

R14/49 Miss Marla Willemse

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M171090

NAME: Miss Marla Willemse
(Principal Investigator)
DEPARTMENT: Human Genetics
University of the Witwatersrand
Sydney Brenner Institute of Molecular Bioscience
Parktown, Johannesburg

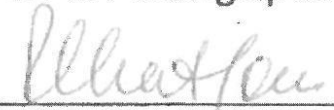
PROJECT TITLE: The Effect of Ascertainment Bias on Detecting Signatures of Selection

DATE CONSIDERED: Adhoc

DECISION: Approved unconditionally

CONDITIONS: Sub-Study under Primary Study (M1 10744)

SUPERVISOR: Dr Z. Lombard, Dr D. Sengupta and Shaun Aron

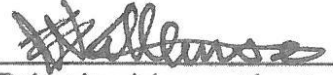
APPROVED BY: 
Professor P. Cleaton-Jones, Chairperson, HREC (Medical)

DATE OF APPROVAL: 13/11/2017

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand. I/We fully understand the conditions under which I am/we are authorised to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit to the Committee. **I agree to submit a yearly progress report.** The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed October and will therefore be due in the month of October each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).


Principal Investigator Signature

Date 30/12/2017

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Professor Michele Ramsay

CLEARANCE CERTIFICATE

M110744

PROJECT

Genotyping

Patterns of Generic Variation in a Black South
African Population: High Throughout SNP

INVESTIGATORS

Professor Michele Ramsay.

DEPARTMENT

School of Pathology/Division of Human Genetics

DATE CONSIDERED

29/07/2011

DECISION OF THE COMMITTEE*

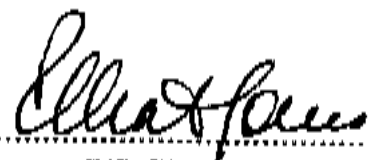
Approved unconditionally

29/07/2011

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 29/07/2011

CHAIRPERSON


(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Prof M Ramsay

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Professor Michele Ramsay

CLEARANCE CERTIFICATE

M110744

PROJECT

Genotyping

Patterns of Generic Variation in a Black South African Population: High Throughput SNP

INVESTIGATORS

Professor Michele Ramsay.

DEPARTMENT

School of Pathology/Division of Human Genetics

DATE CONSIDERED

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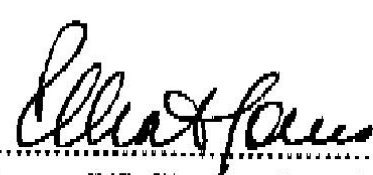
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PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...

Appendix 2.1

a. F_{ST}; Baganda & Ethiopia

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	15	217707	14	1499	9.91x10 ⁻³	6.43x10 ⁻⁵
Affy 6	1.0	28	217693	33	1486	1.85x10 ⁻²	1.52x10 ⁻⁴
Affy 6	1.5	32	217679	60	1482	2.11x10 ⁻²	2.76x10 ⁻⁴
Affy 6	2.0	36	217659	88	1478	2.38x10 ⁻²	4.04x10 ⁻⁴
Affy 6	2.5	39	217638	117	1475	2.58x10 ⁻²	5.37x10 ⁻⁴
Affy 6	3.0	42	217611	146	1472	2.77x10 ⁻²	6.70x10 ⁻⁴
Affy 6	3.5	46	217588	173	1468	3.04x10 ⁻²	7.94x10 ⁻⁴
Affy 6	4.0	51	217567	199	1463	3.37x10 ⁻²	9.14x10 ⁻⁴
Affy 6	4.5	54	217543	228	1460	3.57x10 ⁻²	1.05x10 ⁻³
Affy 6	5.0	58	217521	254	1456	3.83x10 ⁻²	1.17x10 ⁻³
Omni 1	0.5	19	217708	16	1495	1.25x10 ⁻²	7.35x10 ⁻⁵
Omni 1	1.0	30	217687	43	1484	1.98x10 ⁻²	1.97x10 ⁻⁴
Omni 1	1.5	34	217659	76	1480	2.25x10 ⁻²	3.49x10 ⁻⁴
Omni 1	2.0	41	217637	108	1473	2.71x10 ⁻²	4.96x10 ⁻⁴
Omni 1	2.5	47	217611	140	1467	3.10x10 ⁻²	6.43x10 ⁻⁴
Omni 1	3.0	49	217582	172	1465	3.24x10 ⁻²	7.90x10 ⁻⁴
Omni 1	3.5	52	217555	205	1462	3.43x10 ⁻²	9.41x10 ⁻⁴
Omni 1	4.0	55	217528	236	1459	3.63x10 ⁻²	1.08x10 ⁻³
Omni 1	4.5	56	217499	272	1458	3.70x10 ⁻²	1.25x10 ⁻³
Omni 1	5.0	57	217471	304	1457	3.76x10 ⁻²	1.40x10 ⁻³
Mega 2.5	0.5	24	217676	43	1490	1.59x10 ⁻²	1.98x10 ⁻⁴
Mega 2.5	1.0	36	217618	102	1478	2.38x10 ⁻²	4.68x10 ⁻⁴
Mega 2.5	1.5	50	217571	155	1464	3.30x10 ⁻²	7.12x10 ⁻⁴
Mega 2.5	2.0	61	217520	207	1453	4.03x10 ⁻²	9.51x10 ⁻⁴
Mega 2.5	2.5	64	217457	272	1450	4.23x10 ⁻²	1.25x10 ⁻³
Mega 2.5	3.0	65	217395	336	1449	4.29x10 ⁻²	1.54x10 ⁻³
Mega 2.5	3.5	67	217337	402	1447	4.43x10 ⁻²	1.85x10 ⁻³
Mega 2.5	4.0	71	217285	467	1443	4.69x10 ⁻²	2.14x10 ⁻³
Mega 2.5	4.5	73	217221	528	1441	4.82x10 ⁻²	2.42x10 ⁻³
Mega 2.5	5.0	74	217158	596	1440	4.89x10 ⁻²	2.74x10 ⁻³
H3A	0.5	97	217600	165	1417	6.41x10 ⁻²	7.58x10 ⁻⁴
H3A	1.0	130	217414	382	1384	8.59x10 ⁻²	1.75x10 ⁻³
H3A	1.5	164	217223	596	1350	1.08x10 ⁻¹	2.74x10 ⁻³
H3A	2.0	178	217013	826	1336	1.18x10 ⁻¹	3.79x10 ⁻³
H3A	2.5	195	216798	1059	1320	1.29x10 ⁻¹	4.86x10 ⁻³
H3A	3.0	204	216588	1300	1311	1.35x10 ⁻¹	5.97x10 ⁻³
H3A	3.5	217	216391	1520	1298	1.43x10 ⁻¹	6.98x10 ⁻³
H3A	4.0	226	216175	1754	1289	1.49x10 ⁻¹	8.05x10 ⁻³
H3A	4.5	239	215963	1975	1276	1.58x10 ⁻¹	9.06x10 ⁻³
H3A	5.0	245	215746	2194	1270	1.62x10 ⁻¹	1.01x10 ⁻²
PanAFR	0.5	98	217513	248	1416	6.47x10 ⁻²	1.14x10 ⁻³
PanAFR	1.0	147	217256	544	1367	9.71x10 ⁻²	2.50x10 ⁻³
PanAFR	1.5	177	216980	842	1337	1.17x10 ⁻¹	3.87x10 ⁻³
PanAFR	2.0	203	216712	1145	1311	1.34x10 ⁻¹	5.26x10 ⁻³
PanAFR	2.5	224	216433	1452	1290	1.48x10 ⁻¹	6.66x10 ⁻³
PanAFR	3.0	233	216130	1768	1281	1.54x10 ⁻¹	8.11x10 ⁻³
PanAFR	3.5	243	215832	2074	1271	1.61x10 ⁻¹	9.52x10 ⁻³
PanAFR	4.0	252	215542	2388	1262	1.66x10 ⁻¹	1.10x10 ⁻²
PanAFR	4.5	262	215250	2686	1252	1.73x10 ⁻¹	1.23x10 ⁻²
PanAFR	5.0	269	214955	2984	1245	1.78x10 ⁻¹	1.37x10 ⁻²
Omni 2.5	0.5	99	217561	210	1415	6.54x10 ⁻²	9.64x10 ⁻⁴
Omni 2.5	1.0	144	217358	464	1370	9.51x10 ⁻²	2.13x10 ⁻³
Omni 2.5	1.5	171	217126	736	1343	1.13x10 ⁻¹	3.38x10 ⁻³
Omni 2.5	2.0	198	216889	1002	1316	1.31x10 ⁻¹	4.60x10 ⁻³
Omni 2.5	2.5	215	216630	1279	1300	1.42x10 ⁻¹	5.87x10 ⁻³
Omni 2.5	3.0	227	216373	1557	1288	1.50x10 ⁻¹	7.14x10 ⁻³
Omni 2.5	3.5	240	216113	1836	1275	1.58x10 ⁻¹	8.42x10 ⁻³
Omni 2.5	4.0	250	215853	2090	1265	1.65x10 ⁻¹	9.59x10 ⁻³
Omni 2.5	4.5	263	215595	2350	1252	1.74x10 ⁻¹	1.08x10 ⁻²
Omni 2.5	5.0	271	215324	2616	1244	1.79x10 ⁻¹	1.20x10 ⁻²
Omni 5	0.5	246	217461	347	1273	1.62x10 ⁻¹	1.59x10 ⁻³
Omni 5	1.0	356	217060	797	1164	2.34x10 ⁻¹	3.66x10 ⁻³
Omni 5	1.5	420	216612	1280	1101	2.76x10 ⁻¹	5.87x10 ⁻³
Omni 5	2.0	477	216127	1780	1046	3.13x10 ⁻¹	8.17x10 ⁻³
Omni 5	2.5	516	215632	2292	1007	3.39x10 ⁻¹	1.05x10 ⁻²
Omni 5	3.0	553	215138	2785	971	3.63x10 ⁻¹	1.28x10 ⁻²
Omni 5	3.5	581	214647	3268	943	3.81x10 ⁻¹	1.50x10 ⁻²
Omni 5	4.0	602	214136	3777	923	3.95x10 ⁻¹	1.73x10 ⁻²
Omni 5	4.5	628	213634	4255	897	4.12x10 ⁻¹	1.95x10 ⁻²
Omni 5	5.0	645	213128	4740	880	4.23x10 ⁻¹	2.18x10 ⁻²

b. F_{ST}; Baganda & Zulu

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	15	217708	12	1479	1.00x10 ⁻²	5.51x10 ⁻⁵
Affy 6	1.0	26	217693	31	1468	1.74x10 ⁻²	1.42x10 ⁻⁴
Affy 6	1.5	30	217673	57	1464	2.01x10 ⁻²	2.62x10 ⁻⁴
Affy 6	2.0	34	217656	83	1460	2.28x10 ⁻²	3.81x10 ⁻⁴
Affy 6	2.5	41	217637	107	1453	2.74x10 ⁻²	4.91x10 ⁻⁴
Affy 6	3.0	43	217613	135	1451	2.88x10 ⁻²	6.20x10 ⁻⁴
Affy 6	3.5	44	217588	161	1450	2.95x10 ⁻²	7.39x10 ⁻⁴
Affy 6	4.0	46	217566	188	1448	3.08x10 ⁻²	8.63x10 ⁻⁴
Affy 6	4.5	46	217543	217	1448	3.08x10 ⁻²	9.97x10 ⁻⁴
Affy 6	5.0	46	217516	248	1448	3.08x10 ⁻²	1.14x10 ⁻³
Omni 1	0.5	18	217704	16	1477	1.20x10 ⁻²	7.35x10 ⁻⁵
Omni 1	1.0	30	217690	37	1465	2.01x10 ⁻²	1.70x10 ⁻⁴
Omni 1	1.5	41	217673	57	1455	2.74x10 ⁻²	2.62x10 ⁻⁴
Omni 1	2.0	49	217653	83	1448	3.27x10 ⁻²	3.81x10 ⁻⁴
Omni 1	2.5	52	217632	112	1445	3.47x10 ⁻²	5.14x10 ⁻⁴
Omni 1	3.0	56	217609	136	1441	3.74x10 ⁻²	6.25x10 ⁻⁴
Omni 1	3.5	57	217584	169	1440	3.81x10 ⁻²	7.76x10 ⁻⁴
Omni 1	4.0	60	217556	201	1437	4.01x10 ⁻²	9.23x10 ⁻⁴
Omni 1	4.5	64	217532	229	1434	4.27x10 ⁻²	1.05x10 ⁻³
Omni 1	5.0	66	217509	258	1433	4.40x10 ⁻²	1.18x10 ⁻³
Mega 2.5	0.5	24	217690	31	1470	1.61x10 ⁻²	1.42x10 ⁻⁴
Mega 2.5	1.0	35	217644	85	1460	2.34x10 ⁻²	3.90x10 ⁻⁴
Mega 2.5	1.5	45	217600	140	1450	3.01x10 ⁻²	6.43x10 ⁻⁴
Mega 2.5	2.0	51	217551	194	1444	3.41x10 ⁻²	8.91x10 ⁻⁴
Mega 2.5	2.5	57	217501	249	1438	3.81x10 ⁻²	1.14x10 ⁻³
Mega 2.5	3.0	59	217444	307	1436	3.95x10 ⁻²	1.41x10 ⁻³
Mega 2.5	3.5	60	217388	373	1435	4.01x10 ⁻²	1.71x10 ⁻³
Mega 2.5	4.0	63	217337	428	1432	4.21x10 ⁻²	1.97x10 ⁻³
Mega 2.5	4.5	64	217277	491	1431	4.28x10 ⁻²	2.25x10 ⁻³
Mega 2.5	5.0	66	217220	549	1429	4.41x10 ⁻²	2.52x10 ⁻³
H3A	0.5	102	217605	152	1397	6.80x10 ⁻²	6.98x10 ⁻⁴
H3A	1.0	152	217431	354	1348	1.01x10 ⁻¹	1.63x10 ⁻³
H3A	1.5	180	217239	576	1319	1.20x10 ⁻¹	2.64x10 ⁻³
H3A	2.0	198	217033	797	1301	1.32x10 ⁻¹	3.66x10 ⁻³
H3A	2.5	213	216831	1018	1286	1.42x10 ⁻¹	4.67x10 ⁻³
H3A	3.0	224	216624	1246	1275	1.49x10 ⁻¹	5.72x10 ⁻³
H3A	3.5	232	216405	1470	1267	1.55x10 ⁻¹	6.75x10 ⁻³
H3A	4.0	238	216194	1699	1261	1.59x10 ⁻¹	7.80x10 ⁻³
H3A	4.5	241	215978	1930	1258	1.61x10 ⁻¹	8.86x10 ⁻³
H3A	5.0	245	215757	2152	1254	1.63x10 ⁻¹	9.88x10 ⁻³
PanAFR	0.5	124	217534	221	1371	8.29x10 ⁻²	1.01x10 ⁻³
PanAFR	1.0	177	217284	512	1318	1.18x10 ⁻¹	2.35x10 ⁻³
PanAFR	1.5	216	217017	815	1280	1.44x10 ⁻¹	3.74x10 ⁻³
PanAFR	2.0	244	216742	1120	1253	1.63x10 ⁻¹	5.14x10 ⁻³
PanAFR	2.5	264	216452	1435	1233	1.76x10 ⁻¹	6.59x10 ⁻³
PanAFR	3.0	281	216166	1749	1216	1.88x10 ⁻¹	8.03x10 ⁻³
PanAFR	3.5	290	215865	2077	1207	1.94x10 ⁻¹	9.53x10 ⁻³
PanAFR	4.0	308	215584	2377	1189	2.06x10 ⁻¹	1.09x10 ⁻²
PanAFR	4.5	316	215282	2694	1181	2.11x10 ⁻¹	1.24x10 ⁻²
PanAFR	5.0	326	214982	2994	1171	2.18x10 ⁻¹	1.37x10 ⁻²
Omni 2.5	0.5	114	217589	170	1384	7.61x10 ⁻²	7.81x10 ⁻⁴
Omni 2.5	1.0	172	217401	399	1327	1.15x10 ⁻¹	1.83x10 ⁻³
Omni 2.5	1.5	207	217186	647	1294	1.38x10 ⁻¹	2.97x10 ⁻³
Omni 2.5	2.0	232	216951	904	1269	1.55x10 ⁻¹	4.15x10 ⁻³
Omni 2.5	2.5	243	216709	1165	1258	1.62x10 ⁻¹	5.35x10 ⁻³
Omni 2.5	3.0	256	216470	1425	1245	1.71x10 ⁻¹	6.54x10 ⁻³
Omni 2.5	3.5	266	216227	1677	1235	1.77x10 ⁻¹	7.70x10 ⁻³
Omni 2.5	4.0	279	215992	1928	1222	1.86x10 ⁻¹	8.85x10 ⁻³
Omni 2.5	4.5	289	215742	2191	1212	1.93x10 ⁻¹	1.01x10 ⁻²
Omni 2.5	5.0	296	215507	2453	1205	1.97x10 ⁻¹	1.13x10 ⁻²
Omni 5	0.5	247	217515	268	1252	1.65x10 ⁻¹	1.23x10 ⁻³
Omni 5	1.0	366	217187	654	1139	2.43x10 ⁻¹	3.00x10 ⁻³
Omni 5	1.5	441	216821	1070	1070	2.92x10 ⁻¹	4.91x10 ⁻³
Omni 5	2.0	476	216405	1504	1035	3.15x10 ⁻¹	6.90x10 ⁻³
Omni 5	2.5	519	216000	1934	993	3.43x10 ⁻¹	8.87x10 ⁻³
Omni 5	3.0	547	215567	2383	965	3.62x10 ⁻¹	1.09x10 ⁻²
Omni 5	3.5	568	215121	2840	943	3.76x10 ⁻¹	1.30x10 ⁻²
Omni 5	4.0	590	214678	3281	921	3.90x10 ⁻¹	1.51x10 ⁻²
Omni 5	4.5	602	214237	3719	911	3.98x10 ⁻¹	1.71x10 ⁻²
Omni 5	5.0	614	213790	4165	899	4.06x10 ⁻¹	1.91x10 ⁻²

Appendix 2.2

a. F_{ST}; Ethiopia & Zulu

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	20	217710	9	1520	1.30x10 ⁻²	4.13x10 ⁻⁵
Affy 6	1.0	29	217693	32	1511	1.88x10 ⁻²	1.47x10 ⁻⁴
Affy 6	1.5	34	217672	59	1506	2.21x10 ⁻²	2.71x10 ⁻⁴
Affy 6	2.0	43	217654	82	1497	2.79x10 ⁻²	3.77x10 ⁻⁴
Affy 6	2.5	48	217636	108	1492	3.12x10 ⁻²	4.96x10 ⁻⁴
Affy 6	3.0	51	217613	136	1489	3.31x10 ⁻²	6.25x10 ⁻⁴
Affy 6	3.5	59	217593	160	1481	3.83x10 ⁻²	7.35x10 ⁻⁴
Affy 6	4.0	61	217567	188	1479	3.96x10 ⁻²	8.63x10 ⁻⁴
Affy 6	4.5	63	217540	215	1477	4.09x10 ⁻²	9.87x10 ⁻⁴
Affy 6	5.0	65	217518	245	1475	4.22x10 ⁻²	1.13x10 ⁻³
Omni 1	0.5	19	217704	17	1523	1.23x10 ⁻²	7.81x10 ⁻⁵
Omni 1	1.0	31	217684	42	1511	2.01x10 ⁻²	1.93x10 ⁻⁴
Omni 1	1.5	43	217667	68	1499	2.79x10 ⁻²	3.12x10 ⁻⁴
Omni 1	2.0	50	217647	98	1492	3.24x10 ⁻²	4.50x10 ⁻⁴
Omni 1	2.5	57	217626	128	1485	3.70x10 ⁻²	5.88x10 ⁻⁴
Omni 1	3.0	61	217601	158	1481	3.96x10 ⁻²	7.26x10 ⁻⁴
Omni 1	3.5	63	217574	190	1479	4.09x10 ⁻²	8.73x10 ⁻⁴
Omni 1	4.0	66	217541	219	1476	4.28x10 ⁻²	1.01x10 ⁻³
Omni 1	4.5	66	217507	257	1476	4.28x10 ⁻²	1.18x10 ⁻³
Omni 1	5.0	66	217481	288	1476	4.28x10 ⁻²	1.32x10 ⁻³
Mega 2.5	0.5	27	217683	35	1513	1.75x10 ⁻²	1.61x10 ⁻⁴
Mega 2.5	1.0	37	217625	90	1504	2.40x10 ⁻²	4.13x10 ⁻⁴
Mega 2.5	1.5	48	217575	141	1493	3.11x10 ⁻²	6.48x10 ⁻⁴
Mega 2.5	2.0	54	217515	203	1487	3.50x10 ⁻²	9.32x10 ⁻⁴
Mega 2.5	2.5	59	217457	269	1482	3.83x10 ⁻²	1.24x10 ⁻³
Mega 2.5	3.0	64	217393	329	1477	4.15x10 ⁻²	1.51x10 ⁻³
Mega 2.5	3.5	69	217333	394	1472	4.48x10 ⁻²	1.81x10 ⁻³
Mega 2.5	4.0	71	217277	459	1470	4.61x10 ⁻²	2.11x10 ⁻³
Mega 2.5	4.5	72	217219	531	1469	4.67x10 ⁻²	2.44x10 ⁻³
Mega 2.5	5.0	73	217161	599	1468	4.74x10 ⁻²	2.75x10 ⁻³
H3A	0.5	94	217605	159	1447	6.10x10 ⁻²	7.30x10 ⁻⁴
H3A	1.0	138	217431	367	1406	8.94x10 ⁻²	1.69x10 ⁻³
H3A	1.5	159	217241	598	1385	1.03x10 ⁻¹	2.75x10 ⁻³
H3A	2.0	177	217031	817	1368	1.15x10 ⁻¹	3.75x10 ⁻³
H3A	2.5	195	216832	1043	1350	1.26x10 ⁻¹	4.79x10 ⁻³
H3A	3.0	213	216637	1267	1332	1.38x10 ⁻¹	5.81x10 ⁻³
H3A	3.5	228	216426	1491	1317	1.48x10 ⁻¹	6.84x10 ⁻³
H3A	4.0	234	216211	1722	1311	1.51x10 ⁻¹	7.90x10 ⁻³
H3A	4.5	243	215991	1949	1302	1.57x10 ⁻¹	8.94x10 ⁻³
H3A	5.0	249	215784	2180	1296	1.61x10 ⁻¹	1.00x10 ⁻²
PanAFR	0.5	94	217512	253	1446	6.10x10 ⁻²	1.16x10 ⁻³
PanAFR	1.0	131	217242	559	1409	8.51x10 ⁻²	2.57x10 ⁻³
PanAFR	1.5	160	216973	868	1380	1.04x10 ⁻¹	3.98x10 ⁻³
PanAFR	2.0	190	216717	1156	1350	1.23x10 ⁻¹	5.31x10 ⁻³
PanAFR	2.5	211	216445	1447	1330	1.37x10 ⁻¹	6.64x10 ⁻³
PanAFR	3.0	228	216161	1755	1314	1.48x10 ⁻¹	8.05x10 ⁻³
PanAFR	3.5	242	215881	2051	1300	1.57x10 ⁻¹	9.41x10 ⁻³
PanAFR	4.0	254	215597	2352	1289	1.65x10 ⁻¹	1.08x10 ⁻²
PanAFR	4.5	267	215301	2647	1276	1.73x10 ⁻¹	1.21x10 ⁻²
PanAFR	5.0	277	215011	2946	1266	1.80x10 ⁻¹	1.35x10 ⁻²
Omni 2.5	0.5	95	217557	205	1448	6.16x10 ⁻²	9.41x10 ⁻⁴
Omni 2.5	1.0	138	217336	461	1405	8.94x10 ⁻²	2.12x10 ⁻³
Omni 2.5	1.5	167	217117	729	1377	1.08x10 ⁻¹	3.35x10 ⁻³
Omni 2.5	2.0	192	216892	1000	1352	1.24x10 ⁻¹	4.59x10 ⁻³
Omni 2.5	2.5	213	216641	1268	1332	1.38x10 ⁻¹	5.82x10 ⁻³
Omni 2.5	3.0	230	216402	1543	1316	1.49x10 ⁻¹	7.08x10 ⁻³
Omni 2.5	3.5	239	216142	1828	1307	1.55x10 ⁻¹	8.39x10 ⁻³
Omni 2.5	4.0	252	215898	2090	1294	1.63x10 ⁻¹	9.59x10 ⁻³
Omni 2.5	4.5	258	215642	2368	1288	1.67x10 ⁻¹	1.09x10 ⁻²
Omni 2.5	5.0	268	215393	2638	1278	1.73x10 ⁻¹	1.21x10 ⁻²
Omni 5	0.5	260	217460	329	1289	1.68x10 ⁻¹	1.51x10 ⁻³
Omni 5	1.0	386	217076	762	1164	2.49x10 ⁻¹	3.50x10 ⁻³
Omni 5	1.5	468	216648	1238	1085	3.01x10 ⁻¹	5.68x10 ⁻³
Omni 5	2.0	511	216181	1741	1044	3.29x10 ⁻¹	7.99x10 ⁻³
Omni 5	2.5	554	215721	2223	1001	3.56x10 ⁻¹	1.02x10 ⁻²
Omni 5	3.0	577	215240	2748	978	3.71x10 ⁻¹	1.26x10 ⁻²
Omni 5	3.5	606	214764	3237	949	3.90x10 ⁻¹	1.48x10 ⁻²
Omni 5	4.0	636	214277	3741	923	4.08x10 ⁻¹	1.72x10 ⁻²
Omni 5	4.5	652	213762	4229	907	4.18x10 ⁻¹	1.94x10 ⁻²
Omni 5	5.0	665	213226	4722	894	4.27x10 ⁻¹	2.17x10 ⁻²

b. iHS; Baganda

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	113	283643	1248	1962	5.45x10 ⁻²	4.38x10 ⁻³
Affy 6	1.0	138	282231	2537	1937	6.65x10 ⁻²	8.91x10 ⁻³
Affy 6	1.5	156	280814	3770	1919	7.52x10 ⁻²	1.32x10 ⁻²
Affy 6	2.0	164	279385	4642	1911	7.90x10 ⁻²	1.63x10 ⁻²
Affy 6	2.5	181	277969	4604	1894	8.72x10 ⁻²	1.63x10 ⁻²
Affy 6	3.0	192	276545	4567	1883	9.25x10 ⁻²	1.62x10 ⁻²
Affy 6	3.5	192	275107	4564	1883	9.25x10 ⁻²	1.63x10 ⁻²
Affy 6	4.0	195	273673	4556	1880	9.40x10 ⁻²	1.64x10 ⁻²
Affy 6	4.5	200	272241	4531	1875	9.64x10 ⁻²	1.64x10 ⁻²
Affy 6	5.0	225	270834	4476	1850	1.08x10 ⁻¹	1.63x10 ⁻²
Omni 1	0.5	110	283653	868	1969	5.29x10 ⁻²	3.05x10 ⁻³
Omni 1	1.0	147	282258	1836	1931	7.07x10 ⁻²	6.46x10 ⁻³
Omni 1	1.5	183	280857	2830	1896	8.80x10 ⁻²	9.98x10 ⁻³
Omni 1	2.0	200	279436	3791	1880	9.62x10 ⁻²	1.34x10 ⁻²
Omni 1	2.5	208	278008	4331	1872	1.00x10 ⁻¹	1.53x10 ⁻²
Omni 1	3.0	226	276592	4309	1854	1.09x10 ⁻¹	1.53x10 ⁻²
Omni 1	3.5	234	275165	4274	1846	1.13x10 ⁻¹	1.53x10 ⁻²
Omni 1	4.0	235	273728	4273	1845	1.13x10 ⁻¹	1.54x10 ⁻²
Omni 1	4.5	237	272294	4265	1843	1.14x10 ⁻¹	1.54x10 ⁻²
Omni 1	5.0	248	270867	4246	1832	1.19x10 ⁻¹	1.54x10 ⁻²
Mega 2.5	0.5	141	283699	958	1935	6.79x10 ⁻²	3.37x10 ⁻³
Mega 2.5	1.0	187	282311	2003	1889	9.01x10 ⁻²	7.05x10 ⁻³
Mega 2.5	1.5	208	280897	3004	1869	1.00x10 ⁻¹	1.06x10 ⁻²
Mega 2.5	2.0	228	279481	3524	1849	1.10x10 ⁻¹	1.25x10 ⁻²
Mega 2.5	2.5	246	278064	3514	1831	1.18x10 ⁻¹	1.25x10 ⁻²
Mega 2.5	3.0	255	276638	3501	1822	1.23x10 ⁻¹	1.25x10 ⁻²
Mega 2.5	3.5	255	275200	3500	1822	1.23x10 ⁻¹	1.26x10 ⁻²
Mega 2.5	4.0	258	273765	3492	1819	1.24x10 ⁻¹	1.26x10 ⁻²
Mega 2.5	4.5	266	272336	3480	1811	1.28x10 ⁻¹	1.26x10 ⁻²
Mega 2.5	5.0	289	270926	3454	1788	1.39x10 ⁻¹	1.26x10 ⁻²
H3A	0.5	353	283935	834	1732	1.69x10 ⁻¹	2.93x10 ⁻³
H3A	1.0	479	282646	1865	1611	2.29x10 ⁻¹	6.56x10 ⁻³
H3A	1.5	549	281289	2915	1541	2.63x10 ⁻¹	1.03x10 ⁻²
H3A	2.0	609	279923	3960	1480	2.92x10 ⁻¹	1.39x10 ⁻²
H3A	2.5	665	278549	4995	1426	3.18x10 ⁻¹	1.76x10 ⁻²
H3A	3.0	706	277159	6001	1387	3.37x10 ⁻¹	2.12x10 ⁻²
H3A	3.5	739	275764	7004	1355	3.53x10 ⁻¹	2.48x10 ⁻²
H3A	4.0	769	274357	7938	1326	3.67x10 ⁻¹	2.81x10 ⁻²
H3A	4.5	794	272948	8859	1301	3.79x10 ⁻¹	3.14x10 ⁻²
H3A	5.0	814	271535	9772	1282	3.88x10 ⁻¹	3.47x10 ⁻²
PanAFR	0.5	394	283964	861	1694	1.89x10 ⁻¹	3.02x10 ⁻³
PanAFR	1.0	534	282687	1911	1562	2.55x10 ⁻¹	6.71x10 ⁻³
PanAFR	1.5	610	281336	2979	1487	2.91x10 ⁻¹	1.05x10 ⁻²
PanAFR	2.0	667	279961	4058	1434	3.17x10 ⁻¹	1.43x10 ⁻²
PanAFR	2.5	702	278569	5073	1399	3.34x10 ⁻¹	1.79x10 ⁻²
PanAFR	3.0	733	277176	6059	1365	3.49x10 ⁻¹	2.14x10 ⁻²
PanAFR	3.5	761	275770	7032	1338	3.63x10 ⁻¹	2.49x10 ⁻²
PanAFR	4.0	797	274370	7974	1302	3.80x10 ⁻¹	2.82x10 ⁻²
PanAFR	4.5	820	272964	8911	1278	3.91x10 ⁻¹	3.16x10 ⁻²
PanAFR	5.0	840	271553	9770	1257	4.01x10 ⁻¹	3.47x10 ⁻²
Omni 2.5	0.5	329	283898	891	1755	1.58x10 ⁻¹	3.13x10 ⁻³
Omni 2.5	1.0	446	282595	1952	1641	2.14x10 ⁻¹	6.86x10 ⁻³
Omni 2.5	1.5	513	281242	2991	1572	2.46x10 ⁻¹	1.05x10 ⁻²
Omni 2.5	2.0	564	279869	4054	1521	2.71x10 ⁻¹	1.43x10 ⁻²
Omni 2.5	2.5	601	278476	5099	1485	2.88x10 ⁻¹	1.80x10 ⁻²
Omni 2.5	3.0	637	277074	6116	1450	3.05x10 ⁻¹	2.16x10 ⁻²
Omni 2.5	3.5	666	275671	7128	1423	3.19x10 ⁻¹	2.52x10 ⁻²
Omni 2.5	4.0	686	274255	8099	1403	3.28x10 ⁻¹	2.87x10 ⁻²
Omni 2.5	4.5	717	272857	9040	1372	3.43x10 ⁻¹	3.21x10 ⁻²
Omni 2.5	5.0	739	271447	9957	1349	3.54x10 ⁻¹	3.54x10

Appendix 2.3

a. iHS; Ethiopia

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	67	283606	1274	1813	3.56x10 ⁻²	4.47x10 ⁻³
Affy 6	1.0	70	282172	2578	1810	3.72x10 ⁻²	9.05x10 ⁻³
Affy 6	1.5	73	280738	3848	1807	3.88x10 ⁻²	1.35x10 ⁻²
Affy 6	2.0	75	279302	4798	1805	3.99x10 ⁻²	1.69x10 ⁻²
Affy 6	2.5	88	277880	4754	1792	4.68x10 ⁻²	1.68x10 ⁻²
Affy 6	3.0	92	276448	4709	1788	4.89x10 ⁻²	1.67x10 ⁻²
Affy 6	3.5	92	275010	4705	1788	4.89x10 ⁻²	1.68x10 ⁻²
Affy 6	4.0	93	273574	4694	1787	4.95x10 ⁻²	1.69x10 ⁻²
Affy 6	4.5	105	272152	4663	1775	5.59x10 ⁻²	1.68x10 ⁻²
Affy 6	5.0	123	270741	4611	1757	6.54x10 ⁻²	1.67x10 ⁻²
Omni 1	0.5	84	283631	1024	1798	4.46x10 ⁻²	3.60x10 ⁻³
Omni 1	1.0	88	282199	2084	1794	4.68x10 ⁻²	7.33x10 ⁻³
Omni 1	1.5	92	280767	3109	1790	4.89x10 ⁻²	1.10x10 ⁻²
Omni 1	2.0	94	279331	4060	1788	4.99x10 ⁻²	1.43x10 ⁻²
Omni 1	2.5	97	277896	4677	1785	5.15x10 ⁻²	1.66x10 ⁻²
Omni 1	3.0	110	276475	4647	1772	5.84x10 ⁻²	1.65x10 ⁻²
Omni 1	3.5	112	275039	4612	1770	5.95x10 ⁻²	1.65x10 ⁻²
Omni 1	4.0	112	273601	4609	1770	5.95x10 ⁻²	1.66x10 ⁻²
Omni 1	4.5	113	272163	4605	1769	6.00x10 ⁻²	1.66x10 ⁻²
Omni 1	5.0	125	270741	4585	1757	6.64x10 ⁻²	1.67x10 ⁻²
Mega 2.5	0.5	116	283670	1027	1769	6.15x10 ⁻²	3.61x10 ⁻³
Mega 2.5	1.0	126	282244	2095	1758	6.69x10 ⁻²	7.37x10 ⁻³
Mega 2.5	1.5	130	280810	3050	1754	6.90x10 ⁻²	1.07x10 ⁻²
Mega 2.5	2.0	137	279379	3303	1747	7.27x10 ⁻²	1.17x10 ⁻²
Mega 2.5	2.5	147	277955	3287	1737	7.80x10 ⁻²	1.17x10 ⁻²
Mega 2.5	3.0	148	276517	3281	1736	7.86x10 ⁻²	1.17x10 ⁻²
Mega 2.5	3.5	148	275078	3281	1736	7.86x10 ⁻²	1.18x10 ⁻²
Mega 2.5	4.0	154	273648	3275	1730	8.17x10 ⁻²	1.18x10 ⁻²
Mega 2.5	4.5	164	272224	3257	1720	8.70x10 ⁻²	1.18x10 ⁻²
Mega 2.5	5.0	188	270820	3225	1696	9.98x10 ⁻²	1.18x10 ⁻²
H3A	0.5	386	283966	842	1503	2.04x10 ⁻¹	2.96x10 ⁻³
H3A	1.0	481	282638	1896	1409	2.54x10 ⁻¹	6.66x10 ⁻³
H3A	1.5	521	281251	2963	1371	2.75x10 ⁻¹	1.04x10 ⁻²
H3A	2.0	552	279846	4010	1341	2.92x10 ⁻¹	1.41x10 ⁻²
H3A	2.5	564	278422	5058	1329	2.98x10 ⁻¹	1.78x10 ⁻²
H3A	3.0	577	276999	6069	1316	3.05x10 ⁻¹	2.14x10 ⁻²
H3A	3.5	588	275573	7077	1305	3.11x10 ⁻¹	2.50x10 ⁻²
H3A	4.0	598	274144	8055	1295	3.16x10 ⁻¹	2.85x10 ⁻²
H3A	4.5	609	272718	8960	1284	3.22x10 ⁻¹	3.18x10 ⁻²
H3A	5.0	617	271288	9867	1276	3.26x10 ⁻¹	3.51x10 ⁻²
PanAFR	0.5	411	284006	782	1485	2.17x10 ⁻¹	2.75x10 ⁻³
PanAFR	1.0	517	282689	1828	1384	2.72x10 ⁻¹	6.42x10 ⁻³
PanAFR	1.5	550	281299	2910	1351	2.89x10 ⁻¹	1.02x10 ⁻²
PanAFR	2.0	570	279885	3970	1331	3.00x10 ⁻¹	1.40x10 ⁻²
PanAFR	2.5	583	278461	4992	1317	3.07x10 ⁻¹	1.76x10 ⁻²
PanAFR	3.0	594	277034	6027	1307	3.12x10 ⁻¹	2.13x10 ⁻²
PanAFR	3.5	602	275604	7038	1299	3.17x10 ⁻¹	2.49x10 ⁻²
PanAFR	4.0	608	274173	7984	1293	3.20x10 ⁻¹	2.83x10 ⁻²
PanAFR	4.5	613	272740	8928	1288	3.22x10 ⁻¹	3.17x10 ⁻²
PanAFR	5.0	615	271304	9827	1286	3.24x10 ⁻¹	3.50x10 ⁻²
Omni 2.5	0.5	341	283905	884	1548	1.81x10 ⁻¹	3.10x10 ⁻³
Omni 2.5	1.0	433	282567	1943	1458	2.29x10 ⁻¹	6.83x10 ⁻³
Omni 2.5	1.5	478	281178	3053	1416	2.52x10 ⁻¹	1.07x10 ⁻²
Omni 2.5	2.0	495	279761	4116	1400	2.61x10 ⁻¹	1.45x10 ⁻²
Omni 2.5	2.5	509	278341	5136	1385	2.69x10 ⁻¹	1.81x10 ⁻²
Omni 2.5	3.0	521	276916	6172	1373	2.75x10 ⁻¹	2.18x10 ⁻²
Omni 2.5	3.5	532	275490	7175	1363	2.81x10 ⁻¹	2.54x10 ⁻²
Omni 2.5	4.0	540	274062	8171	1355	2.85x10 ⁻¹	2.90x10 ⁻²
Omni 2.5	4.5	546	272632	9108	1349	2.88x10 ⁻¹	3.23x10 ⁻²
Omni 2.5	5.0	552	271201	10028	1343	2.91x10 ⁻¹	3.57x10 ⁻²
Omni 5	0.5	479	284093	690	1417	2.53x10 ⁻¹	2.42x10 ⁻³
Omni 5	1.0	630	282825	1673	1272	3.31x10 ⁻¹	5.88x10 ⁻³
Omni 5	1.5	695	281460	2704	1214	3.64x10 ⁻¹	9.52x10 ⁻³
Omni 5	2.0	730	280070	3729	1178	3.83x10 ⁻¹	1.31x10 ⁻²
Omni 5	2.5	757	278666	4747	1151	3.97x10 ⁻¹	1.67x10 ⁻²
Omni 5	3.0	774	277256	5727	1132	4.06x10 ⁻¹	2.02x10 ⁻²
Omni 5	3.5	784	275834	6698	1122	4.11x10 ⁻¹	2.37x10 ⁻²
Omni 5	4.0	799	274411	7656	1107	4.19x10 ⁻¹	2.71x10 ⁻²
Omni 5	4.5	809	272988	8575	1097	4.24x10 ⁻¹	3.05x10 ⁻²
Omni 5	5.0	815	271557	9504	1091	4.28x10 ⁻¹	3.38x10 ⁻²

b. iHS; Zulu

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	102	246477	1260	1692	5.69x10 ⁻²	5.09x10 ⁻³
Affy 6	1.0	129	245251	2530	1665	7.19x10 ⁻²	1.02x10 ⁻²
Affy 6	1.5	144	243994	3757	1650	8.03x10 ⁻²	1.52x10 ⁻²
Affy 6	2.0	151	242659	4394	1643	8.42x10 ⁻²	1.78x10 ⁻²
Affy 6	2.5	158	241228	4355	1636	8.81x10 ⁻²	1.77x10 ⁻²
Affy 6	3.0	166	239801	4325	1628	9.25x10 ⁻²	1.77x10 ⁻²
Affy 6	3.5	168	238367	4322	1626	9.36x10 ⁻²	1.78x10 ⁻²
Affy 6	4.0	170	236932	4310	1624	9.48x10 ⁻²	1.79x10 ⁻²
Affy 6	4.5	178	235508	4280	1616	9.92x10 ⁻²	1.78x10 ⁻²
Affy 6	5.0	191	234088	4221	1603	1.06x10 ⁻¹	1.77x10 ⁻²
Omni 1	0.5	106	246459	834	1688	5.91x10 ⁻²	3.37x10 ⁻³
Omni 1	1.0	147	245217	1770	1647	8.19x10 ⁻²	7.17x10 ⁻³
Omni 1	1.5	172	243940	2766	1623	9.58x10 ⁻²	1.12x10 ⁻²
Omni 1	2.0	182	242641	3795	1613	1.01x10 ⁻¹	1.54x10 ⁻²
Omni 1	2.5	190	241254	4131	1605	1.06x10 ⁻¹	1.68x10 ⁻²
Omni 1	3.0	196	239822	4092	1599	1.09x10 ⁻¹	1.68x10 ⁻²
Omni 1	3.5	204	238395	4079	1591	1.14x10 ⁻¹	1.68x10 ⁻²
Omni 1	4.0	208	236962	4078	1587	1.16x10 ⁻¹	1.69x10 ⁻²
Omni 1	4.5	212	235534	4065	1583	1.18x10 ⁻¹	1.70x10 ⁻²
Omni 1	5.0	219	234104	4042	1576	1.22x10 ⁻¹	1.70x10 ⁻²
Mega 2.5	0.5	111	246557	953	1685	6.18x10 ⁻²	3.85x10 ⁻³
Mega 2.5	1.0	144	245310	1959	1652	8.02x10 ⁻²	7.92x10 ⁻³
Mega 2.5	1.5	161	244051	2981	1635	8.96x10 ⁻²	1.21x10 ⁻²
Mega 2.5	2.0	176	242712	3468	1620	9.80x10 ⁻²	1.41x10 ⁻²
Mega 2.5	2.5	182	241279	3457	1614	1.01x10 ⁻¹	1.41x10 ⁻²
Mega 2.5	3.0	191	239852	3447	1605	1.06x10 ⁻¹	1.42x10 ⁻²
Mega 2.5	3.5	194	238418	3446	1602	1.08x10 ⁻¹	1.42x10 ⁻²
Mega 2.5	4.0	196	236983	3438	1600	1.09x10 ⁻¹	1.43x10 ⁻²
Mega 2.5	4.5	204	235558	3429	1592	1.14x10 ⁻¹	1.43x10 ⁻²
Mega 2.5	5.0	218	234136	3399	1578	1.21x10 ⁻¹	1.43x10 ⁻²
H3A	0.5	312	246747	889	1489	1.73x10 ⁻¹	3.59x10 ⁻³
H3A	1.0	412	245612	1969	1393	2.28x10 ⁻¹	7.95x10 ⁻³
H3A	1.5	487	244426	3027	1318	2.70x10 ⁻¹	1.22x10 ⁻²
H3A	2.0	549	243240	4063	1257	3.04x10 ⁻¹	1.64x10 ⁻²
H3A	2.5	590	242023	5078	1214	3.27x10 ⁻¹	2.06x10 ⁻²
H3A	3.0	627	240828	6101	1180	3.47x10 ⁻¹	2.47x10 ⁻²
H3A	3.5	663	239630	7062	1145	3.67x10 ⁻¹	2.86x10 ⁻²
H3A	4.0	684	238389	8043	1125	3.78x10 ⁻¹	3.26x10 ⁻²
H3A	4.5	703	237145	8991	1108	3.88x10 ⁻¹	3.65x10 ⁻²
H3A	5.0	718	235899	9918	1093	3.96x10 ⁻¹	4.03x10 ⁻²
PanAFR	0.5	337	246795	898	1466	1.87x10 ⁻¹	3.63x10 ⁻³
PanAFR	1.0	473	245659	1958	1332	2.62x10 ⁻¹	7.91x10 ⁻³
PanAFR	1.5	555	244497	3028	1257	3.06x10 ⁻¹	1.22x10 ⁻²
PanAFR	2.0	618	243309	4049	1195	3.41x10 ⁻¹	1.64x10 ⁻²
PanAFR	2.5	667	242112	5046	1146	3.68x10 ⁻¹	2.04x10 ⁻²
PanAFR	3.0	693	240895	6050	1121	3.82x10 ⁻¹	2.45x10 ⁻²
PanAFR	3.5	719	239655	7054	1097	3.96x10 ⁻¹	2.86x10 ⁻²
PanAFR	4.0	739	238410	7984	1078	4.07x10 ⁻¹	3.24x10 ⁻²
PanAFR	4.5	753	237166	8877	1064	4.14x10 ⁻¹	3.61x10 ⁻²
PanAFR	5.0	769	235916	9759	1047	4.23x10 ⁻¹	3.97x10 ⁻²
Omni 2.5	0.5	305	246729	944	1496	1.69x10 ⁻¹	3.81x10 ⁻³
Omni 2.5	1.0	402	245587	2009	1401	2.23x10 ⁻¹	8.11x10 ⁻³
Omni 2.5	1.5	475	244413	3081	1332	2.63x10 ⁻¹	1.24x10 ⁻²
Omni 2.5	2.0	531	243212	4131	1276	2.94x10 ⁻¹	1.67x10 ⁻²
Omni 2.5	2.5	563	241976	5159	1245	3.11x10 ⁻¹	2.09x10 ⁻²
Omni 2.5	3.0	592	240762	6195	1217	3.27x10 ⁻¹	2.51x10 ⁻²
Omni 2.5	3.5	619	239521	7168	1191	3.42x10 ⁻¹	2.91x10 ⁻²
Omni 2.5	4.0	639	238280	8113	1172	3.53x10 ⁻¹	3.29x10 ⁻²
Omni 2.5	4.5	650	237034	9059	1162	3.59x10 ⁻¹	3.68x10 ⁻²
Omni 2.5	5.0	664	235788	10009	1150	3.66x10 ⁻¹	4.07x10 ⁻²
Omni 5	0.5	329	246787	840	1475	1.82x10 ⁻¹	3.39x10 ⁻³
Omni 5	1.0	455	245693	1842	1352	2.52x10 ⁻¹	7.44x10 ⁻³
Omni 5	1.5	554	244554	2853	1255	3.06x10 ⁻¹	1.15x10 ⁻²
Omni 5	2.0	609	243379	3844	1200	3.37x10 ⁻¹	1.55x10 ⁻²
Omni 5	2.5	660	242152	4818	1149	3.65x10 ⁻¹	1.95x10 ⁻²
Omni 5	3.0	696	240942	5826	1113	3.85x10 ⁻¹	2.36x10 ⁻²
Omni 5	3.5	727	239727	6781	1083	4.02x10 ⁻¹	2.75x10 ⁻²
Omni 5	4.0	749	238503	7747	1060	4.14x10 ⁻¹	3.15x10 ⁻²
Omni 5	4.5	775	237283	8683	1034	4.28x10 ⁻¹	3.53x10 ⁻²
Omni 5	5.0	807	236052	9589	1004	4.46x10 ⁻¹	3.90x10 ⁻²

Appendix 2.4

a. XP-EHH; Baganda & Ethiopia

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	81	283381	1264	1230	6.18×10^{-2}	4.44×10^{-3}
Affy 6	1.0	82	281943	2555	1229	6.25×10^{-2}	8.98×10^{-3}
Affy 6	1.5	84	280507	3828	1227	6.41×10^{-2}	1.35×10^{-2}
Affy 6	2.0	84	279068	5056	1227	6.41×10^{-2}	1.78×10^{-2}
Affy 6	2.5	84	277629	6259	1227	6.41×10^{-2}	2.20×10^{-2}
Affy 6	3.0	84	276191	7407	1227	6.41×10^{-2}	2.61×10^{-2}
Affy 6	3.5	91	274930	7876	1221	6.94×10^{-2}	2.78×10^{-2}
Affy 6	4.0	92	273667	7921	1220	7.01×10^{-2}	2.81×10^{-2}
Affy 6	4.5	93	273005	7953	1219	7.09×10^{-2}	2.83×10^{-2}
Affy 6	5.0	94	272880	7956	1218	7.16×10^{-2}	2.83×10^{-2}
Omni 1	0.5	65	283368	965	1245	4.96×10^{-2}	3.39×10^{-3}
Omni 1	1.0	66	281930	2060	1244	5.04×10^{-2}	7.25×10^{-3}
Omni 1	1.5	69	280494	3133	1241	5.27×10^{-2}	1.10×10^{-2}
Omni 1	2.0	70	279057	4150	1240	5.34×10^{-2}	1.47×10^{-2}
Omni 1	2.5	70	277619	5081	1240	5.34×10^{-2}	1.80×10^{-2}
Omni 1	3.0	70	276180	6020	1240	5.34×10^{-2}	2.13×10^{-2}
Omni 1	3.5	70	274741	6791	1240	5.34×10^{-2}	2.41×10^{-2}
Omni 1	4.0	79	273480	6886	1233	6.02×10^{-2}	2.46×10^{-2}
Omni 1	4.5	80	272172	6937	1232	6.10×10^{-2}	2.49×10^{-2}
Omni 1	5.0	81	271776	6939	1231	6.17×10^{-2}	2.49×10^{-2}
Mega 2.5	0.5	135	283446	1019	1180	1.03×10^{-1}	3.58×10^{-3}
Mega 2.5	1.0	155	282028	2196	1161	1.18×10^{-1}	7.73×10^{-3}
Mega 2.5	1.5	158	280592	3322	1158	1.20×10^{-1}	1.17×10^{-2}
Mega 2.5	2.0	159	279154	4438	1158	1.21×10^{-1}	1.56×10^{-2}
Mega 2.5	2.5	160	277716	5474	1157	1.21×10^{-1}	1.93×10^{-2}
Mega 2.5	3.0	160	276278	6502	1157	1.21×10^{-1}	2.30×10^{-2}
Mega 2.5	3.5	161	274840	7430	1156	1.22×10^{-1}	2.63×10^{-2}
Mega 2.5	4.0	162	273402	8271	1155	1.23×10^{-1}	2.94×10^{-2}
Mega 2.5	4.5	162	271963	9081	1155	1.23×10^{-1}	3.23×10^{-2}
Mega 2.5	5.0	162	270524	9778	1155	1.23×10^{-1}	3.49×10^{-2}
H3A	0.5	379	283786	734	967	2.82×10^{-1}	2.58×10^{-3}
H3A	1.0	496	282485	1686	859	3.66×10^{-1}	5.93×10^{-3}
H3A	1.5	539	281104	2691	816	3.98×10^{-1}	9.48×10^{-3}
H3A	2.0	567	279699	3700	790	4.18×10^{-1}	1.31×10^{-2}
H3A	2.5	578	278274	4721	779	4.26×10^{-1}	1.67×10^{-2}
H3A	3.0	586	276847	5699	771	4.32×10^{-1}	2.02×10^{-2}
H3A	3.5	591	275415	6657	767	4.35×10^{-1}	2.36×10^{-2}
H3A	4.0	596	273982	7629	762	4.39×10^{-1}	2.71×10^{-2}
H3A	4.5	600	272548	8579	758	4.42×10^{-1}	3.05×10^{-2}
H3A	5.0	603	271112	9518	755	4.44×10^{-1}	3.39×10^{-2}
PanAFR	0.5	444	283910	579	910	3.28×10^{-1}	2.04×10^{-3}
PanAFR	1.0	595	282690	1424	766	4.37×10^{-1}	5.01×10^{-3}
PanAFR	1.5	668	281348	2270	698	4.89×10^{-1}	8.00×10^{-3}
PanAFR	2.0	710	279968	3139	658	5.19×10^{-1}	1.11×10^{-2}
PanAFR	2.5	736	278564	4054	632	5.38×10^{-1}	1.43×10^{-2}
PanAFR	3.0	760	277152	4938	610	5.55×10^{-1}	1.75×10^{-2}
PanAFR	3.5	777	275735	5811	596	5.66×10^{-1}	2.06×10^{-2}
PanAFR	4.0	783	274306	6641	590	5.70×10^{-1}	2.36×10^{-2}
PanAFR	4.5	790	272874	7483	584	5.75×10^{-1}	2.67×10^{-2}
PanAFR	5.0	791	271437	8305	583	5.76×10^{-1}	2.97×10^{-2}
Omni 2.5	0.5	384	283750	732	972	2.83×10^{-1}	2.57×10^{-3}
Omni 2.5	1.0	479	282430	1738	883	3.52×10^{-1}	6.12×10^{-3}
Omni 2.5	1.5	527	281053	2720	841	3.85×10^{-1}	9.59×10^{-3}
Omni 2.5	2.0	551	279642	3743	819	4.02×10^{-1}	1.32×10^{-2}
Omni 2.5	2.5	561	278218	4810	809	4.09×10^{-1}	1.70×10^{-2}
Omni 2.5	3.0	567	276787	5810	805	4.13×10^{-1}	2.06×10^{-2}
Omni 2.5	3.5	574	275356	6787	799	4.18×10^{-1}	2.41×10^{-2}
Omni 2.5	4.0	581	273928	7745	793	4.23×10^{-1}	2.75×10^{-2}
Omni 2.5	4.5	584	272492	8693	790	4.25×10^{-1}	3.09×10^{-2}
Omni 2.5	5.0	588	271058	9696	786	4.28×10^{-1}	3.45×10^{-2}
Omni 5	0.5	456	283942	553	913	3.33×10^{-1}	1.94×10^{-3}
Omni 5	1.0	622	282735	1369	763	4.49×10^{-1}	4.82×10^{-3}
Omni 5	1.5	710	281424	2238	684	5.09×10^{-1}	7.89×10^{-3}
Omni 5	2.0	759	280050	3133	639	5.43×10^{-1}	1.11×10^{-2}
Omni 5	2.5	796	278659	4055	607	5.67×10^{-1}	1.43×10^{-2}
Omni 5	3.0	827	277259	4937	581	5.87×10^{-1}	1.75×10^{-2}
Omni 5	3.5	850	275851	5791	562	6.02×10^{-1}	2.06×10^{-2}
Omni 5	4.0	860	274429	6713	553	6.09×10^{-1}	2.39×10^{-2}
Omni 5	4.5	868	273000	7609	546	6.14×10^{-1}	2.71×10^{-2}
Omni 5	5.0	871	271565	8491	543	6.16×10^{-1}	3.03×10^{-2}

b. XP-EHH; Baganda & Zulu

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	80	277539	1258	1422	5.33x10 ⁻²	4.51x10 ⁻³
Affy 6	1.0	92	276119	2556	1410	6.13x10 ⁻²	9.17x10 ⁻³
Affy 6	1.5	100	274693	3822	1402	6.66x10 ⁻²	1.37x10 ⁻²
Affy 6	2.0	101	273261	5055	1401	6.72x10 ⁻²	1.82x10 ⁻²
Affy 6	2.5	102	271830	6246	1400	6.79x10 ⁻²	2.25x10 ⁻²
Affy 6	3.0	103	270399	7393	1399	6.86x10 ⁻²	2.66x10 ⁻²
Affy 6	3.5	111	269147	7853	1391	7.39x10 ⁻²	2.84x10 ⁻²
Affy 6	4.0	122	267897	7891	1381	8.12x10 ⁻²	2.86x10 ⁻²
Affy 6	4.5	122	267235	7923	1381	8.12x10 ⁻²	2.88x10 ⁻²
Affy 6	5.0	122	267109	7927	1381	8.12x10 ⁻²	2.88x10 ⁻²
Omni 1	0.5	73	277567	1042	1429	4.86x10 ⁻²	3.74x10 ⁻³
Omni 1	1.0	87	276176	2128	1415	5.79x10 ⁻²	7.65x10 ⁻³
Omni 1	1.5	90	274772	3206	1412	5.99x10 ⁻²	1.15x10 ⁻²
Omni 1	2.0	92	273360	4224	1410	6.13x10 ⁻²	1.52x10 ⁻²
Omni 1	2.5	94	271956	5155	1408	6.26x10 ⁻²	1.86x10 ⁻²
Omni 1	3.0	95	270547	6035	1407	6.32x10 ⁻²	2.18x10 ⁻²
Omni 1	3.5	96	269138	6739	1406	6.39x10 ⁻²	2.44x10 ⁻²
Omni 1	4.0	107	267879	6852	1395	7.12x10 ⁻²	2.49x10 ⁻²
Omni 1	4.5	115	266583	6897	1387	7.66x10 ⁻²	2.52x10 ⁻²
Omni 1	5.0	116	266190	6899	1386	7.72x10 ⁻²	2.53x10 ⁻²
Mega 2.5	0.5	100	277600	1163	1399	6.67x10 ⁻²	4.17x10 ⁻³
Mega 2.5	1.0	124	276227	2365	1376	8.27x10 ⁻²	8.49x10 ⁻³
Mega 2.5	1.5	135	274841	3481	1365	9.00x10 ⁻²	1.25x10 ⁻²
Mega 2.5	2.0	147	273455	4573	1353	9.80x10 ⁻²	1.64x10 ⁻²
Mega 2.5	2.5	153	272067	5596	1347	1.02x10 ⁻¹	2.02x10 ⁻²
Mega 2.5	3.0	155	270669	6580	1345	1.03x10 ⁻¹	2.37x10 ⁻²
Mega 2.5	3.5	161	269269	7468	1340	1.07x10 ⁻¹	2.70x10 ⁻²
Mega 2.5	4.0	165	267876	8355	1336	1.10x10 ⁻¹	3.02x10 ⁻²
Mega 2.5	4.5	166	266486	9122	1335	1.11x10 ⁻¹	3.31x10 ⁻²
Mega 2.5	5.0	169	265092	9809	1332	1.13x10 ⁻¹	3.57x10 ⁻²
H3A	0.5	316	277875	825	1198	2.09x10 ⁻¹	2.96x10 ⁻³
H3A	1.0	414	276580	1870	1103	2.73x10 ⁻¹	6.72x10 ⁻³
H3A	1.5	465	275228	2944	1053	3.06x10 ⁻¹	1.06x10 ⁻²
H3A	2.0	496	273855	3985	1024	3.26x10 ⁻¹	1.43x10 ⁻²
H3A	2.5	513	272473	5062	1011	3.37x10 ⁻¹	1.82x10 ⁻²
H3A	3.0	526	271089	6106	1000	3.45x10 ⁻¹	2.20x10 ⁻²
H3A	3.5	541	269709	7102	985	3.55x10 ⁻¹	2.57x10 ⁻²
H3A	4.0	548	268328	8116	978	3.59x10 ⁻¹	2.94x10 ⁻²
H3A	4.5	556	266939	9106	970	3.64x10 ⁻¹	3.30x10 ⁻²
H3A	5.0	561	265530	10062	965	3.68x10 ⁻¹	3.65x10 ⁻²
PanAFR	0.5	364	277922	791	1160	2.39x10 ⁻¹	2.84x10 ⁻³
PanAFR	1.0	471	276653	1795	1057	3.08x10 ⁻¹	6.45x10 ⁻³
PanAFR	1.5	532	275316	2864	997	3.48x10 ⁻¹	1.03x10 ⁻²
PanAFR	2.0	563	273946	3932	967	3.68x10 ⁻¹	1.42x10 ⁻²
PanAFR	2.5	592	272569	4931	938	3.87x10 ⁻¹	1.78x10 ⁻²
PanAFR	3.0	606	271179	5938	924	3.96x10 ⁻¹	2.14x10 ⁻²
PanAFR	3.5	625	269803	6944	906	4.08x10 ⁻¹	2.51x10 ⁻²
PanAFR	4.0	635	268412	7935	897	4.14x10 ⁻¹	2.87x10 ⁻²
PanAFR	4.5	646	267021	8912	886	4.22x10 ⁻¹	3.23x10 ⁻²
PanAFR	5.0	658	265632	9840	876	4.29x10 ⁻¹	3.57x10 ⁻²
Omni 2.5	0.5	298	277852	814	1213	1.97x10 ⁻¹	2.92x10 ⁻³
Omni 2.5	1.0	401	276564	1850	1113	2.65x10 ⁻¹	6.64x10 ⁻³
Omni 2.5	1.5	452	275213	2918	1065	2.98x10 ⁻¹	1.05x10 ⁻²
Omni 2.5	2.0	487	273844	4000	1033	3.20x10 ⁻¹	1.44x10 ⁻²
Omni 2.5	2.5	503	272459	5065	1019	3.30x10 ⁻¹	1.83x10 ⁻²
Omni 2.5	3.0	518	271071	6083	1005	3.40x10 ⁻¹	2.19x10 ⁻²
Omni 2.5	3.5	532	269678	7115	991	3.49x10 ⁻¹	2.57x10 ⁻²
Omni 2.5	4.0	546	268289	8129	979	3.58x10 ⁻¹	2.94x10 ⁻²
Omni 2.5	4.5	551	266885	9112	974	3.61x10 ⁻¹	3.30x10 ⁻²
Omni 2.5	5.0	557	265493	10109	970	3.65x10 ⁻¹	3.67x10 ⁻²
Omni 5	0.5	369	277975	675	1155	2.42x10 ⁻¹	2.42x10 ⁻³
Omni 5	1.0	523	276754	1566	1011	3.41x10 ⁻¹	5.63x10 ⁻³
Omni 5	1.5	615	275465	2501	929	3.98x10 ⁻¹	9.00x10 ⁻³
Omni 5	2.0	684	274144	3436	864	4.42x10 ⁻¹	1.24x10 ⁻²
Omni 5	2.5	721	272778	4401	830	4.65x10 ⁻¹	1.59x10 ⁻²
Omni 5	3.0	751	271417	5373	803	4.83x10 ⁻¹	1.94x10 ⁻²
Omni 5	3.5	776	270046	6296	779	4.99x10 ⁻¹	2.28x10 ⁻²
Omni 5	4.0	791	268667	7253	765	5.08x10 ⁻¹	2.63x10 ⁻²
Omni 5	4.5	799	267270	8212	758	5.13x10 ⁻¹	2.98x10 ⁻²
Omni 5	5.0	806	265873	9195	751	5.18x10 ⁻¹	3.34x10 ⁻²

Appendix 2.5

a. XP-EHH; Ethiopia & Zulu

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	62	265562	1266	1173	5.02x10 ⁻²	4.74x10 ⁻³
Affy 6	1.0	64	264214	2574	1171	5.18x10 ⁻²	9.65x10 ⁻³
Affy 6	1.5	64	262849	3850	1171	5.18x10 ⁻²	1.44x10 ⁻²
Affy 6	2.0	64	261500	5078	1171	5.18x10 ⁻²	1.90x10 ⁻²
Affy 6	2.5	64	260143	6267	1171	5.18x10 ⁻²	2.35x10 ⁻²
Affy 6	3.0	65	258816	7423	1170	5.26x10 ⁻²	2.79x10 ⁻²
Affy 6	3.5	72	257593	7895	1163	5.83x10 ⁻²	2.97x10 ⁻²
Affy 6	4.0	74	256331	7940	1161	5.99x10 ⁻²	3.00x10 ⁻²
Affy 6	4.5	74	255668	7973	1161	5.99x10 ⁻²	3.02x10 ⁻²
Affy 6	5.0	75	255543	7976	1160	6.07x10 ⁻²	3.03x10 ⁻²
Omni 1	0.5	52	265532	945	1182	4.21x10 ⁻²	3.55x10 ⁻³
Omni 1	1.0	56	264163	2063	1178	4.54x10 ⁻²	7.75x10 ⁻³
Omni 1	1.5	58	262779	3149	1176	4.70x10 ⁻²	1.18x10 ⁻²
Omni 1	2.0	58	261397	4188	1176	4.70x10 ⁻²	1.58x10 ⁻²
Omni 1	2.5	59	260015	5130	1175	4.78x10 ⁻²	1.93x10 ⁻²
Omni 1	3.0	59	258640	6057	1175	4.78x10 ⁻²	2.29x10 ⁻²
Omni 1	3.5	59	257265	6787	1175	4.78x10 ⁻²	2.57x10 ⁻²
Omni 1	4.0	69	256009	6895	1167	5.58x10 ⁻²	2.62x10 ⁻²
Omni 1	4.5	70	254701	6946	1166	5.66x10 ⁻²	2.65x10 ⁻²
Omni 1	5.0	70	254304	6949	1166	5.66x10 ⁻²	2.66x10 ⁻²
Mega 2.5	0.5	116	265582	1055	1122	9.37x10 ⁻²	3.96x10 ⁻³
Mega 2.5	1.0	126	264216	2203	1113	1.02x10 ⁻¹	8.27x10 ⁻³
Mega 2.5	1.5	130	262829	3349	1109	1.05x10 ⁻¹	1.26x10 ⁻²
Mega 2.5	2.0	134	261455	4464	1105	1.08x10 ⁻¹	1.68x10 ⁻²
Mega 2.5	2.5	135	260075	5498	1104	1.09x10 ⁻¹	2.07x10 ⁻²
Mega 2.5	3.0	137	258708	6512	1102	1.11x10 ⁻¹	2.46x10 ⁻²
Mega 2.5	3.5	138	257335	7451	1101	1.11x10 ⁻¹	2.81x10 ⁻²
Mega 2.5	4.0	139	255962	8319	1100	1.12x10 ⁻¹	3.15x10 ⁻²
Mega 2.5	4.5	139	254588	9115	1100	1.12x10 ⁻¹	3.46x10 ⁻²
Mega 2.5	5.0	139	253200	9795	1100	1.12x10 ⁻¹	3.72x10 ⁻²
H3A	0.5	319	265911	820	940	2.53x10 ⁻¹	3.07x10 ⁻³
H3A	1.0	414	264667	1809	850	3.28x10 ⁻¹	6.79x10 ⁻³
H3A	1.5	465	263356	2801	804	3.66x10 ⁻¹	1.05x10 ⁻²
H3A	2.0	481	262042	3845	791	3.78x10 ⁻¹	1.45x10 ⁻²
H3A	2.5	485	260697	4849	787	3.81x10 ⁻¹	1.83x10 ⁻²
H3A	3.0	490	259355	5835	782	3.85x10 ⁻¹	2.20x10 ⁻²
H3A	3.5	496	258004	6823	776	3.90x10 ⁻¹	2.58x10 ⁻²
H3A	4.0	503	256649	7758	769	3.95x10 ⁻¹	2.93x10 ⁻²
H3A	4.5	505	255280	8712	767	3.97x10 ⁻¹	3.30x10 ⁻²
H3A	5.0	505	253925	9675	767	3.97x10 ⁻¹	3.67x10 ⁻²
PanAFR	0.5	382	266026	658	883	3.02x10 ⁻¹	2.47x10 ⁻³
PanAFR	1.0	515	264837	1522	758	4.05x10 ⁻¹	5.71x10 ⁻³
PanAFR	1.5	590	263575	2404	684	4.63x10 ⁻¹	9.04x10 ⁻³
PanAFR	2.0	633	262281	3278	644	4.96x10 ⁻¹	1.23x10 ⁻²
PanAFR	2.5	659	260966	4185	618	5.16x10 ⁻¹	1.58x10 ⁻²
PanAFR	3.0	677	259639	5098	604	5.28x10 ⁻¹	1.93x10 ⁻²
PanAFR	3.5	690	258299	5978	593	5.38x10 ⁻¹	2.26x10 ⁻²
PanAFR	4.0	695	256975	6851	587	5.42x10 ⁻¹	2.60x10 ⁻²
PanAFR	4.5	697	255623	7699	585	5.44x10 ⁻¹	2.92x10 ⁻²
PanAFR	5.0	700	254283	8528	582	5.46x10 ⁻¹	3.24x10 ⁻²
Omni 2.5	0.5	318	265857	818	948	2.51x10 ⁻¹	3.07x10 ⁻³
Omni 2.5	1.0	395	264589	1851	876	3.11x10 ⁻¹	6.95x10 ⁻³
Omni 2.5	1.5	436	263280	2860	840	3.42x10 ⁻¹	1.07x10 ⁻²
Omni 2.5	2.0	447	261942	3890	830	3.50x10 ⁻¹	1.46x10 ⁻²
Omni 2.5	2.5	458	260598	4921	821	3.58x10 ⁻¹	1.85x10 ⁻²
Omni 2.5	3.0	467	259233	5918	812	3.65x10 ⁻¹	2.23x10 ⁻²
Omni 2.5	3.5	473	257872	6912	807	3.70x10 ⁻¹	2.61x10 ⁻²
Omni 2.5	4.0	475	256517	7924	806	3.71x10 ⁻¹	3.00x10 ⁻²
Omni 2.5	4.5	477	255160	8926	804	3.72x10 ⁻¹	3.38x10 ⁻²
Omni 2.5	5.0	481	253794	9903	800	3.75x10 ⁻¹	3.76x10 ⁻²
Omni 5	0.5	408	266075	637	871	3.19x10 ⁻¹	2.39x10 ⁻³
Omni 5	1.0	552	264894	1466	743	4.26x10 ⁻¹	5.50x10 ⁻³
Omni 5	1.5	627	263631	2361	678	4.80x10 ⁻¹	8.88x10 ⁻³
Omni 5	2.0	674	262328	3284	638	5.14x10 ⁻¹	1.24x10 ⁻²
Omni 5	2.5	701	261000	4207	614	5.33x10 ⁻¹	1.59x10 ⁻²
Omni 5	3.0	724	259678	5105	595	5.49x10 ⁻¹	1.93x10 ⁻²
Omni 5	3.5	747	258348	5987	574	5.65x10 ⁻¹	2.26x10 ⁻²
Omni 5	4.0	757	256992	6905	565	5.73x10 ⁻¹	2.62x10 ⁻²
Omni 5	4.5	771	255660	7758	551	5.83x10 ⁻¹	2.95x10 ⁻²
Omni 5	5.0	779	254315	8638	544	5.89x10 ⁻¹	3.28x10 ⁻²

b. Tajima’s D; Baganda

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	4	260897	23	2058	1.94x10 ⁻³	8.81x10 ⁻⁵
Affy 6	1.0	5	260869	50	2057	2.42x10 ⁻³	1.92x10 ⁻⁴
Affy 6	1.5	5	260840	79	2057	2.42x10 ⁻³	3.03x10 ⁻⁴
Affy 6	2.0	6	260811	108	2056	2.91x10 ⁻³	4.14x10 ⁻⁴
Affy 6	2.5	6	260782	137	2056	2.91x10 ⁻³	5.25x10 ⁻⁴
Affy 6	3.0	6	260753	165	2056	2.91x10 ⁻³	6.32x10 ⁻⁴
Affy 6	3.5	6	260723	194	2056	2.91x10 ⁻³	7.44x10 ⁻⁴
Affy 6	4.0	6	260694	223	2056	2.91x10 ⁻³	8.55x10 ⁻⁴
Affy 6	4.5	6	260665	252	2056	2.91x10 ⁻³	9.66x10 ⁻⁴
Affy 6	5.0	6	260636	281	2056	2.91x10 ⁻³	1.08x10 ⁻³
Omni 1	0.5	6	260894	22	2056	2.91x10 ⁻³	8.43x10 ⁻⁵
Omni 1	1.0	8	260859	53	2054	3.88x10 ⁻³	2.03x10 ⁻⁴
Omni 1	1.5	8	260822	84	2054	3.88x10 ⁻³	3.22x10 ⁻⁴
Omni 1	2.0	8	260785	114	2054	3.88x10 ⁻³	4.37x10 ⁻⁴
Omni 1	2.5	9	260749	139	2053	4.36x10 ⁻³	5.33x10 ⁻⁴
Omni 1	3.0	9	260712	165	2053	4.36x10 ⁻³	6.32x10 ⁻⁴
Omni 1	3.5	9	260675	192	2053	4.36x10 ⁻³	7.36x10 ⁻⁴
Omni 1	4.0	10	260639	215	2052	4.85x10 ⁻³	8.24x10 ⁻⁴
Omni 1	4.5	11	260603	242	2051	5.33x10 ⁻³	9.28x10 ⁻⁴
Omni 1	5.0	11	260566	270	2051	5.33x10 ⁻³	1.04x10 ⁻³
Mega 2.5	0.5	9	260870	47	2053	4.36x10 ⁻³	1.80x10 ⁻⁴
Mega 2.5	1.0	15	260814	103	2047	7.27x10 ⁻³	3.95x10 ⁻⁴
Mega 2.5	1.5	19	260756	157	2044	9.21x10 ⁻³	6.02x10 ⁻⁴
Mega 2.5	2.0	20	260695	214	2043	9.69x10 ⁻³	8.20x10 ⁻⁴
Mega 2.5	2.5	22	260637	268	2040	1.07x10 ⁻²	1.03x10 ⁻³
Mega 2.5	3.0	22	260575	329	2040	1.07x10 ⁻²	1.26x10 ⁻³
Mega 2.5	3.5	22	260514	386	2040	1.07x10 ⁻²	1.48x10 ⁻³
Mega 2.5	4.0	23	260453	443	2039	1.12x10 ⁻²	1.70x10 ⁻³
Mega 2.5	4.5	24	260392	500	2038	1.16x10 ⁻²	1.92x10 ⁻³
Mega 2.5	5.0	24	260330	562	2038	1.16x10 ⁻²	2.15x10 ⁻³
H3A	0.5	21	260684	202	2041	1.02x10 ⁻²	7.74x10 ⁻⁴
H3A	1.0	31	260432	416	2031	1.50x10 ⁻²	1.59x10 ⁻³
H3A	1.5	38	260177	644	2024	1.84x10 ⁻²	2.47x10 ⁻³
H3A	2.0	39	259915	860	2023	1.89x10 ⁻²	3.30x10 ⁻³
H3A	2.5	39	259653	1094	2023	1.89x10 ⁻²	4.20x10 ⁻³
H3A	3.0	41	259393	1334	2021	1.99x10 ⁻²	5.12x10 ⁻³
H3A	3.5	42	259131	1555	2020	2.04x10 ⁻²	5.97x10 ⁻³
H3A	4.0	42	258869	1790	2020	2.04x10 ⁻²	6.87x10 ⁻³
H3A	4.5	44	258609	2022	2018	2.13x10 ⁻²	7.76x10 ⁻³
H3A	5.0	44	258346	2262	2018	2.13x10 ⁻²	8.68x10 ⁻³
PanAFR	0.5	31	260589	328	2031	1.50x10 ⁻²	1.26x10 ⁻³
PanAFR	1.0	41	260234	677	2021	1.99x10 ⁻²	2.59x10 ⁻³
PanAFR	1.5	47	259875	1025	2015	2.28x10 ⁻²	3.93x10 ⁻³
PanAFR	2.0	53	259517	1369	2009	2.57x10 ⁻²	5.25x10 ⁻³
PanAFR	2.5	58	259157	1711	2004	2.81x10 ⁻²	6.56x10 ⁻³
PanAFR	3.0	61	258795	2052	2001	2.96x10 ⁻²	7.87x10 ⁻³
PanAFR	3.5	63	258433	2399	1999	3.06x10 ⁻²	9.20x10 ⁻³
PanAFR	4.0	63	258068	2742	1999	3.06x10 ⁻²	1.05x10 ⁻²
PanAFR	4.5	65	257705	3078	1997	3.15x10 ⁻²	1.18x10 ⁻²
PanAFR	5.0	70	257346	3420	1992	3.39x10 ⁻²	1.31x10 ⁻²
Omni 2.5	0.5	36	260668	245	2026	1.75x10 ⁻²	9.39x10 ⁻⁴
Omni 2.5	1.0	44	260385	524	2019	2.13x10 ⁻²	2.01x10 ⁻³
Omni 2.5	1.5	48	260097	793	2015	2.33x10 ⁻²	3.04x10 ⁻³
Omni 2.5	2.0	51	259809	1070	2012	2.47x10 ⁻²	4.10x10 ⁻³
Omni 2.5	2.5	54	259521	1341	2009	2.62x10 ⁻²	5.14x10 ⁻³
Omni 2.5	3.0	54	259229	1623	2009	2.62x10 ⁻²	6.22x10 ⁻³
Omni 2.5	3.5	56	258940	1897	2007	2.71x10 ⁻²	7.27x10 ⁻³
Omni 2.5	4.0	56	258648	2175	2007	2.71x10 ⁻²	8.34x10 ⁻³
Omni 2.5	4.5	58	258359	2447	2005	2.81x10 ⁻²	9.38x10 ⁻³
Omni 2.5	5.0	58	258068	2711	2005	2.81x10 ⁻²	1.04x10 ⁻²
Omni 5	0.5	86	260495	411	1976	4.17x10 ⁻²	1.58x10 ^{-3</}

Appendix 2.6

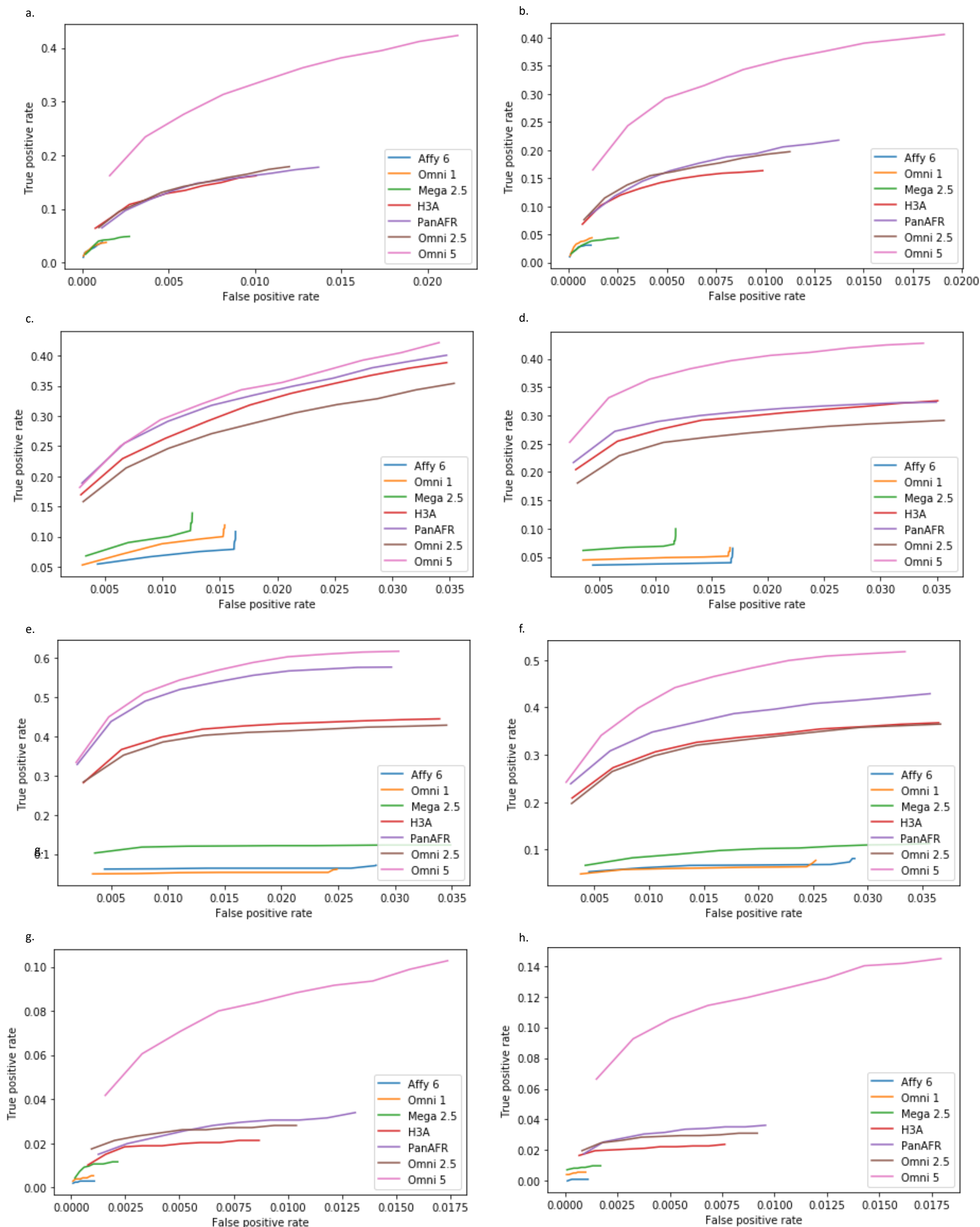
a. Tajima’s D; Ethiopia

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	0	260333	28	1933	0.00x10 ⁰	1.08x10 ⁻⁴
Affy 6	1.0	1	260306	55	1931	5.18x10 ⁻⁴	2.11x10 ⁻⁴
Affy 6	1.5	2	260278	83	1930	1.04x10 ⁻³	3.19x10 ⁻⁴
Affy 6	2.0	2	260249	112	1930	1.04x10 ⁻³	4.30x10 ⁻⁴
Affy 6	2.5	2	260220	141	1930	1.04x10 ⁻³	5.42x10 ⁻⁴
Affy 6	3.0	2	260190	170	1930	1.04x10 ⁻³	6.53x10 ⁻⁴
Affy 6	3.5	2	260161	199	1930	1.04x10 ⁻³	7.64x10 ⁻⁴
Affy 6	4.0	2	260132	227	1930	1.04x10 ⁻³	8.72x10 ⁻⁴
Affy 6	4.5	2	260103	256	1930	1.04x10 ⁻³	9.83x10 ⁻⁴
Affy 6	5.0	2	260074	285	1930	1.04x10 ⁻³	1.09x10 ⁻³
Omni 1	0.5	8	260338	18	1925	4.14x10 ⁻³	6.91x10 ⁻⁵
Omni 1	1.0	8	260303	49	1925	4.14x10 ⁻³	1.88x10 ⁻⁴
Omni 1	1.5	9	260268	77	1924	4.66x10 ⁻³	2.96x10 ⁻⁴
Omni 1	2.0	10	260233	107	1923	5.17x10 ⁻³	4.11x10 ⁻⁴
Omni 1	2.5	10	260197	134	1923	5.17x10 ⁻³	5.15x10 ⁻⁴
Omni 1	3.0	11	260162	158	1922	5.69x10 ⁻³	6.07x10 ⁻⁴
Omni 1	3.5	11	260126	183	1922	5.69x10 ⁻³	7.03x10 ⁻⁴
Omni 1	4.0	11	260089	210	1922	5.69x10 ⁻³	8.07x10 ⁻⁴
Omni 1	4.5	11	260053	236	1922	5.69x10 ⁻³	9.07x10 ⁻⁴
Omni 1	5.0	11	260017	256	1922	5.69x10 ⁻³	9.84x10 ⁻⁴
Mega 2.5	0.5	14	260329	23	1918	7.25x10 ⁻³	8.83x10 ⁻⁵
Mega 2.5	1.0	15	260279	64	1917	7.76x10 ⁻³	2.46x10 ⁻⁴
Mega 2.5	1.5	16	260228	108	1916	8.28x10 ⁻³	4.15x10 ⁻⁴
Mega 2.5	2.0	16	260176	156	1916	8.28x10 ⁻³	5.99x10 ⁻⁴
Mega 2.5	2.5	17	260125	203	1915	8.80x10 ⁻³	7.80x10 ⁻⁴
Mega 2.5	3.0	17	260073	250	1915	8.80x10 ⁻³	9.60x10 ⁻⁴
Mega 2.5	3.5	18	260023	297	1914	9.32x10 ⁻³	1.14x10 ⁻³
Mega 2.5	4.0	19	259972	343	1913	9.83x10 ⁻³	1.32x10 ⁻³
Mega 2.5	4.5	19	259920	392	1913	9.83x10 ⁻³	1.51x10 ⁻³
Mega 2.5	5.0	19	259868	442	1913	9.83x10 ⁻³	1.70x10 ⁻³
H3A	0.5	32	260176	174	1900	1.66x10 ⁻²	6.68x10 ⁻⁴
H3A	1.0	38	259961	373	1894	1.97x10 ⁻²	1.43x10 ⁻³
H3A	1.5	39	259741	580	1893	2.02x10 ⁻²	2.23x10 ⁻³
H3A	2.0	40	259522	783	1892	2.07x10 ⁻²	3.01x10 ⁻³
H3A	2.5	41	259302	987	1891	2.12x10 ⁻²	3.79x10 ⁻³
H3A	3.0	43	259083	1181	1889	2.23x10 ⁻²	4.54x10 ⁻³
H3A	3.5	43	258863	1385	1889	2.23x10 ⁻²	5.32x10 ⁻³
H3A	4.0	44	258643	1585	1888	2.28x10 ⁻²	6.09x10 ⁻³
H3A	4.5	44	258422	1786	1888	2.28x10 ⁻²	6.86x10 ⁻³
H3A	5.0	46	258204	1984	1886	2.38x10 ⁻²	7.63x10 ⁻³
PanAFR	0.5	34	260127	231	1898	1.76x10 ⁻²	8.87x10 ⁻⁴
PanAFR	1.0	49	259871	480	1883	2.54x10 ⁻²	1.84x10 ⁻³
PanAFR	1.5	54	259605	730	1878	2.80x10 ⁻²	2.80x10 ⁻³
PanAFR	2.0	59	259339	981	1873	3.05x10 ⁻²	3.77x10 ⁻³
PanAFR	2.5	61	259070	1239	1871	3.16x10 ⁻²	4.76x10 ⁻³
PanAFR	3.0	65	258803	1490	1867	3.36x10 ⁻²	5.72x10 ⁻³
PanAFR	3.5	66	258533	1741	1866	3.42x10 ⁻²	6.69x10 ⁻³
PanAFR	4.0	68	258264	1988	1864	3.52x10 ⁻²	7.64x10 ⁻³
PanAFR	4.5	68	257993	2239	1864	3.52x10 ⁻²	8.60x10 ⁻³
PanAFR	5.0	70	257724	2490	1862	3.62x10 ⁻²	9.57x10 ⁻³
Omni 2.5	0.5	38	260144	210	1894	1.97x10 ⁻²	8.07x10 ⁻⁴
Omni 2.5	1.0	48	259896	450	1884	2.48x10 ⁻²	1.73x10 ⁻³
Omni 2.5	1.5	51	259641	703	1881	2.64x10 ⁻²	2.70x10 ⁻³
Omni 2.5	2.0	55	259388	948	1877	2.85x10 ⁻²	3.64x10 ⁻³
Omni 2.5	2.5	56	259131	1191	1876	2.90x10 ⁻²	4.58x10 ⁻³
Omni 2.5	3.0	57	258874	1435	1875	2.95x10 ⁻²	5.51x10 ⁻³
Omni 2.5	3.5	57	258615	1675	1875	2.95x10 ⁻²	6.44x10 ⁻³
Omni 2.5	4.0	58	258358	1921	1874	3.00x10 ⁻²	7.38x10 ⁻³
Omni 2.5	4.5	60	258102	2159	1872	3.11x10 ⁻²	8.30x10 ⁻³
Omni 2.5	5.0	60	257844	2388	1872	3.11x10 ⁻²	9.18x10 ⁻³
Omni 5	0.5	128	259958	389	1804	6.63x10 ⁻²	1.49x10 ⁻³
Omni 5	1.0	179	259475	846	1755	9.26x10 ⁻²	3.25x10 ⁻³
Omni 5	1.5	204	258970	1311	1731	1.05x10 ⁻¹	5.04x10 ⁻³
Omni 5	2.0	221	258456	1775	1713	1.14x10 ⁻¹	6.82x10 ⁻³
Omni 5	2.5	231	257933	2266	1703	1.19x10 ⁻¹	8.71x10 ⁻³
Omni 5	3.0	243	257411	2754	1691	1.26x10 ⁻¹	1.06x10 ⁻²
Omni 5	3.5	255	256888	3241	1679	1.32x10 ⁻¹	1.25x10 ⁻²
Omni 5	4.0	271	256369	3715	1663	1.40x10 ⁻¹	1.43x10 ⁻²
Omni 5	4.5	274	255837	4195	1660	1.42x10 ⁻¹	1.61x10 ⁻²
Omni 5	5.0	280	255307	4665	1654	1.45x10 ⁻¹	1.79x10 ⁻²

b. Tajima’s D; Zulu

Array	Outlier %	TP	TN	FP	FN	TPR	FPR
Affy 6	0.5	4	260889	22	2063	1.94x10 ⁻³	8.43x10 ⁻⁵
Affy 6	1.0	5	260862	49	2062	2.42x10 ⁻³	1.88x10 ⁻⁴
Affy 6	1.5	5	260834	76	2062	2.42x10 ⁻³	2.91x10 ⁻⁴
Affy 6	2.0	5	260806	104	2062	2.42x10 ⁻³	3.99x10 ⁻⁴
Affy 6	2.5	5	260778	131	2062	2.42x10 ⁻³	5.02x10 ⁻⁴
Affy 6	3.0	5	260750	158	2062	2.42x10 ⁻³	6.06x10 ⁻⁴
Affy 6	3.5	5	260722	185	2062	2.42x10 ⁻³	7.09x10 ⁻⁴
Affy 6	4.0	5	260694	211	2062	2.42x10 ⁻³	8.09x10 ⁻⁴
Affy 6	4.5	5	260666	239	2062	2.42x10 ⁻³	9.16x10 ⁻⁴
Affy 6	5.0	5	260638	266	2062	2.42x10 ⁻³	1.02x10 ⁻³
Omni 1	0.5	12	260891	17	2055	5.81x10 ⁻³	6.52x10 ⁻⁵
Omni 1	1.0	15	260859	45	2052	7.26x10 ⁻³	1.72x10 ⁻⁴
Omni 1	1.5	17	260826	72	2050	8.22x10 ⁻³	2.76x10 ⁻⁴
Omni 1	2.0	18	260791	98	2049	8.71x10 ⁻³	3.76x10 ⁻⁴
Omni 1	2.5	18	260755	132	2049	8.71x10 ⁻³	5.06x10 ⁻⁴
Omni 1	3.0	18	260720	157	2049	8.71x10 ⁻³	6.02x10 ⁻⁴
Omni 1	3.5	19	260685	184	2048	9.19x10 ⁻³	7.05x10 ⁻⁴
Omni 1	4.0	19	260649	211	2048	9.19x10 ⁻³	8.09x10 ⁻⁴
Omni 1	4.5	19	260614	240	2048	9.19x10 ⁻³	9.20x10 ⁻⁴
Omni 1	5.0	19	260578	263	2048	9.19x10 ⁻³	1.01x10 ⁻³
Mega 2.5	0.5	9	260868	39	2058	4.35x10 ⁻³	1.49x10 ⁻⁴
Mega 2.5	1.0	12	260814	92	2055	5.81x10 ⁻³	3.53x10 ⁻⁴
Mega 2.5	1.5	20	260765	139	2047	9.68x10 ⁻³	5.33x10 ⁻⁴
Mega 2.5	2.0	22	260711	191	2045	1.06x10 ⁻²	7.32x10 ⁻⁴
Mega 2.5	2.5	24	260656	241	2043	1.16x10 ⁻²	9.24x10 ⁻⁴
Mega 2.5	3.0	25	260600	295	2042	1.21x10 ⁻²	1.13x10 ⁻³
Mega 2.5	3.5	27	260546	345	2040	1.31x10 ⁻²	1.32x10 ⁻³
Mega 2.5	4.0	27	260489	400	2040	1.31x10 ⁻²	1.53x10 ⁻³
Mega 2.5	4.5	27	260432	454	2040	1.31x10 ⁻²	1.74x10 ⁻³
Mega 2.5	5.0	27	260376	507	2040	1.31x10 ⁻²	1.94x10 ⁻³
H3A	0.5	29	260689	184	2038	1.40x10 ⁻²	7.05x10 ⁻⁴
H3A	1.0	35	260440	406	2032	1.69x10 ⁻²	1.56x10 ⁻³
H3A	1.5	39	260189	628	2028	1.89x10 ⁻²	2.41x10 ⁻³
H3A	2.0	43	259938	862	2024	2.08x10 ⁻²	3.31x10 ⁻³
H3A	2.5	47	259688	1090	2020	2.27x10 ⁻²	4.18x10 ⁻³
H3A	3.0	47	259434	1319	2020	2.27x10 ⁻²	5.06x10 ⁻³
H3A	3.5	47	259179	1546	2020	2.27x10 ⁻²	5.93x10 ⁻³
H3A	4.0	48	258925	1780	2019	2.32x10 ⁻²	6.83x10 ⁻³
H3A	4.5	48	258670	2013	2019	2.32x10 ⁻²	7.72x10 ⁻³
H3A	5.0	48	258415	2254	2019	2.32x10 ⁻²	8.65x10 ⁻³
PanAFR	0.5	18	260576	334	2049	8.71x10 ⁻³	1.28x10 ⁻³
PanAFR	1.0	30	260233	673	2037	1.45x10 ⁻²	2.58x10 ⁻³
PanAFR	1.5	37	259885	1018	2030	1.79x10 ⁻²	3.90x10 ⁻³
PanAFR	2.0	43	259536	1352	2025	2.08x10 ⁻²	5.18x10 ⁻³
PanAFR	2.5	45	259183	1697	2023	2.18x10 ⁻²	6.50x10 ⁻³
PanAFR	3.0	47	258830	2035	2021	2.27x10 ⁻²	7.80x10 ⁻³
PanAFR	3.5	49	258477	2366	2019	2.37x10 ⁻²	9.07x10 ⁻³
PanAFR	4.0	51	258124	2691	2017	2.47x10 ⁻²	1.03x10 ⁻²
PanAFR	4.5	52	257770	3027	2016	2.51x10 ⁻²	1.16x10 ⁻²
PanAFR	5.0	53	257415	3364	2015	2.56x10 ⁻²	1.29x10 ⁻²
Omni 2.5	0.5	36	260673	231	2031	1.74x10 ⁻²	8.85x10 ⁻⁴
Omni 2.5	1.0	52	260412	484	2015	2.52x10 ⁻²	1.86x10 ⁻³
Omni 2.5	1.5	56	260140	746	2011	2.71x10 ⁻²	2.86x10 ⁻³
Omni 2.5	2.0	57	259864	1008	2010	2.76x10 ⁻²	3.86x10 ⁻³
Omni 2.5	2.5	59	259589	1271	2008	2.85x10 ⁻²	4.87x10 ⁻³
Omni 2.5	3.0	64	259318	1521	2003	3.10x10 ⁻²	5.83x10 ⁻³
Omni 2.5	3.5	64	259041	1784	2003	3.10x10 ⁻²	6.84x10 ⁻³
Omni 2.5	4.0	65	258766	2051	2002	3.14x10 ⁻²	7.86x10 ⁻³
Omni 2.5	4.5	65	258489	2314	2002	3.14x10 ⁻²	8.87x10 ⁻³
Omni 2.5	5.0	66	258213	2571	2001	3.19x10 ⁻²	9.86x10 ⁻³
Omni 5	0.5	114	260544	347	1955	5.51x10 ⁻²	1.33x10 ⁻³
Omni 5	1.0	149	260092	763	1921	7.20x10 ⁻²	2.92x10 ⁻³
Omni 5	1.5	170	259625	1205	1901	8.21x10 ⁻²	4.62x10 ⁻³
Omni 5	2.0	184	259154	1634	1887	8.88x10 ⁻²	6.27x10 ⁻³
Omni 5	2.5	200	258683	2060	1871	9.66x10 ⁻²	7.90x10 ⁻³
Omni 5	3.0	207	258203	2487	1864	1.00x10 ⁻¹	9.54x10 ⁻³
Omni 5	3.5	211	257721	2928	1860	1.02x10 ⁻¹	1.12x10 ⁻²
Omni 5	4.0	219	257241	3369	1852	1.06x10 ⁻¹	1.29x10 ⁻²
Omni 5	4.5	227	256762	3790	1844	1.10x10 ⁻¹	1.45x10 ⁻²
Omni 5	5.0	229	256276	4222	1842	1.11x10 ⁻¹	1.62x10 ⁻²

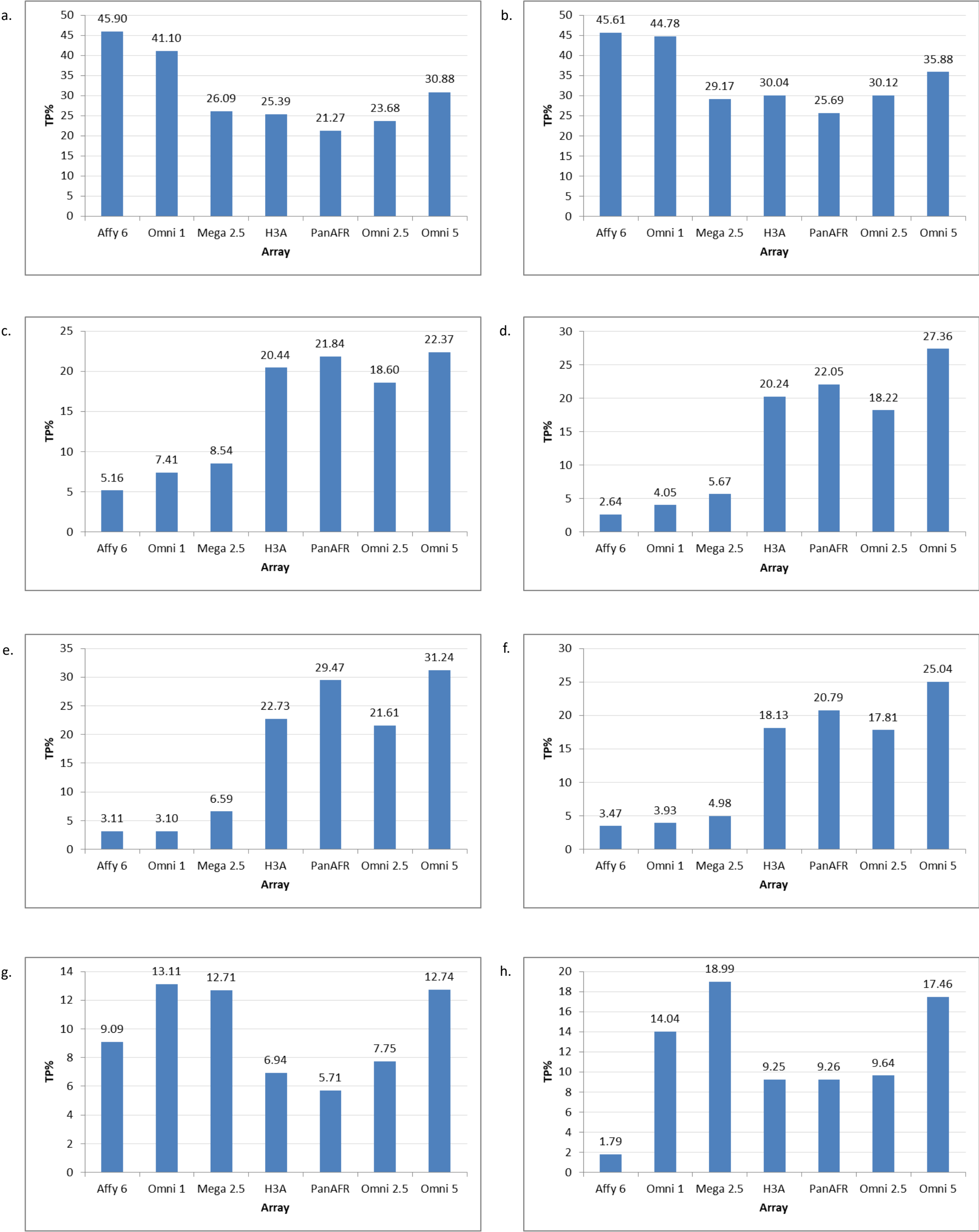
Appendix 3.



a. F_{ST} ; Baganda and Ethiopia
b. F_{ST} ; Baganda and Zulu
c. iHS; Baganda
d. iHS; Ethiopia

e. XP-EHH; Baganda and Ethiopia
f. XP-EHH; Baganda and Zulu
g. Tajima's D; Baganda
h. Tajima's D; Ethiopia

Appendix 4.

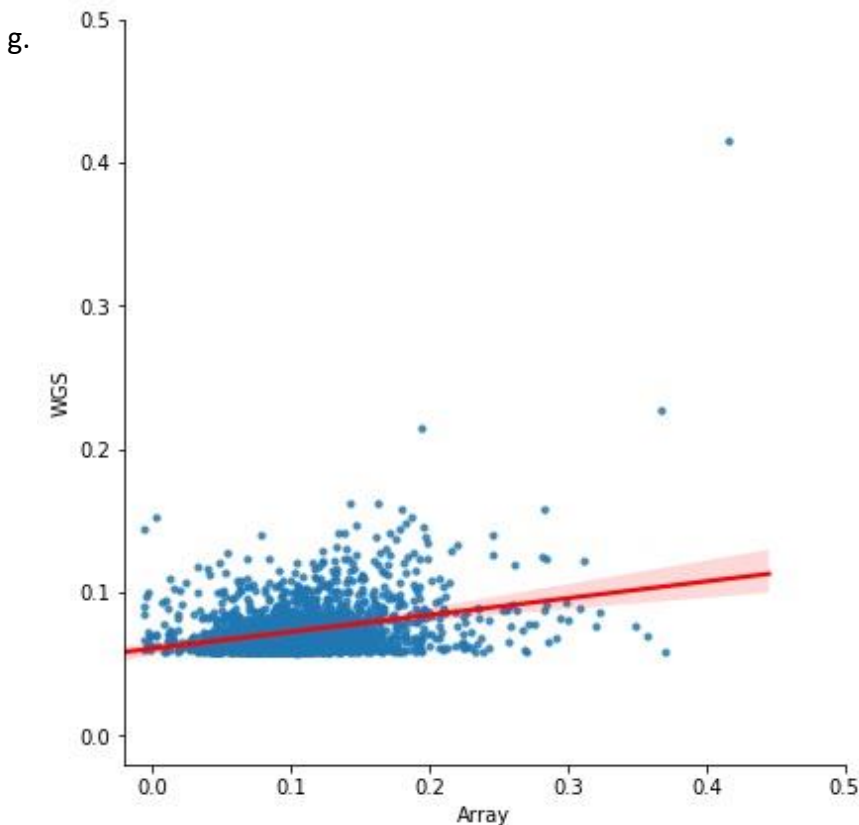
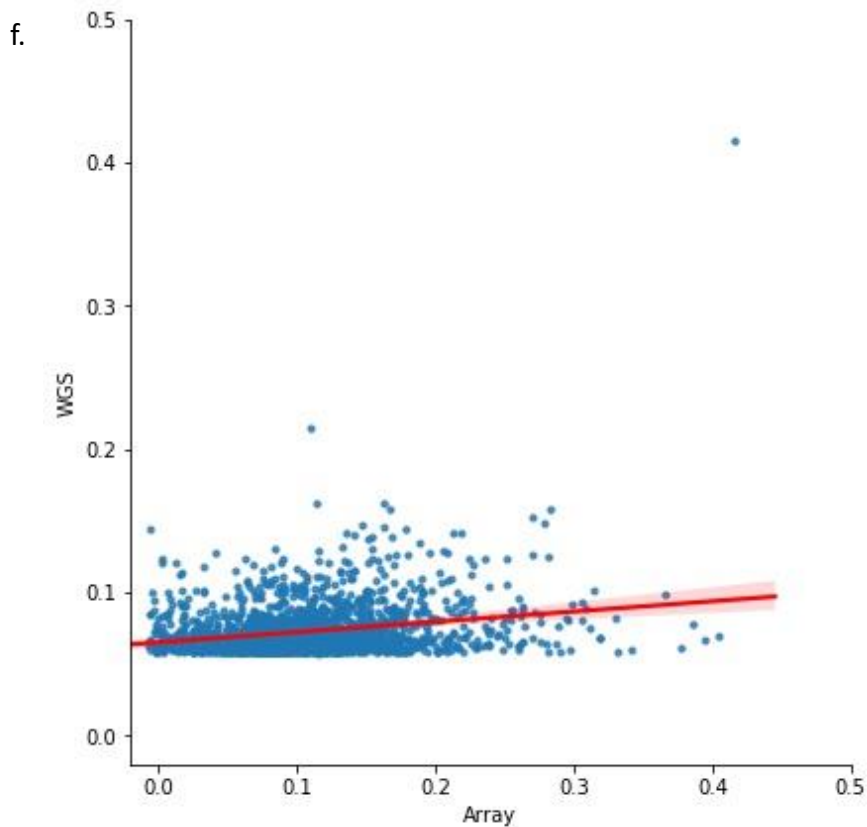
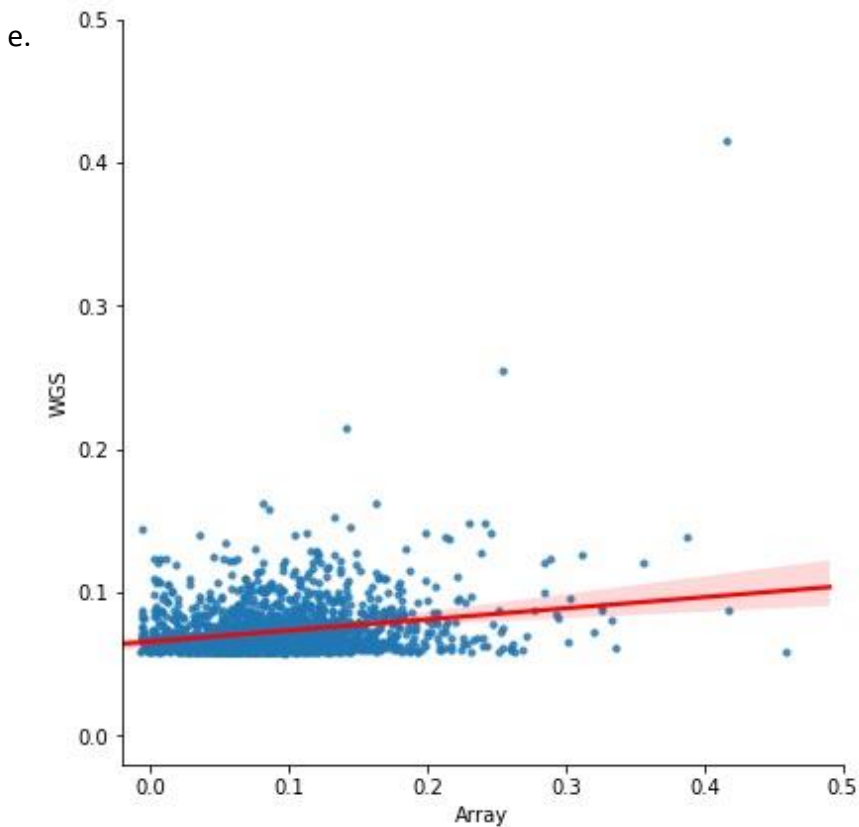
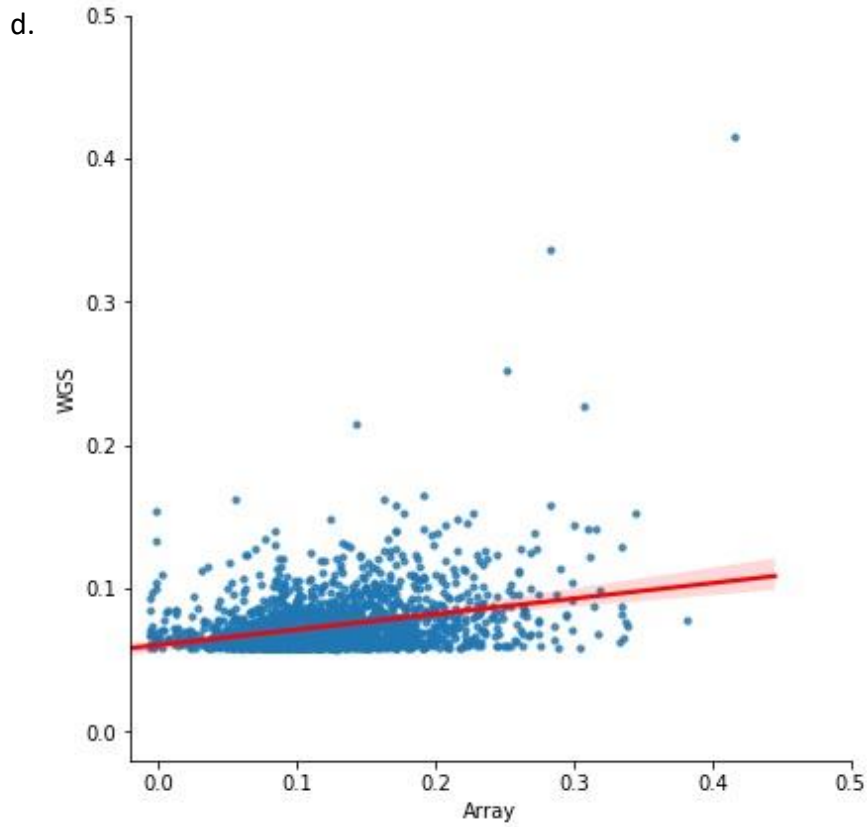
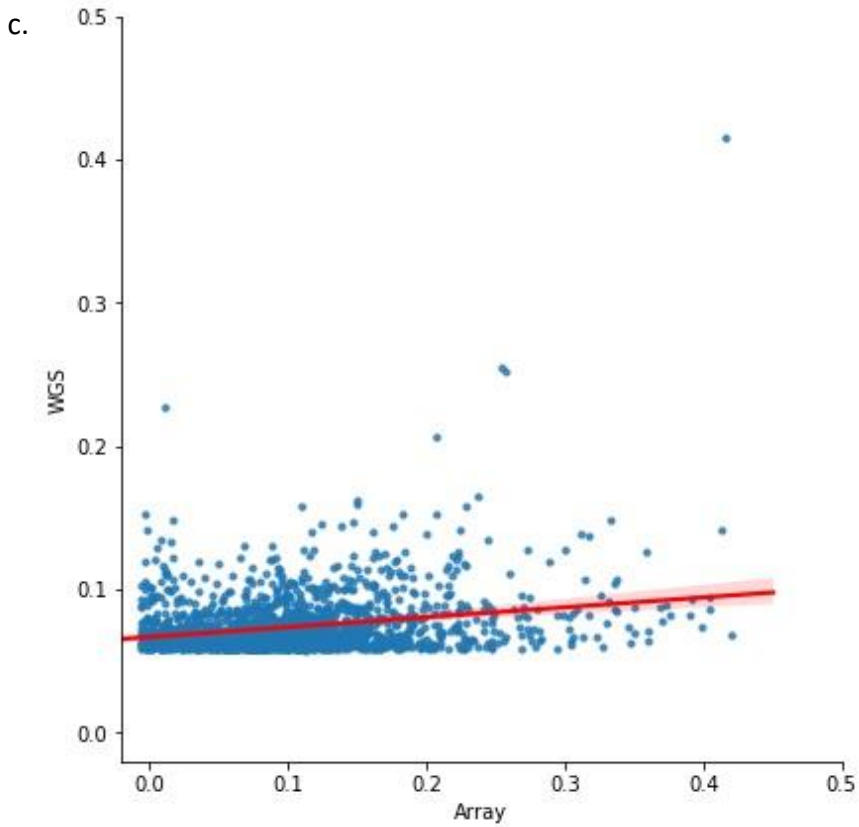
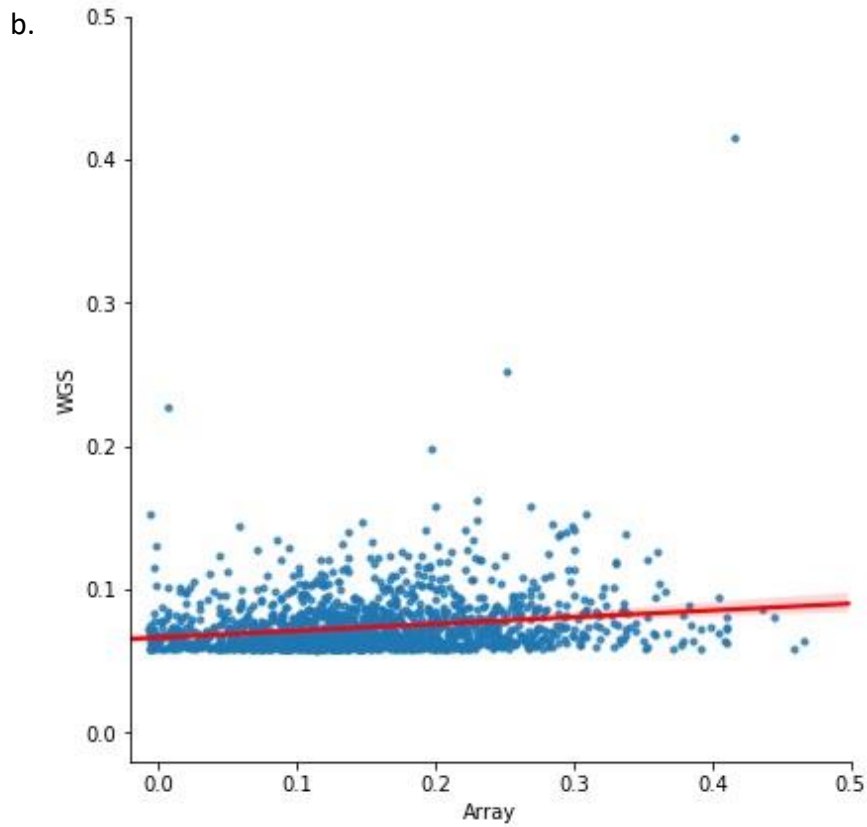
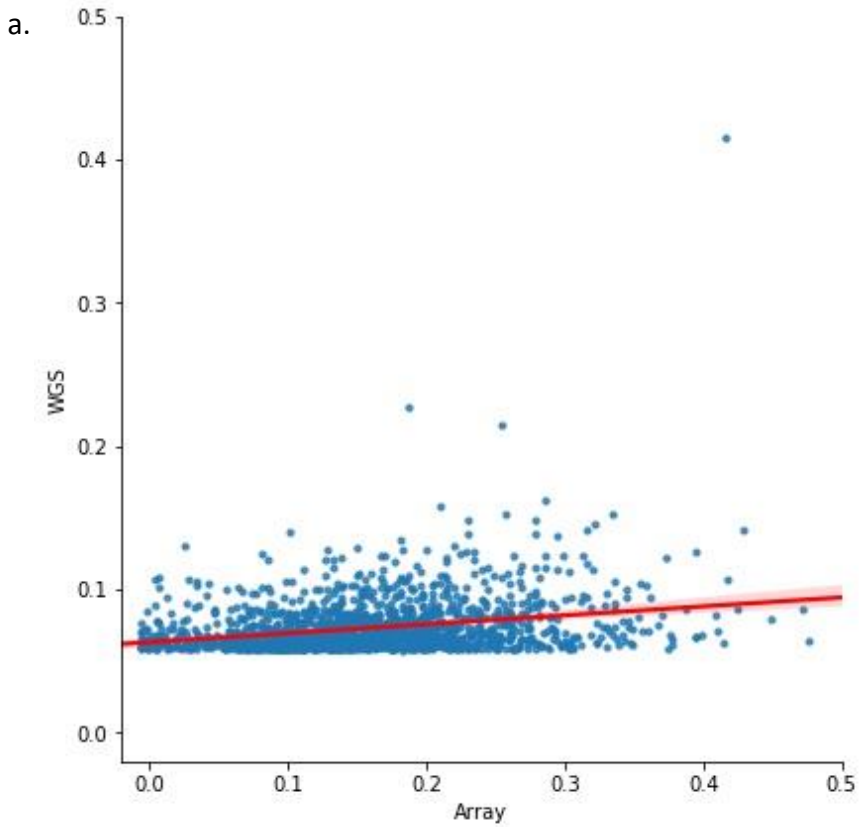


a. F_{ST} ; Baganda and Ethiopia
b. F_{ST} ; Baganda and Zulu
c. iHS ; Baganda
d. iHS ; Ethiopia
e. XP-EHH; Baganda and Ethiopia
f. XP-EHH; Baganda and Zulu
g. Tajima's D; Baganda
h. Tajima's D; Ethiopia

Appendix 5.

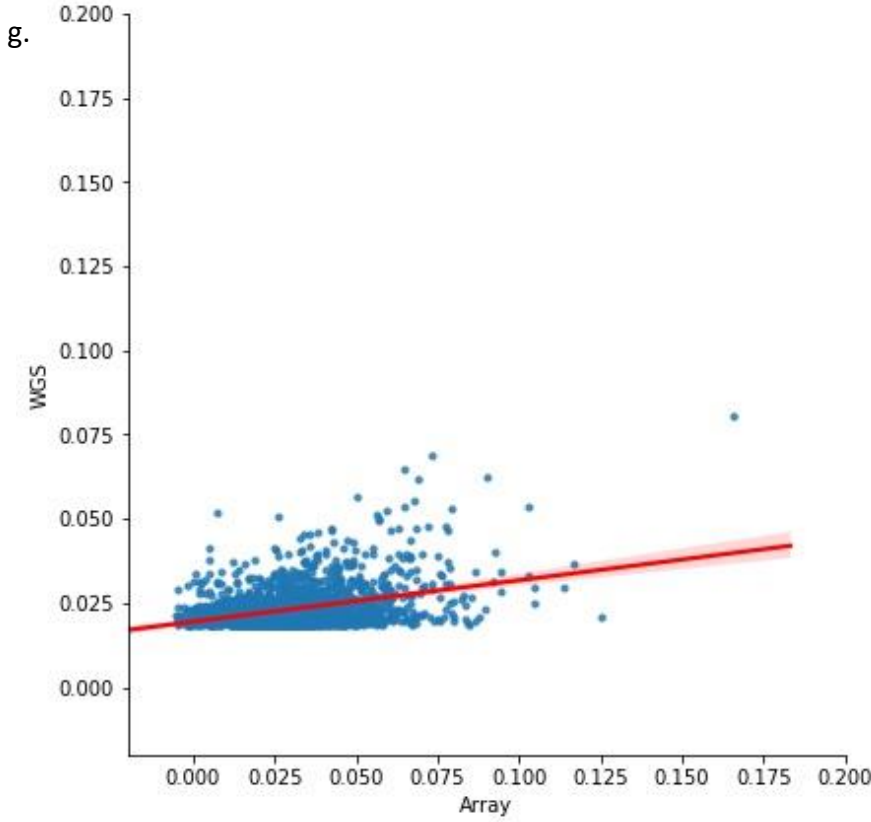
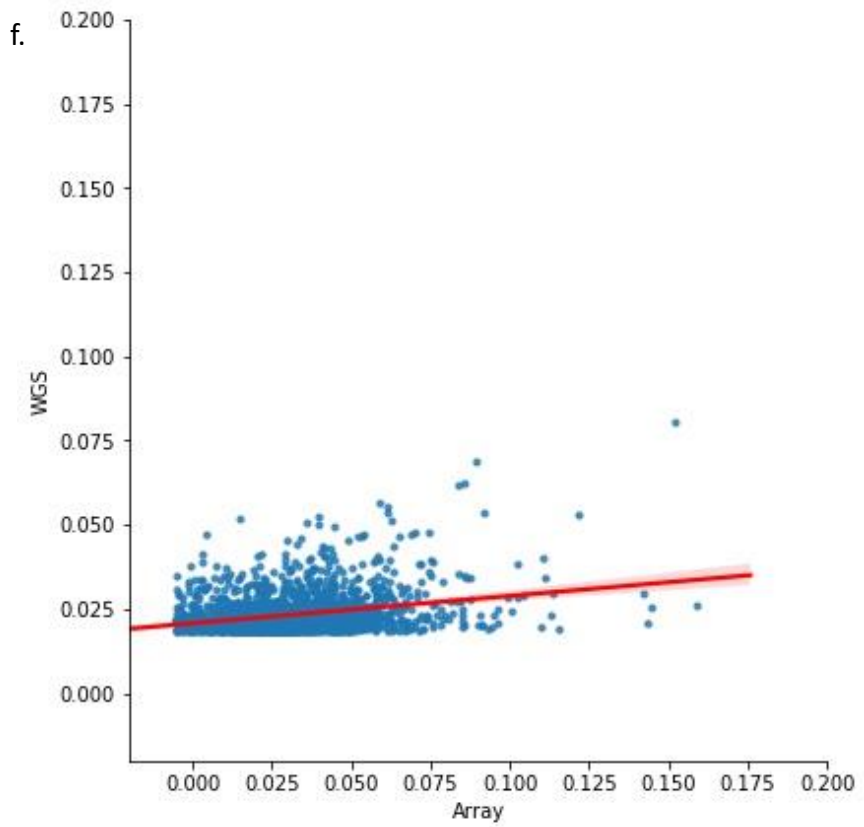
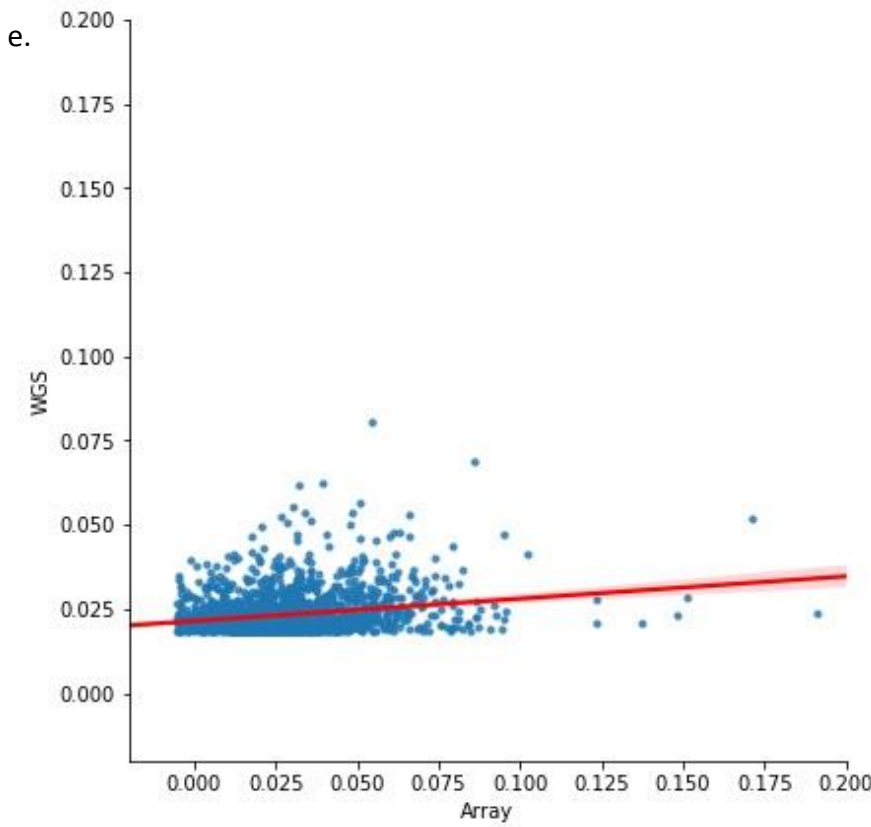
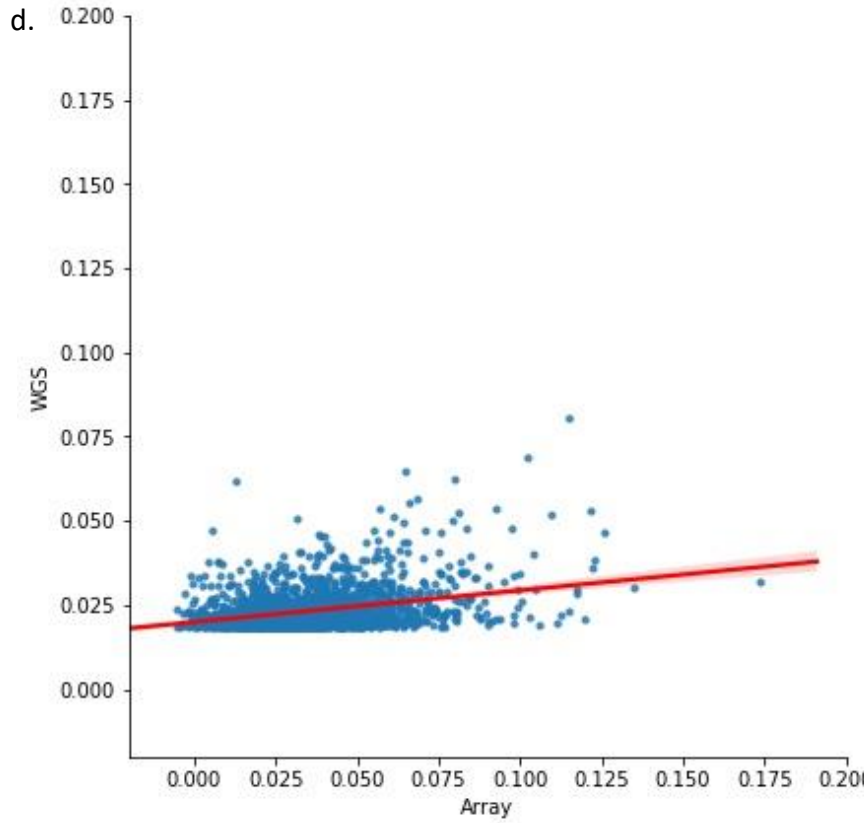
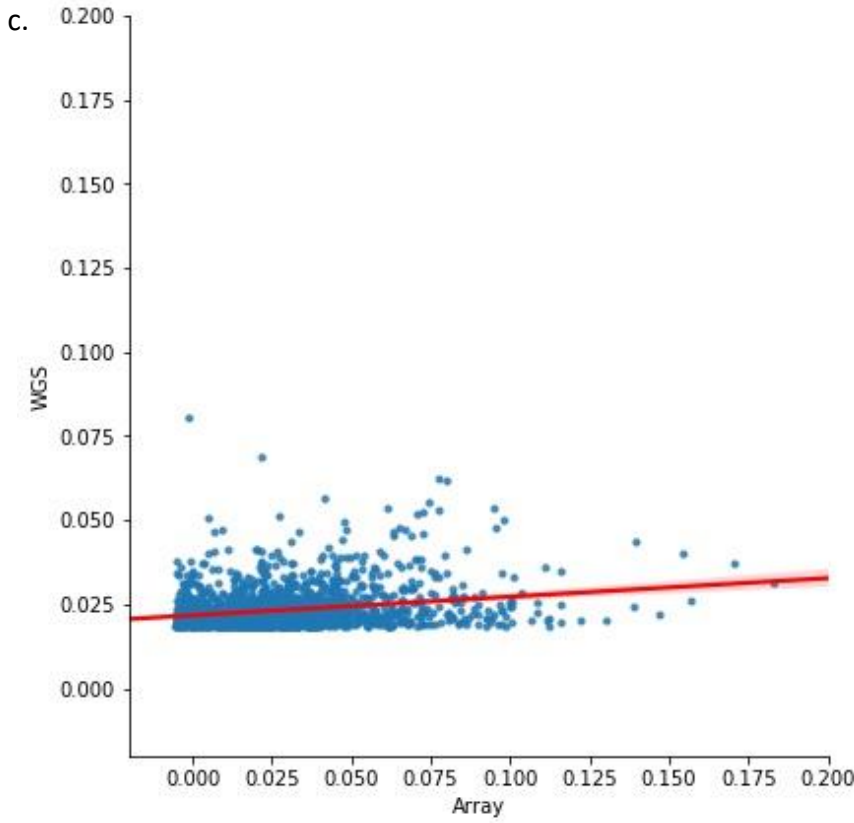
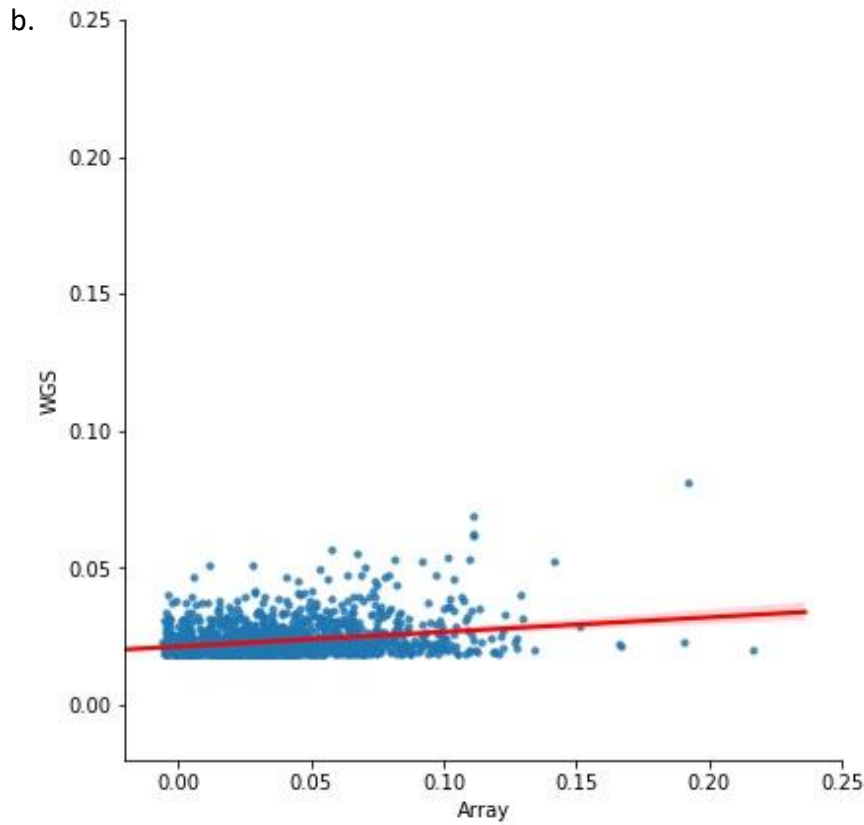
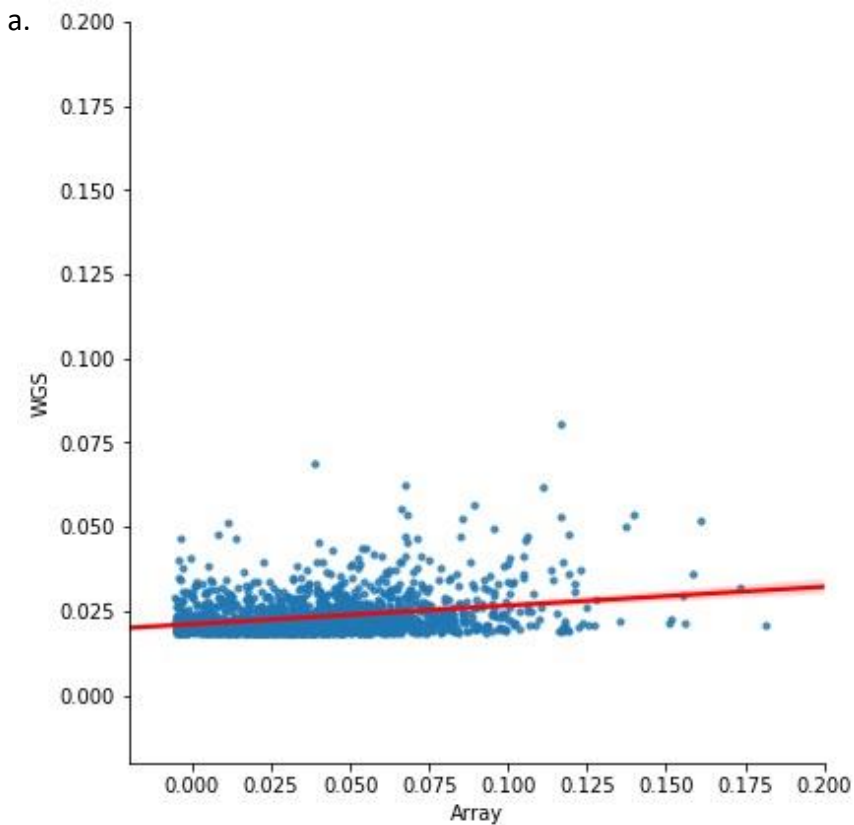
Selection Statistic	Population	Statistic	Significance level: Critical values
F _{ST}	Baganda & Ethiopia	129.793	15.000: 0.575
			10.000: 0.655
			5.000: 0.785
			2.500: 0.916
			1.000: 1.090
	Baganda & Zulu	143.799	15.000: 0.575
			10.000: 0.655
			5.000: 0.785
			2.500: 0.916
			1.000: 1.090
	Ethiopia & Zulu	132.552	15.000: 0.575
			10.000: 0.655
			5.000: 0.785
			2.500: 0.916
			1.000: 1.090
iHS	Baganda	200.986	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.917
			1.000: 1.090
	Ethiopia	153.457	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.917
			1.000: 1.090
	Zulu	163.928	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.917
			1.000: 1.090
XP-EHH	Baganda & Ethiopia	119.336	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.917
			1.000: 1.090
	Baganda & Zulu	121.445	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.917
			1.000: 1.090
	Ethiopia & Zulu	116.395	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.917
			1.000: 1.090
Tajima's D	Baganda	74.352	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.916
			1.000: 1.090
	Ethiopia	76.193	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.916
			1.000: 1.090
	Zulu	90.379	15.000: 0.575
			10.000: 0.655
			5.000: 0.786
			2.500: 0.916
			1.000: 1.090

Appendix 6.1.



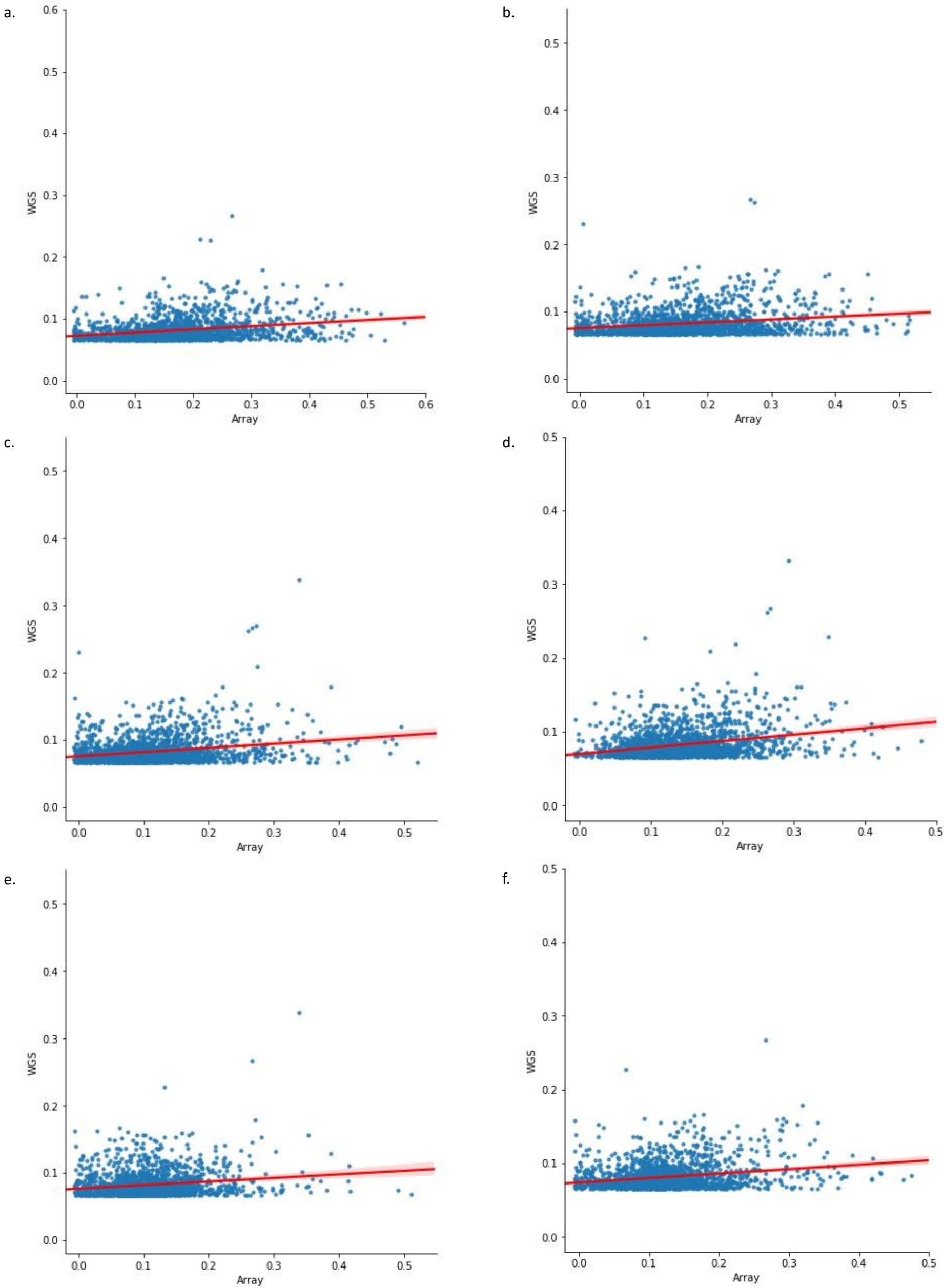
- a. F_{ST} ; Baganda and Ethiopia; Affy 6
- b. F_{ST} ; Baganda and Ethiopia; Omni1
- c. F_{ST} ; Baganda and Ethiopia; Mega 2.5
- d. F_{ST} ; Baganda and Ethiopia; H3A
- e. F_{ST} ; Baganda and Ethiopia; PanAFR
- f. F_{ST} ; Baganda and Ethiopia; Omni 2.5
- g. F_{ST} ; Baganda and Ethiopia; Omni5

Appendix 6.2.



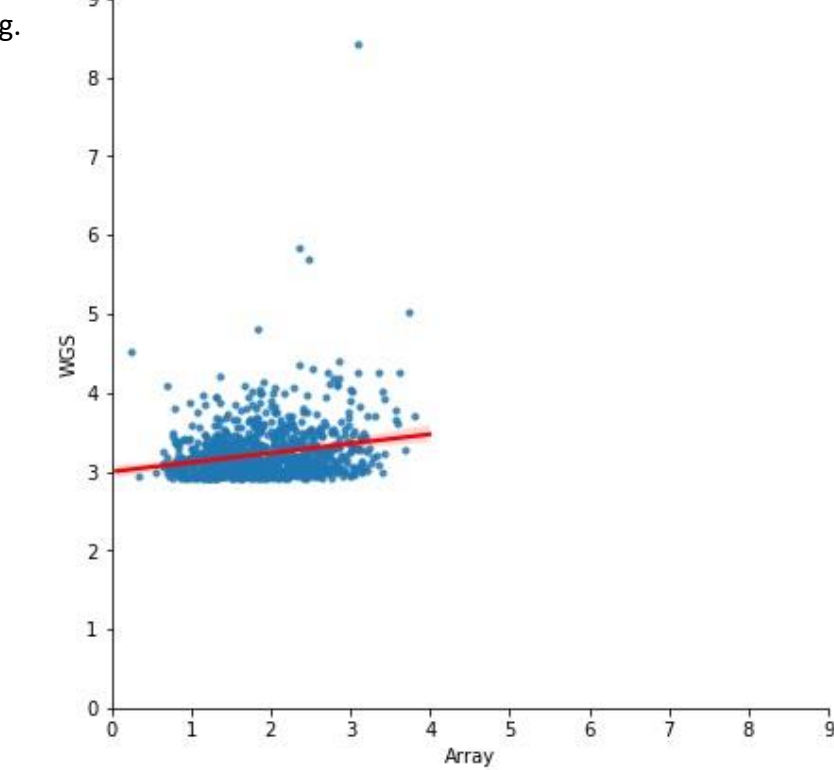
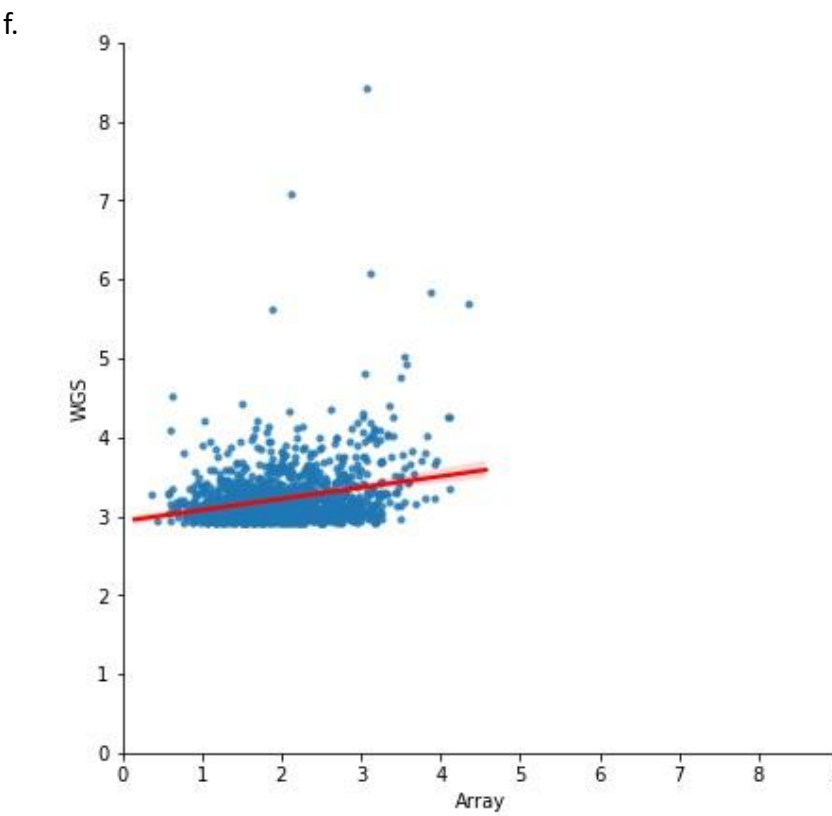
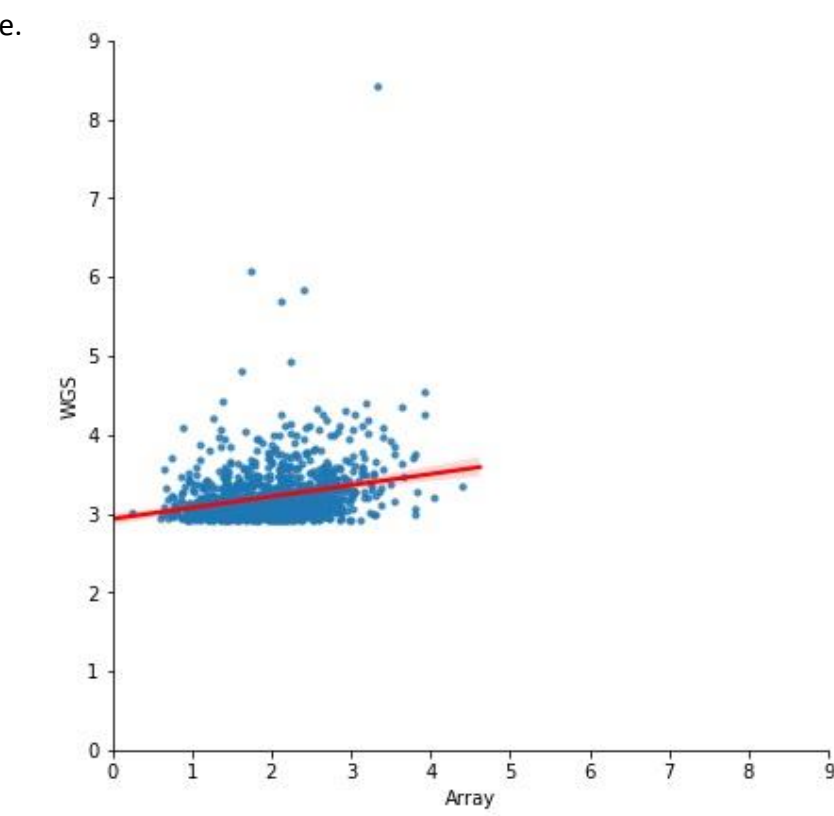
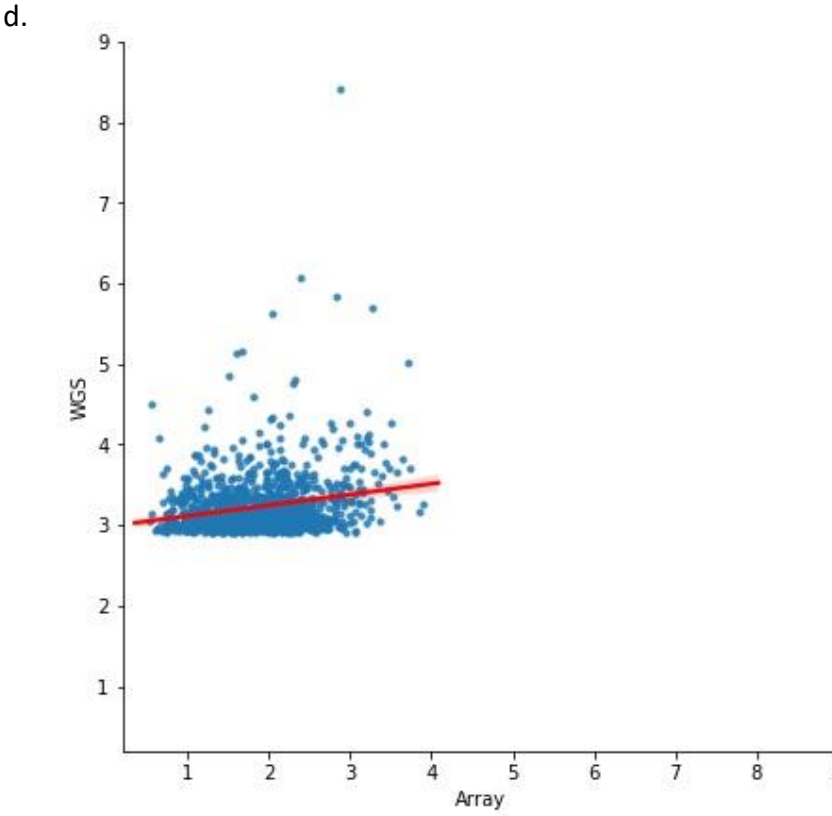
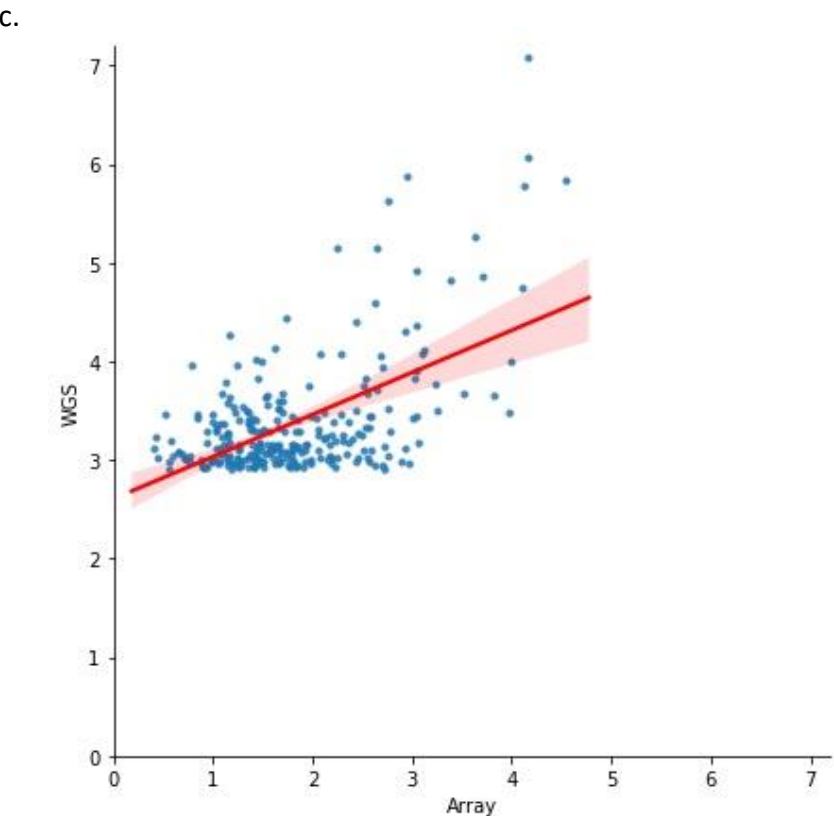
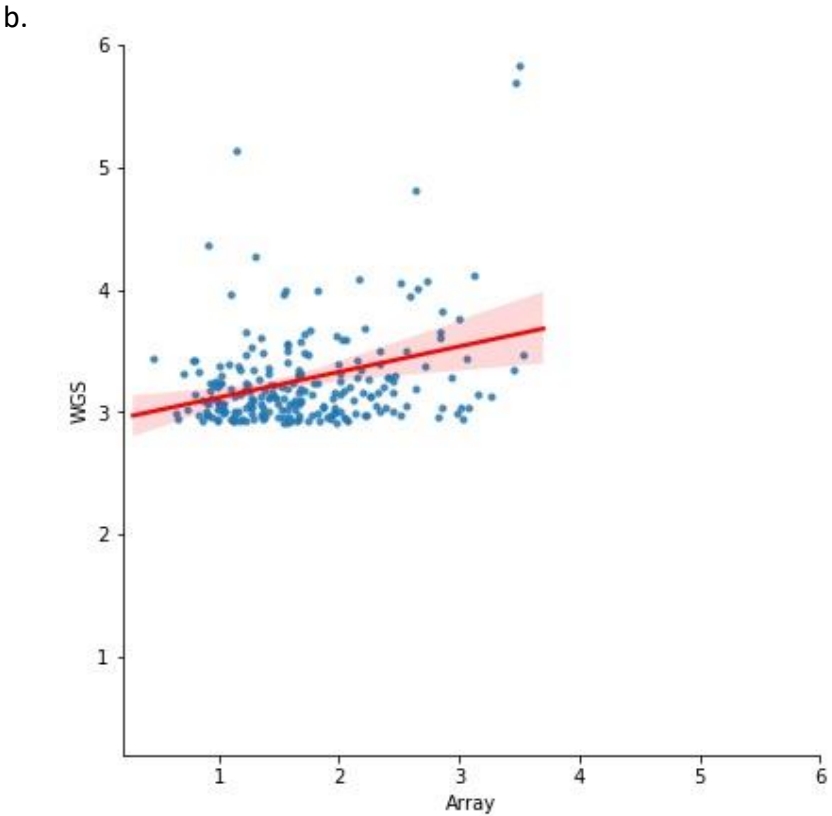
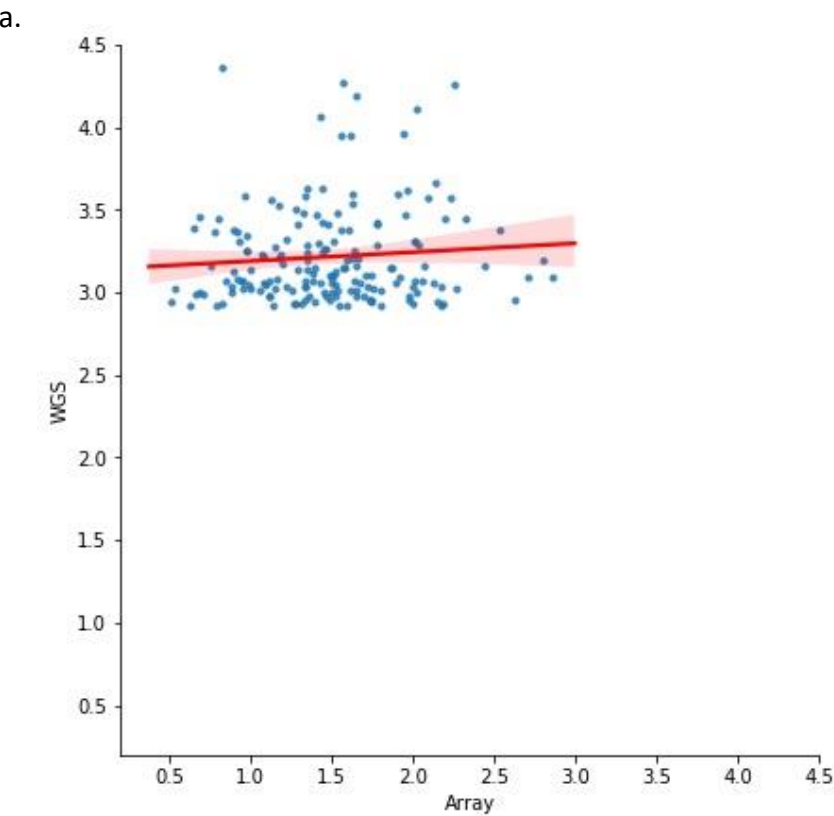
- a. F_{ST} ; Baganda and Zulu; Affy 6
- b. F_{ST} ; Baganda and Zulu; Omni1
- c. F_{ST} ; Baganda and Zulu; Mega 2.5
- d. F_{ST} ; Baganda and Zulu; H3A
- e. F_{ST} ; Baganda and Zulu; PanAFR
- f. F_{ST} ; Baganda and Zulu; Omni 2.5
- g. F_{ST} ; Baganda and Zulu; Omni5

Appendix 6.3.



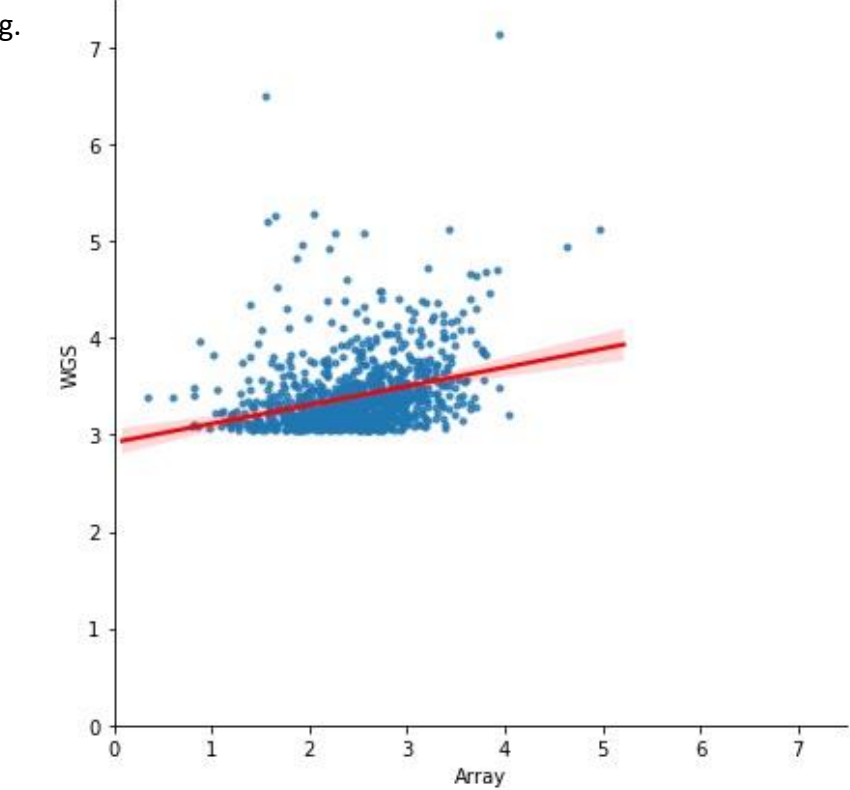
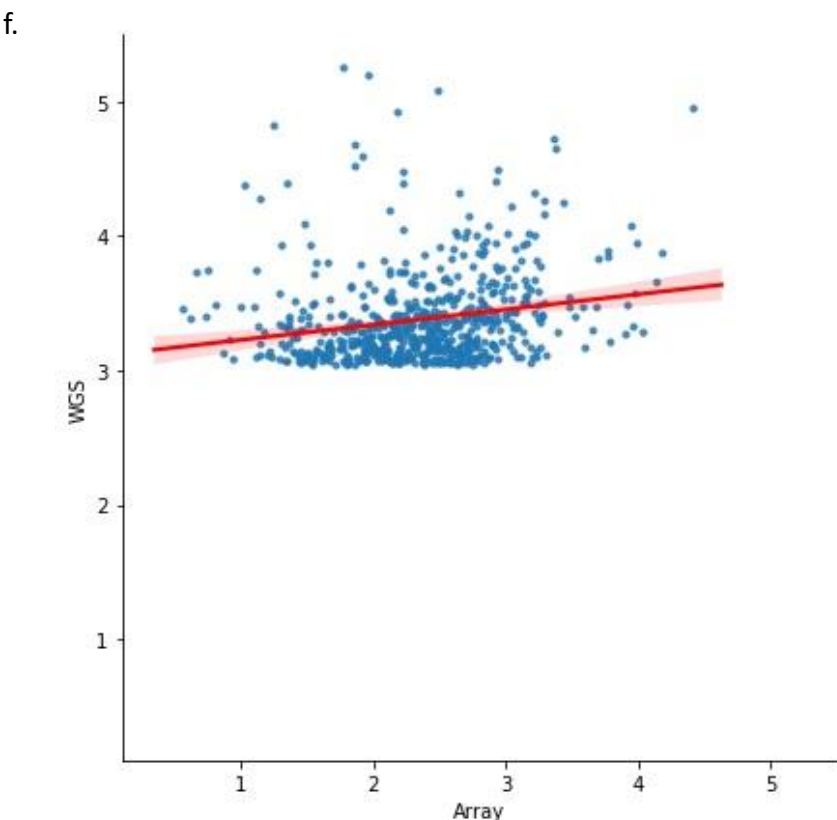
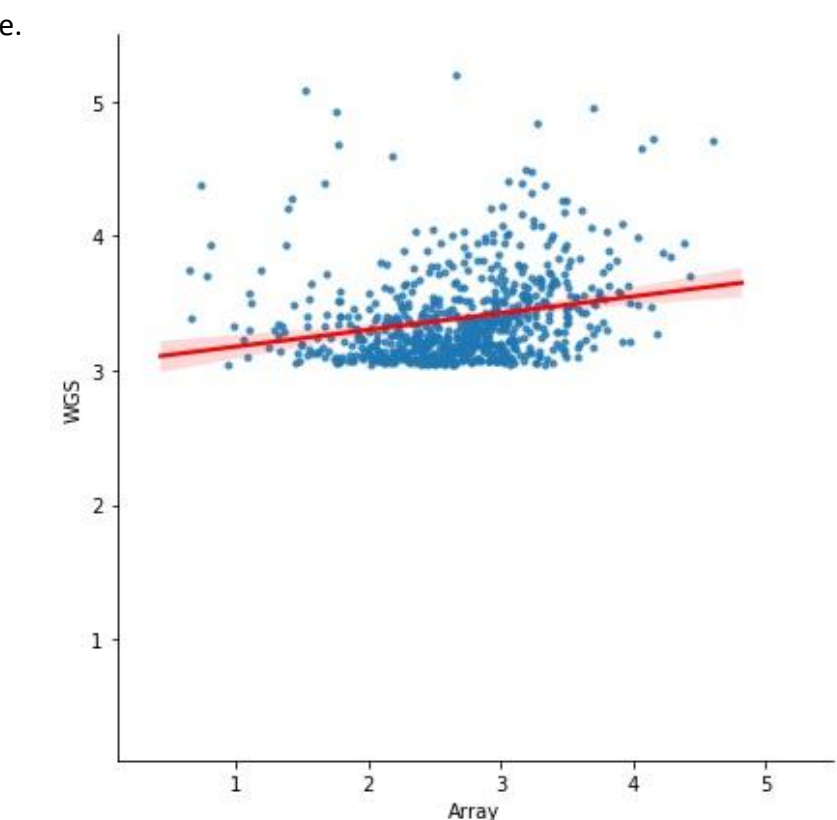
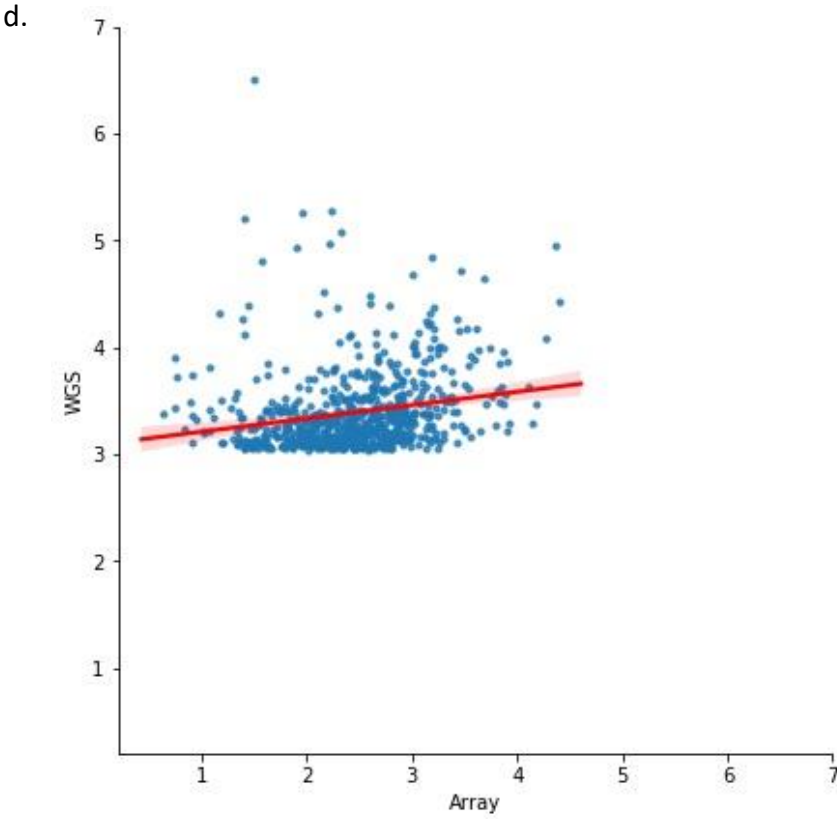
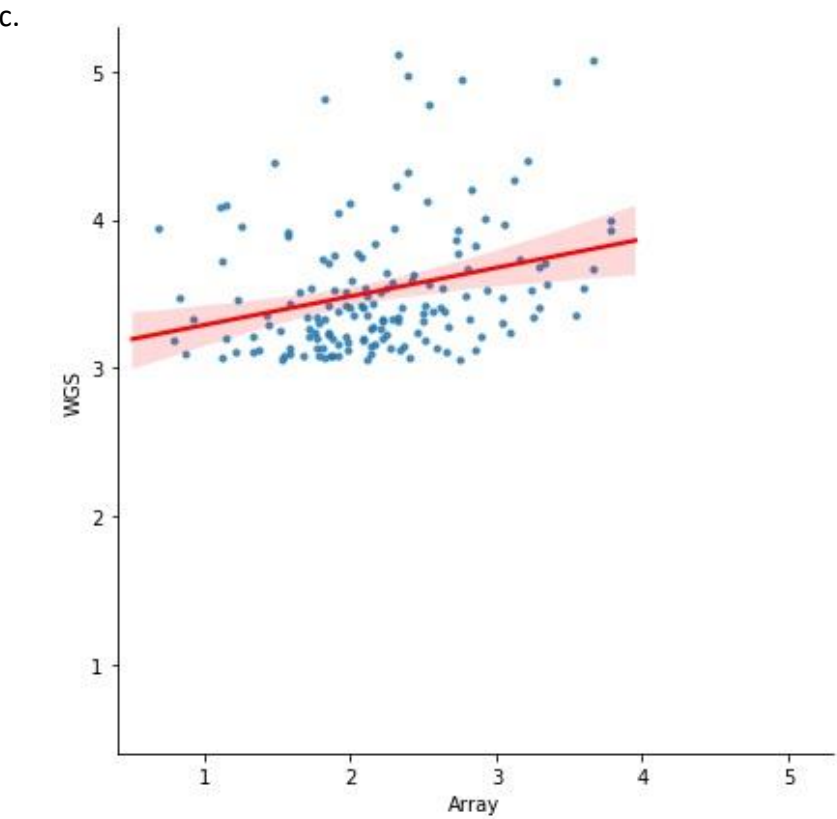
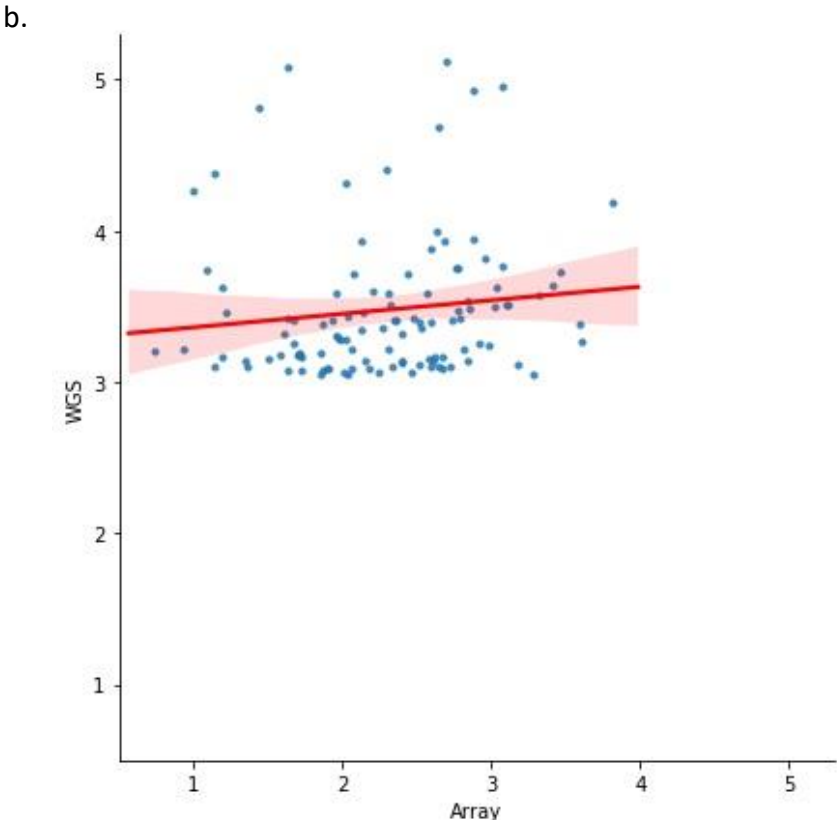
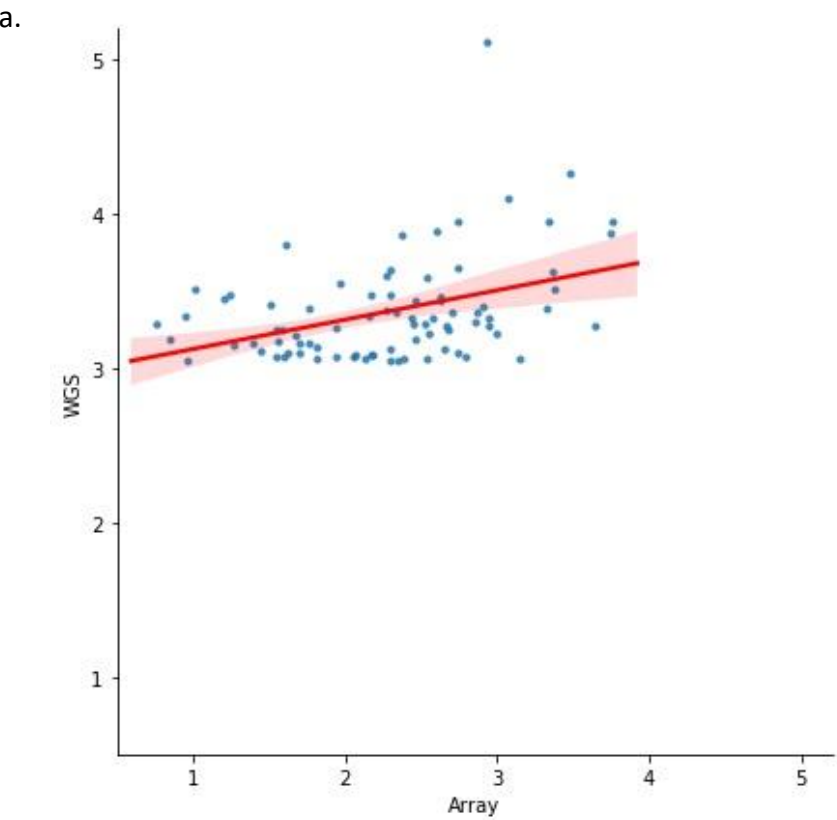
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- b. F_{ST} ; Ethiopia and Zulu; Omni1
- c. F_{ST} ; Ethiopia and Zulu; Mega 2.5
- d. F_{ST} ; Ethiopia and Zulu; H3A
- e. F_{ST} ; Ethiopia and Zulu; PanAFR
- f. F_{ST} ; Ethiopia and Zulu; Omni 2.5

Appendix 6.4.



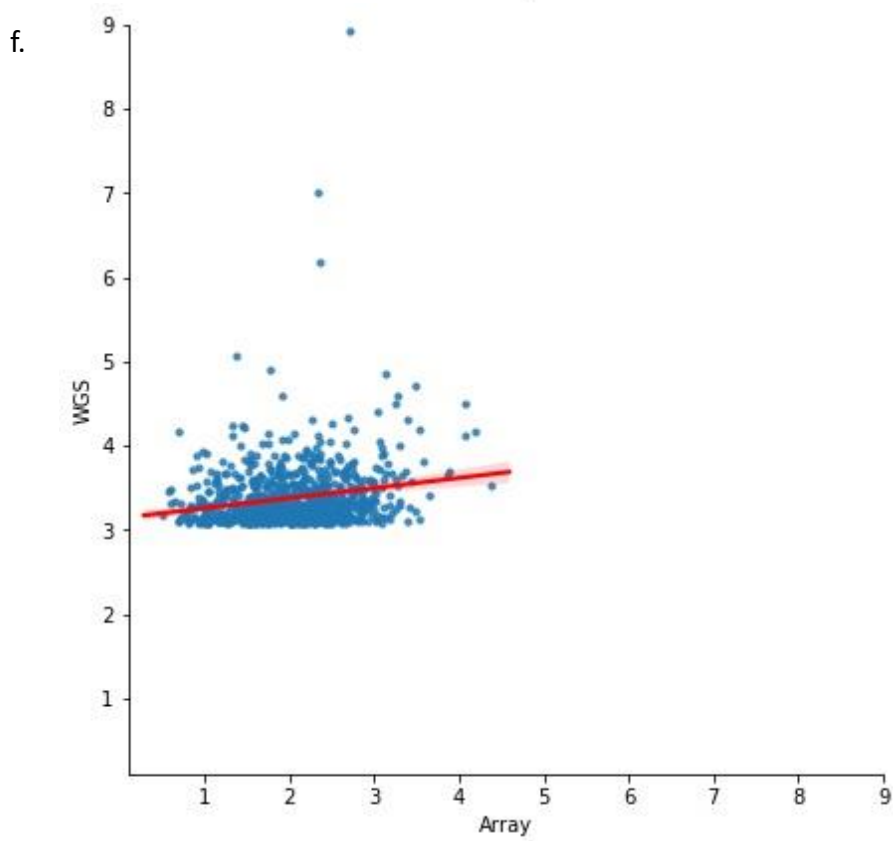
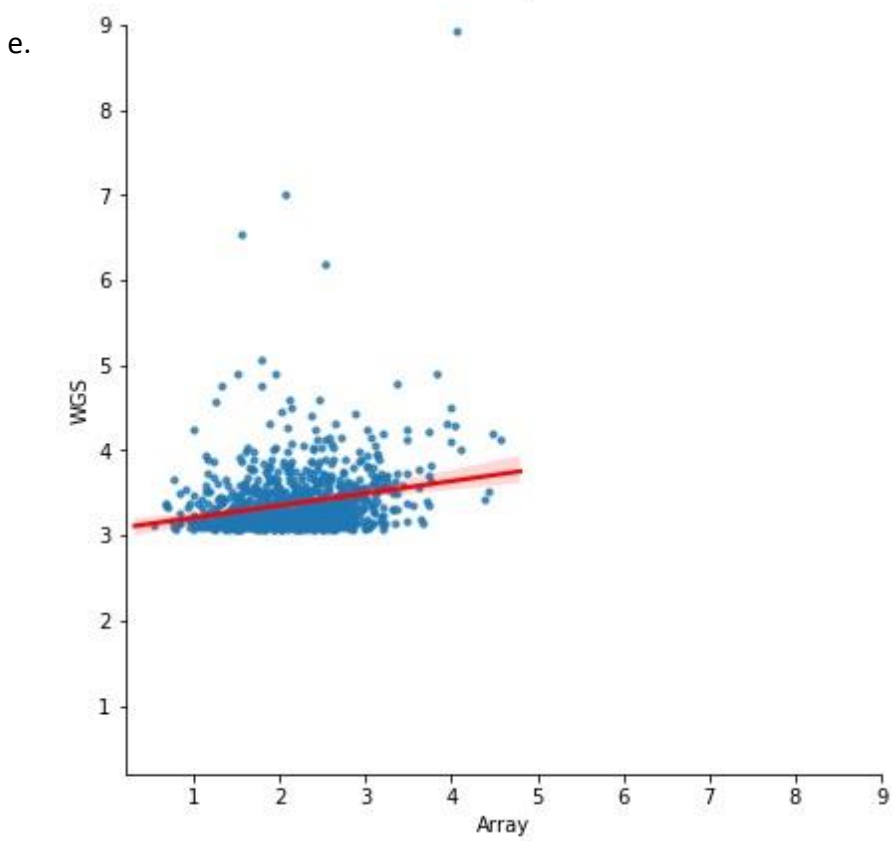
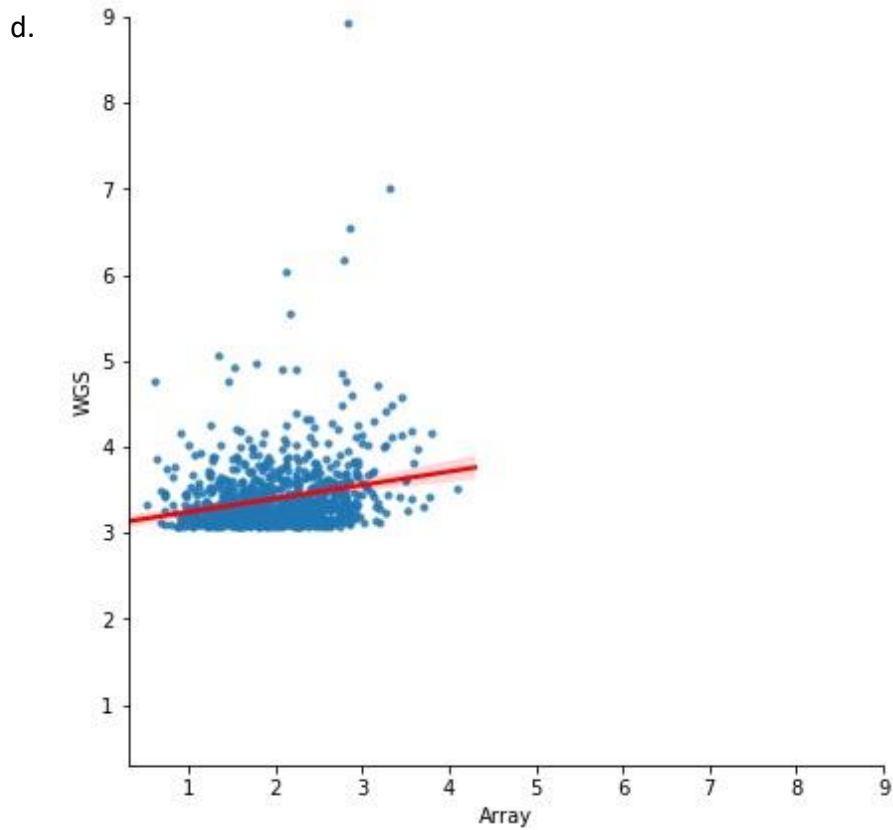
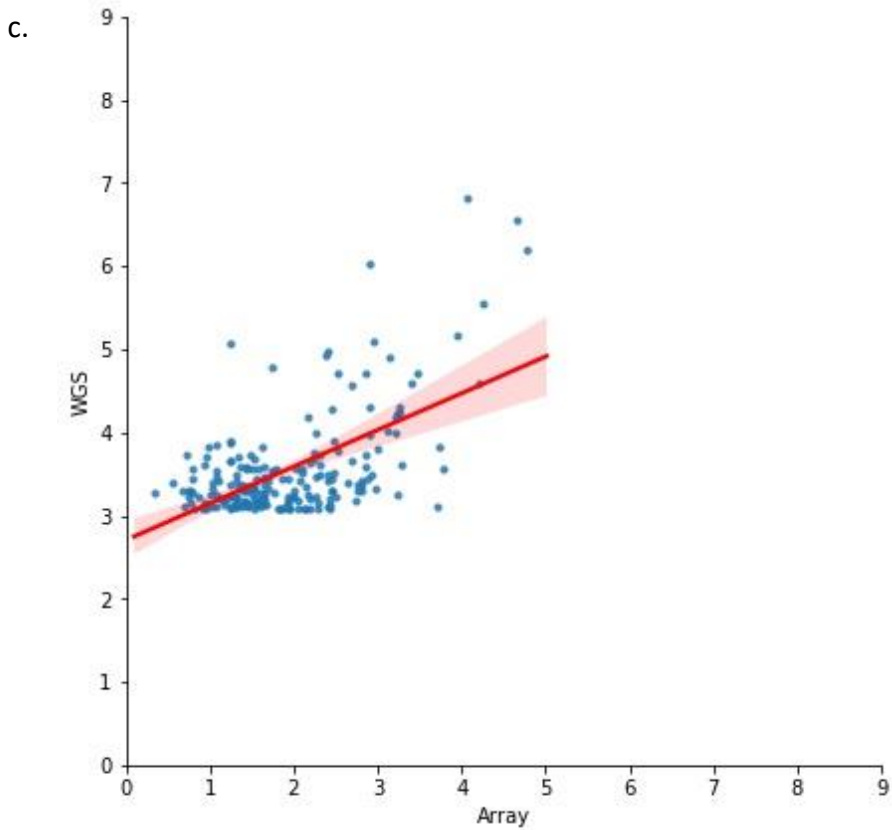
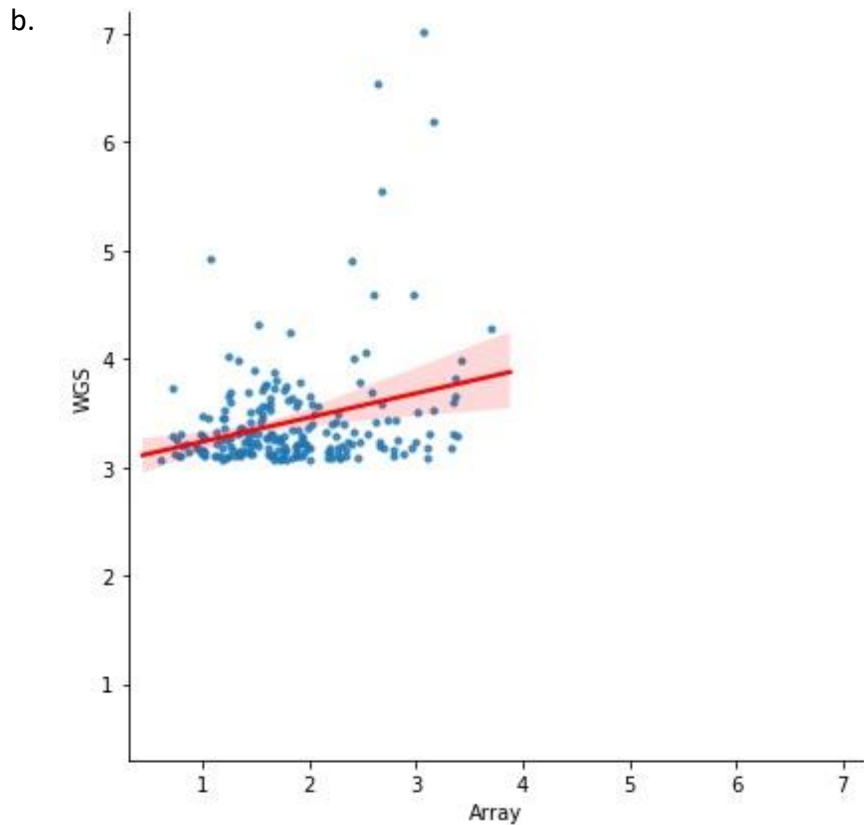
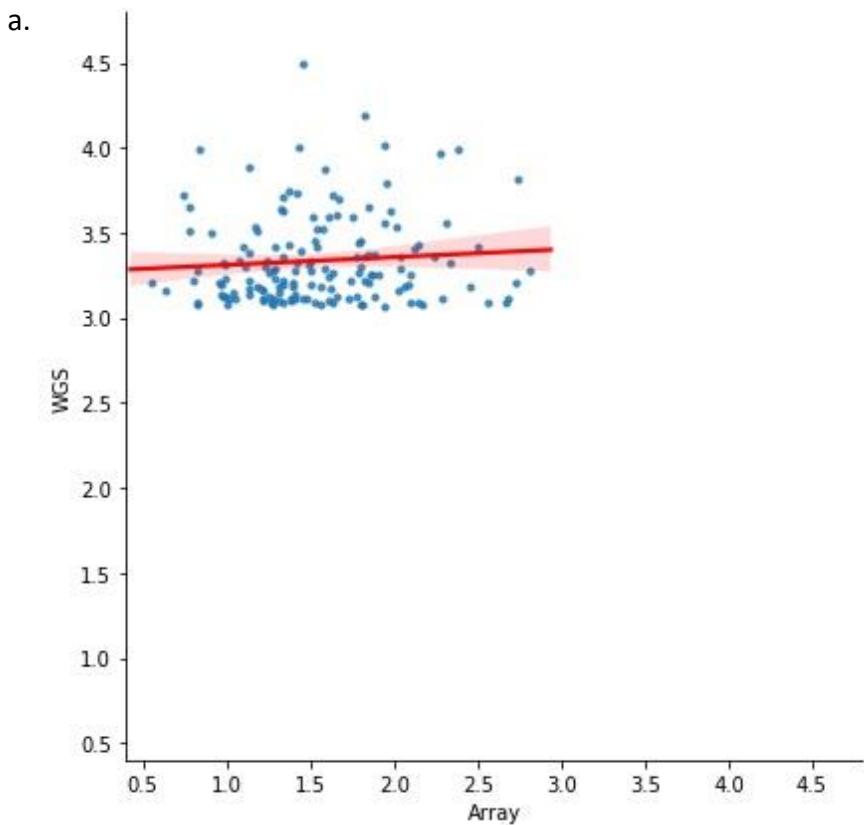
- a. iHS; Baganda; Affy 6
- b. iHS; Baganda; Omni1
- c. iHS; Baganda; Mega 2.5
- d. iHS; Baganda; H3A
- e. iHS; Baganda; PanAFR
- f. iHS; Baganda; Omni 2.5
- g. iHS; Baganda; Omni5

Appendix 6.5.



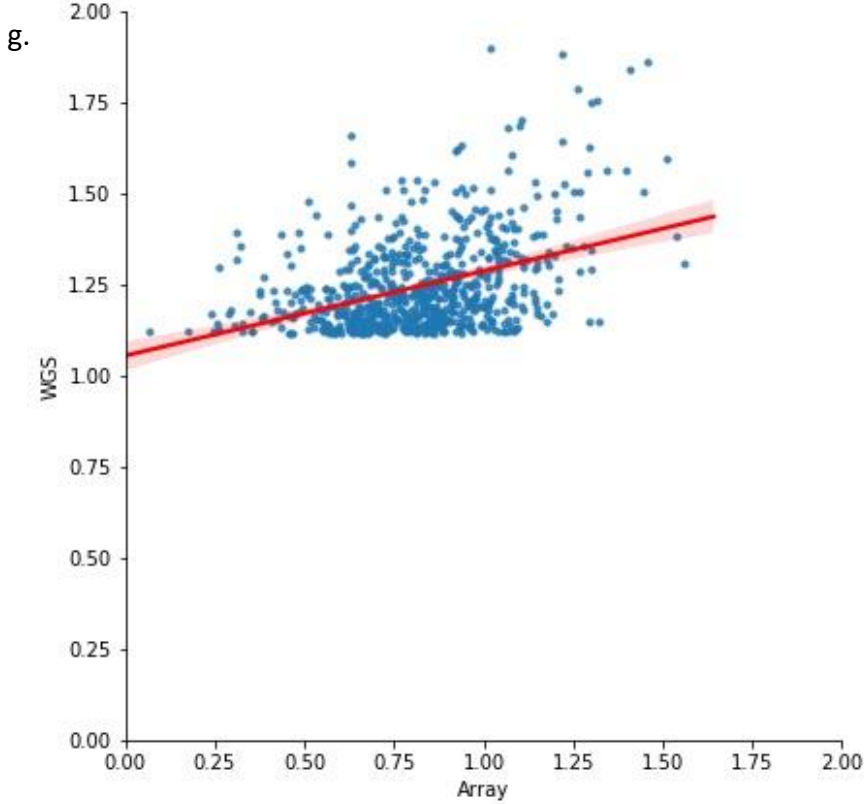
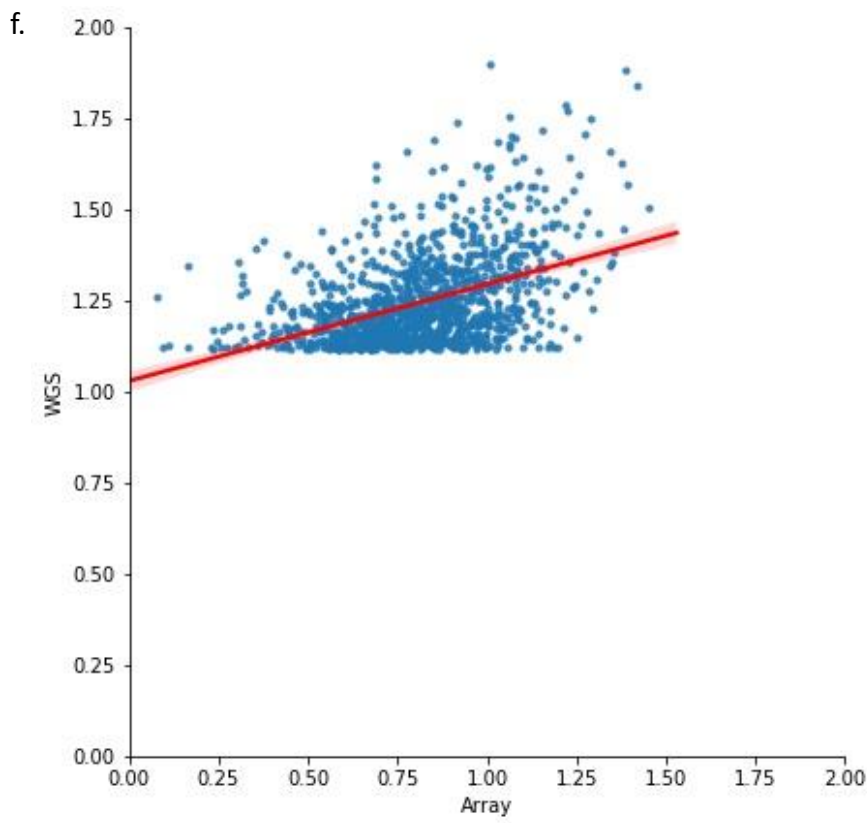
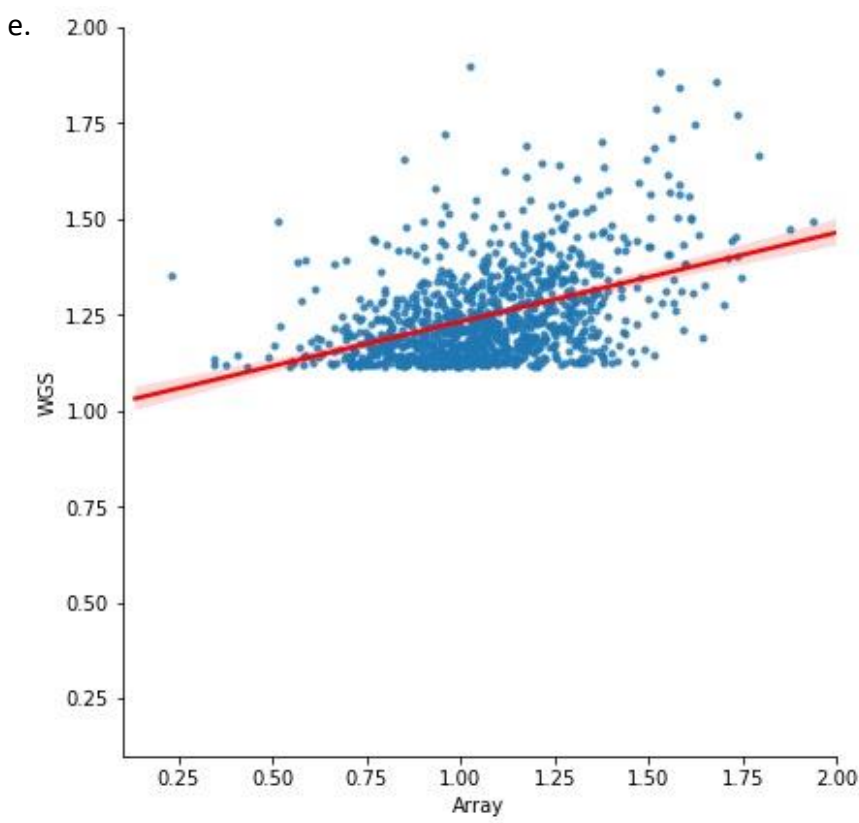
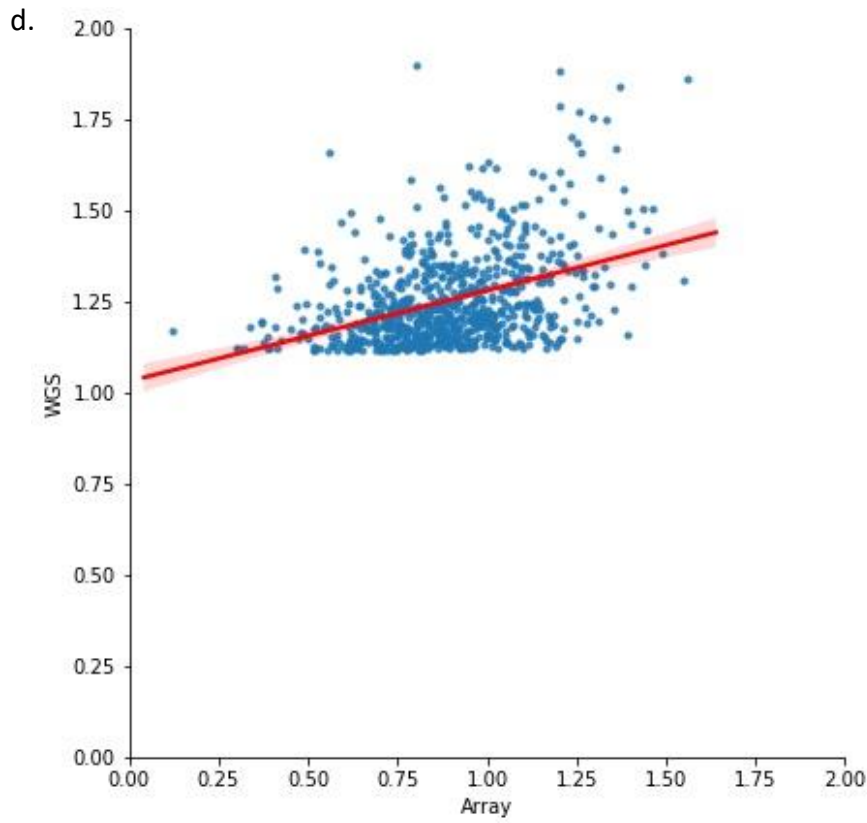
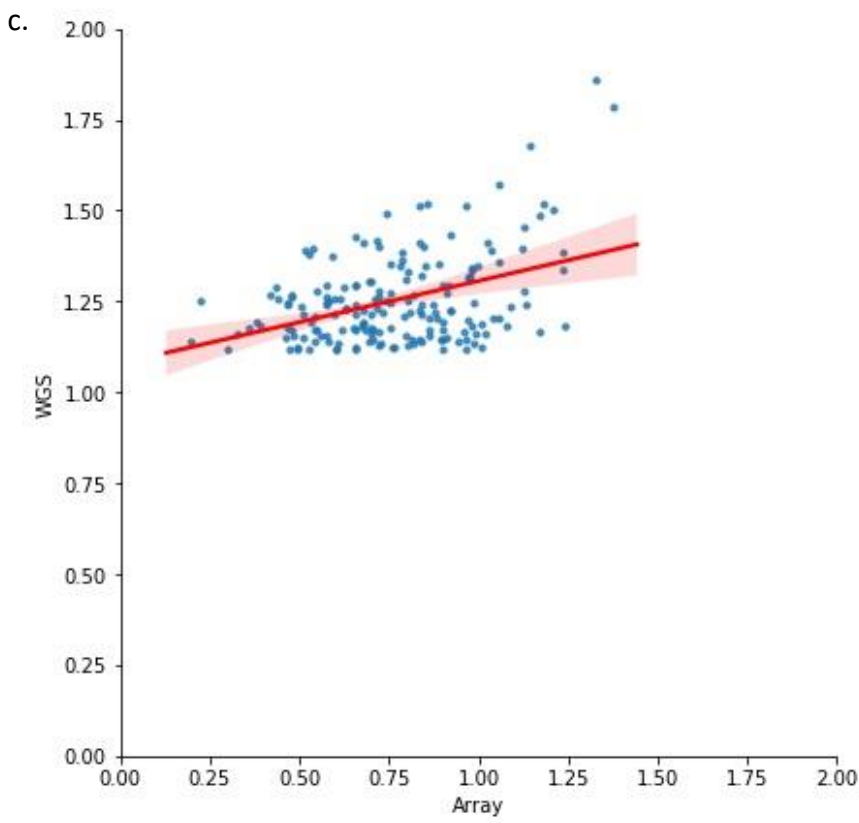
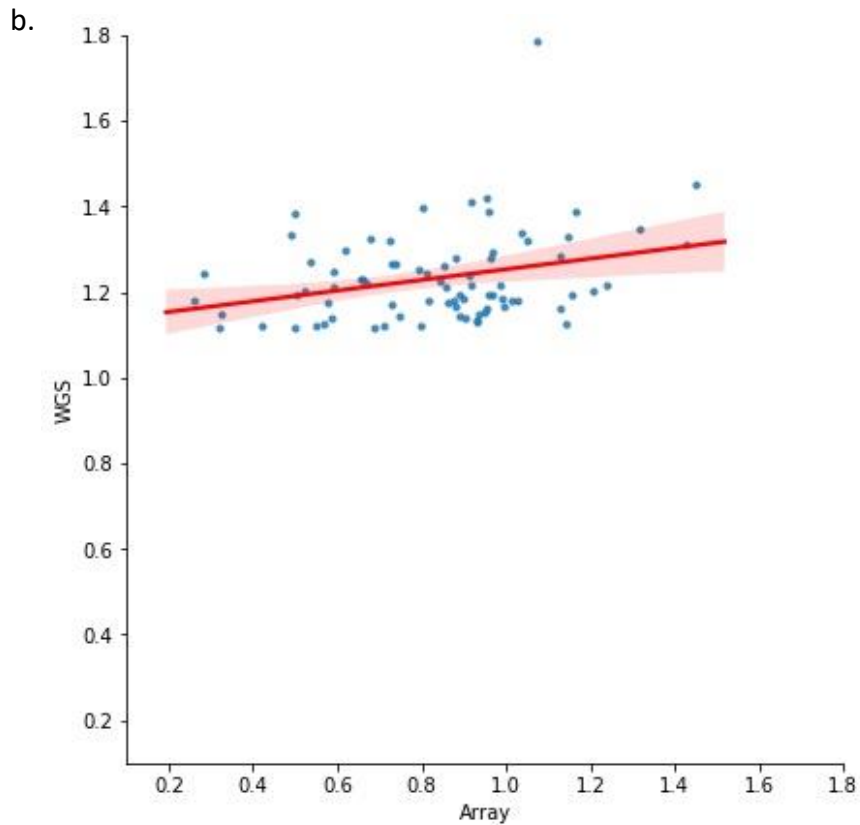
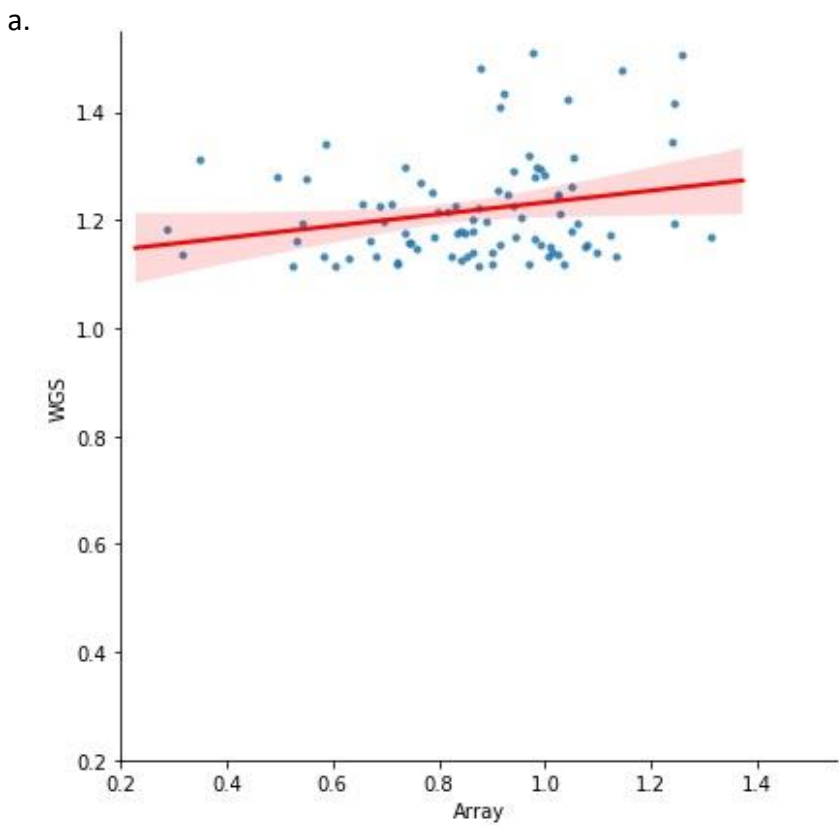
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- b. iHS; Ethiopia; Omni1
- c. iHS; Ethiopia; Mega 2.5
- d. iHS; Ethiopia; H3A
- e. iHS; Ethiopia; PanAFR
- f. iHS; Ethiopia; Omni 2.5
- g. iHS; Ethiopia; Omni5

Appendix 6.6.



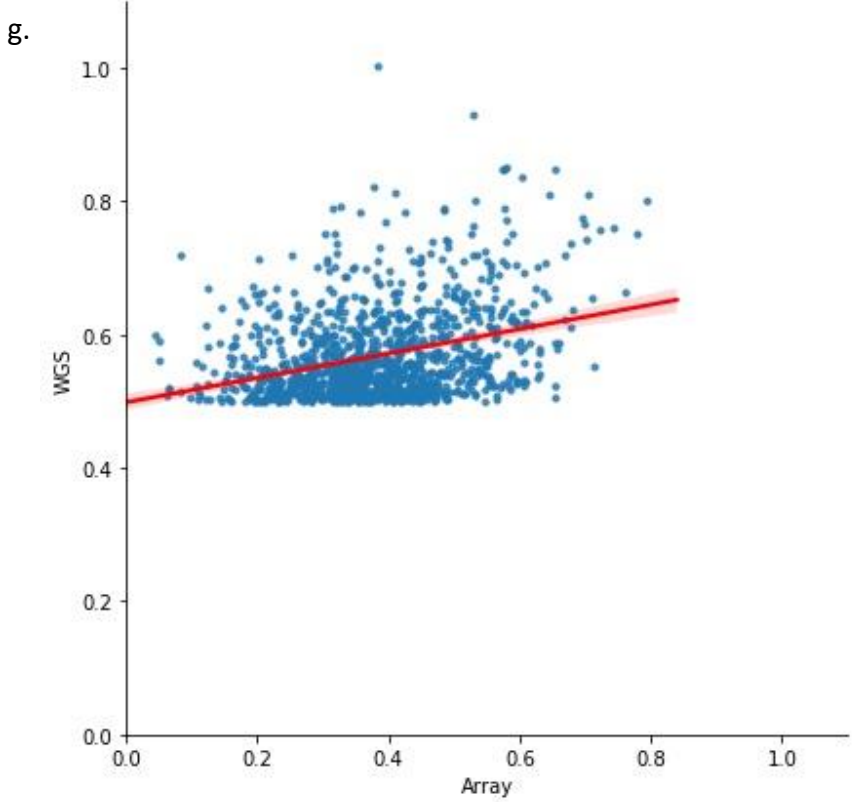
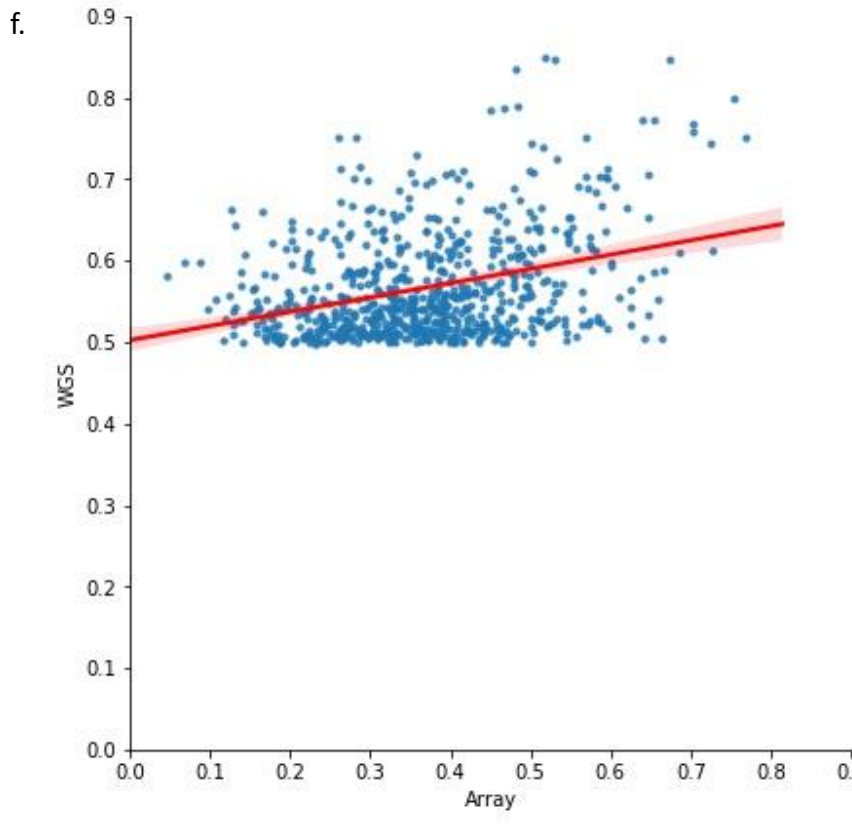
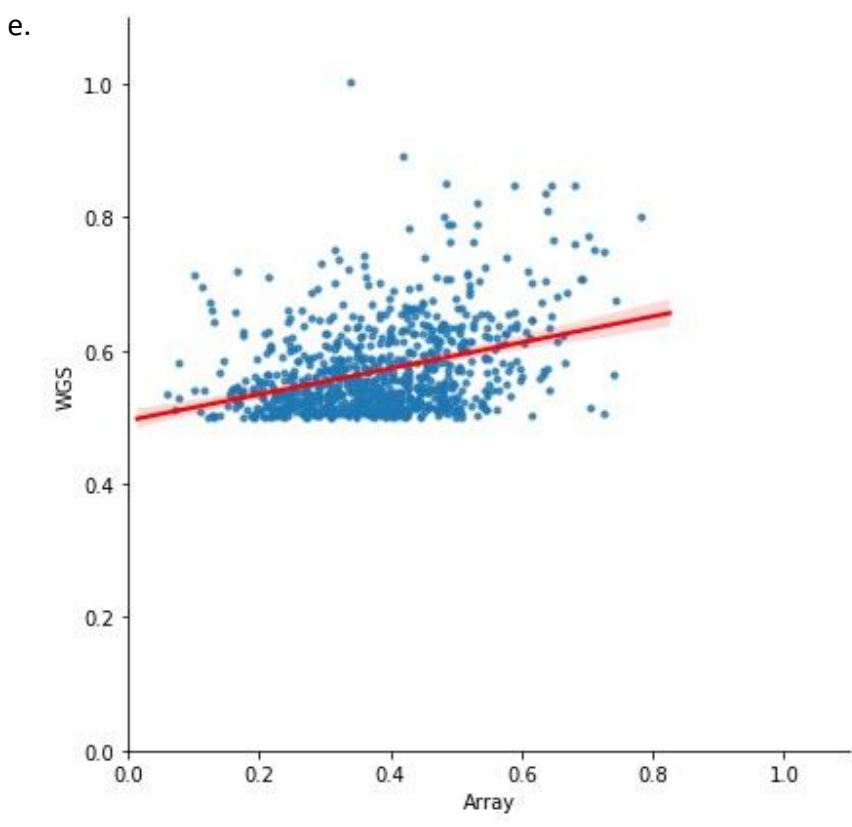
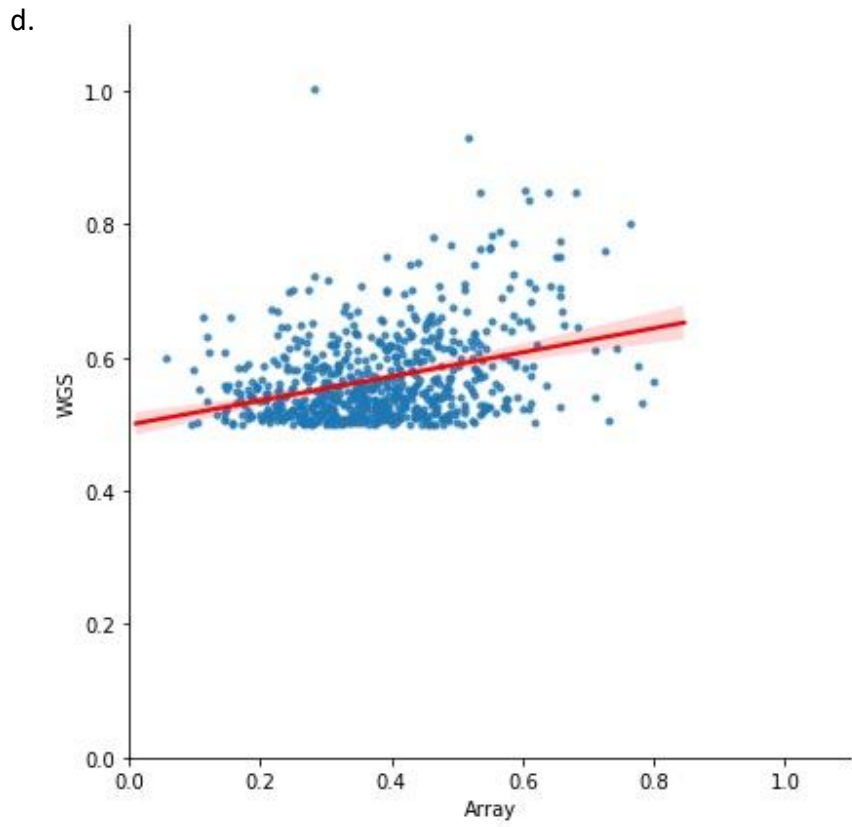
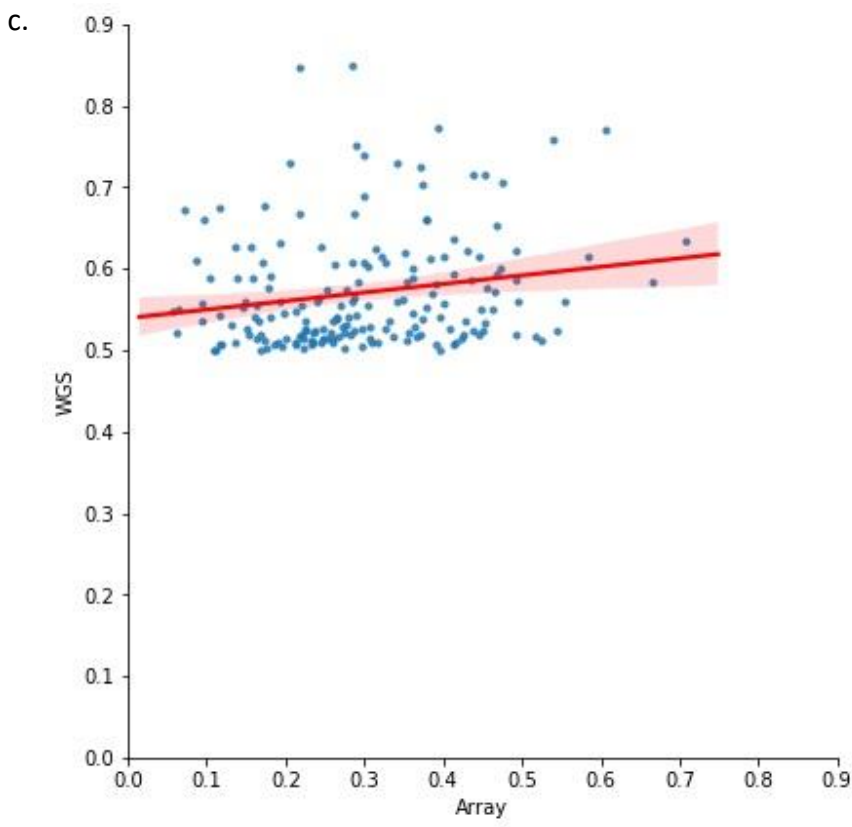
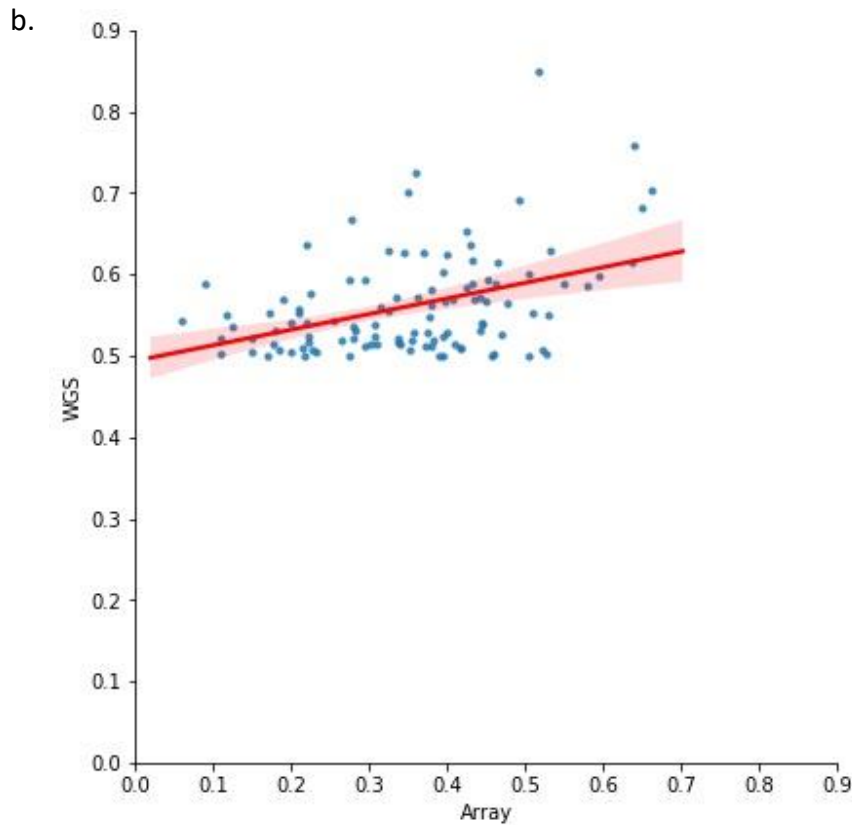
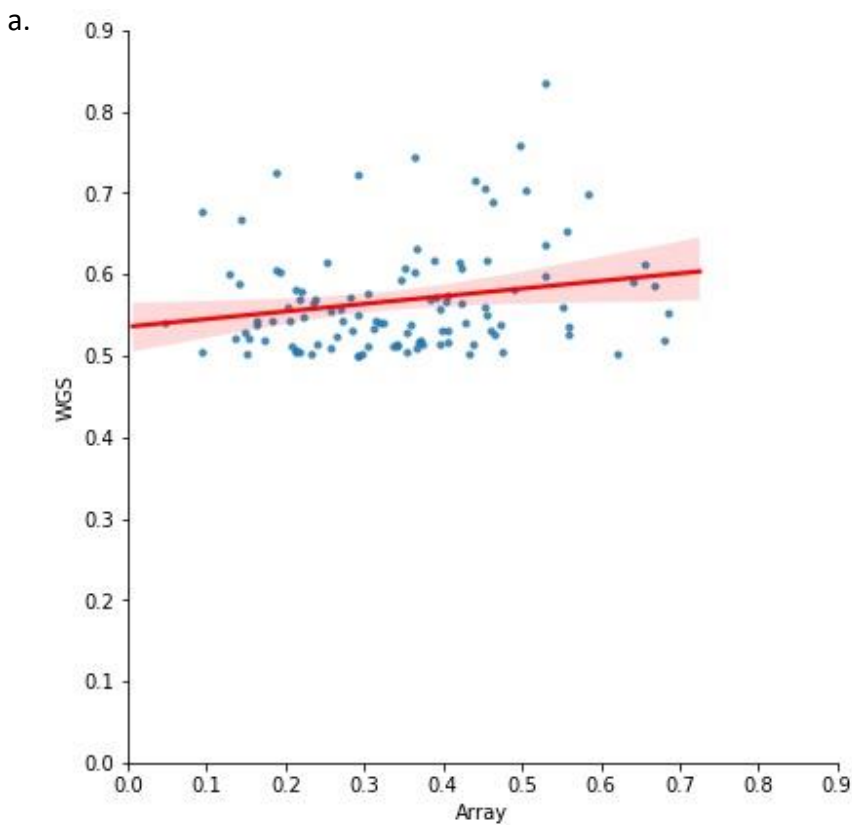
- a. iHS; Zulu; Affy 6
- b. iHS; Zulu; Omni1
- c. iHS; Zulu; Mega 2.5
- d. iHS; Zulu; H3A
- e. iHS; Zulu; PanAFR
- f. iHS; Zulu; Omni 2.5

Appendix 6.7.



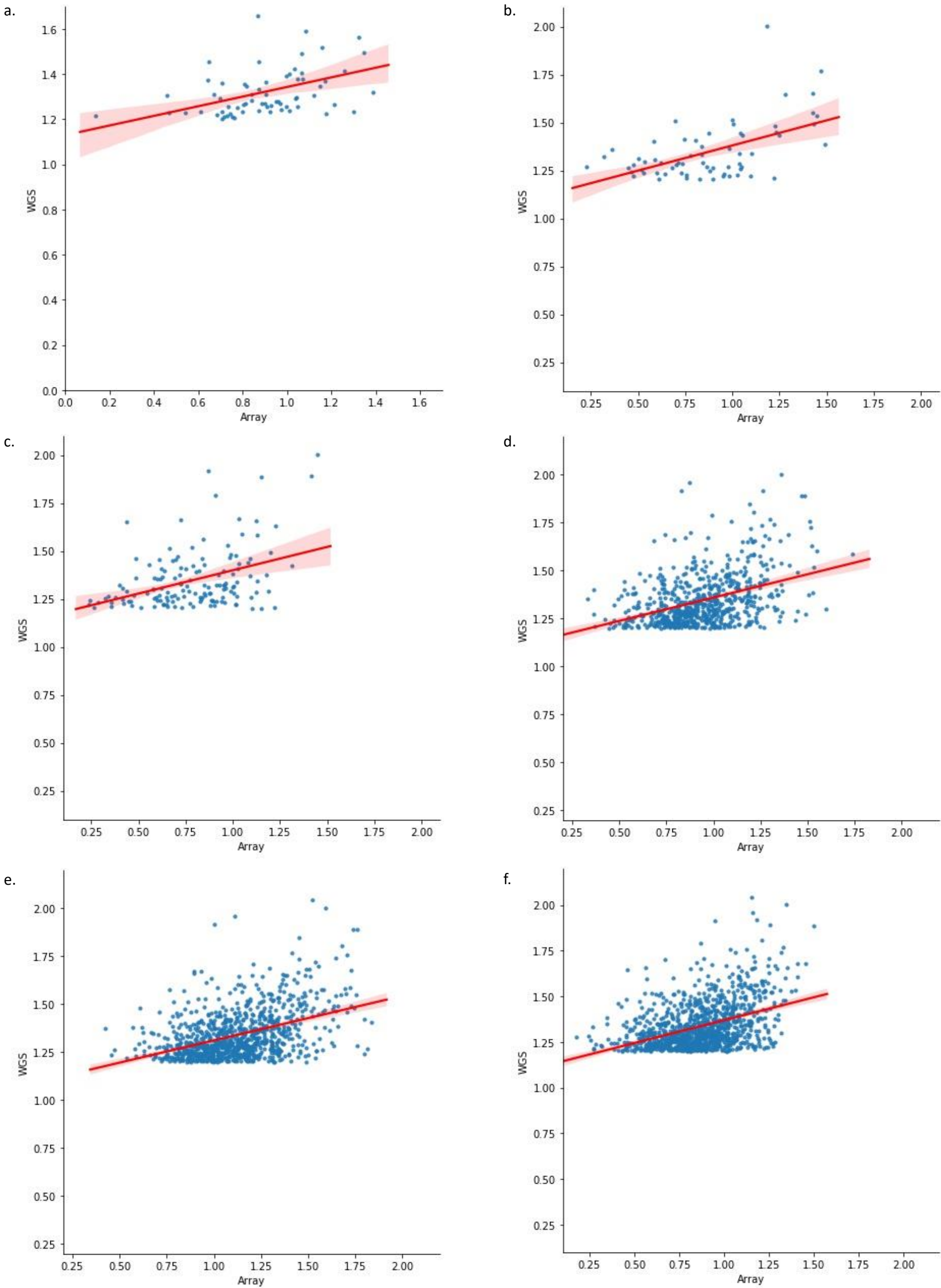
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- b. XP-EHH; Baganda and Ethiopia; Omni1
- c. XP-EHH; Baganda and Ethiopia; Mega 2.5
- d. XP-EHH; Baganda and Ethiopia; H3A
- e. XP-EHH; Baganda and Ethiopia; PanAFR
- f. XP-EHH; Baganda and Ethiopia; Omni 2.5
- g. XP-EHH; Baganda and Ethiopia; Omni5

Appendix 6.8.



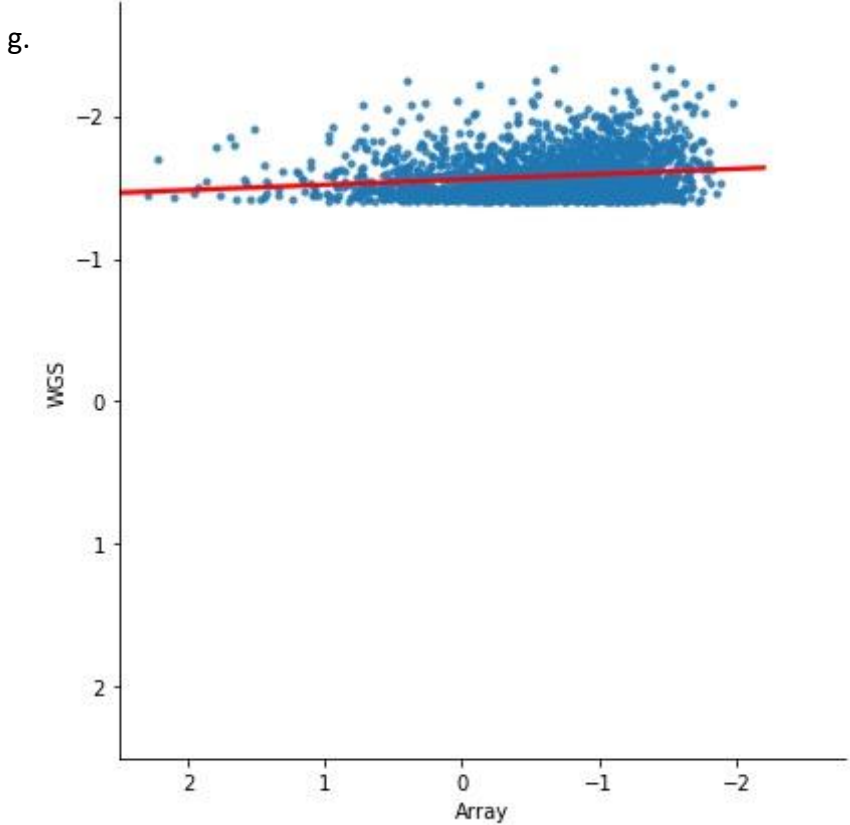
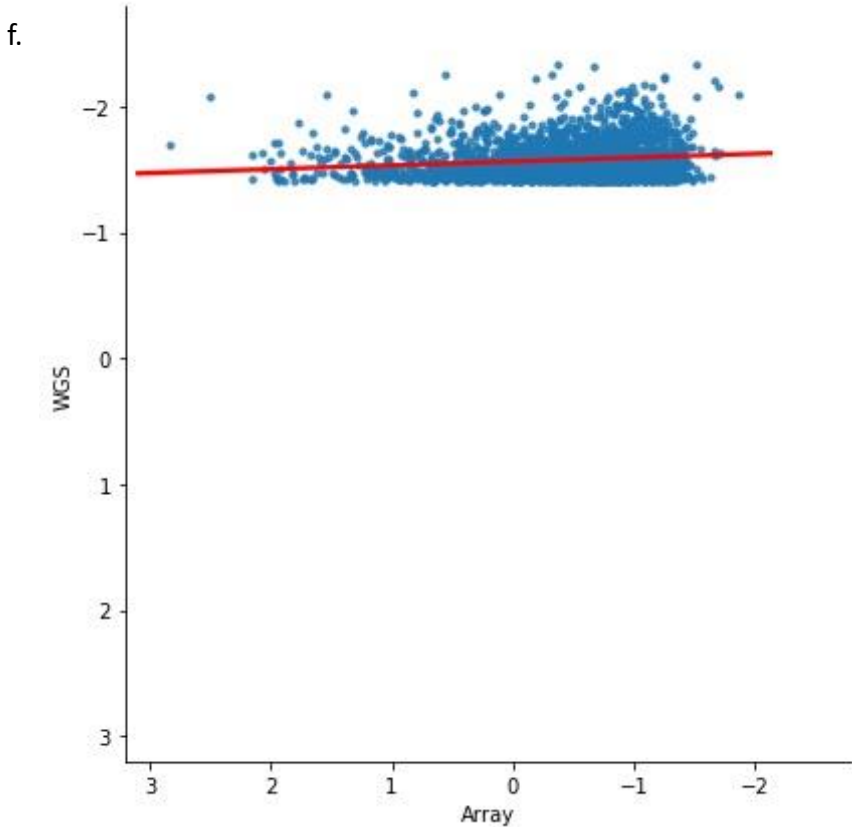
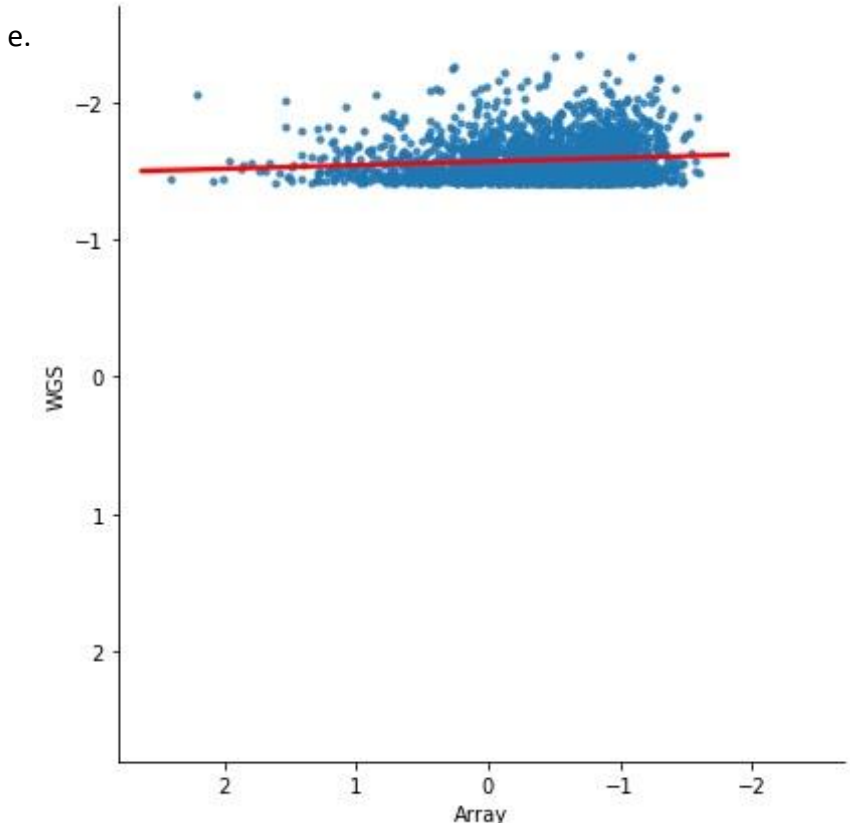
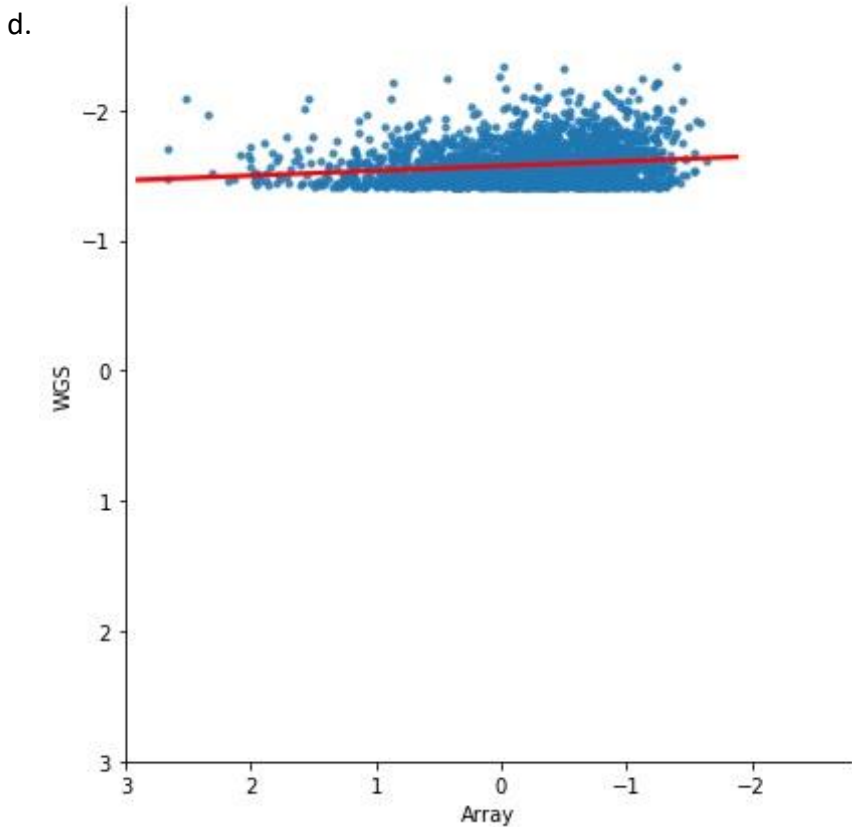
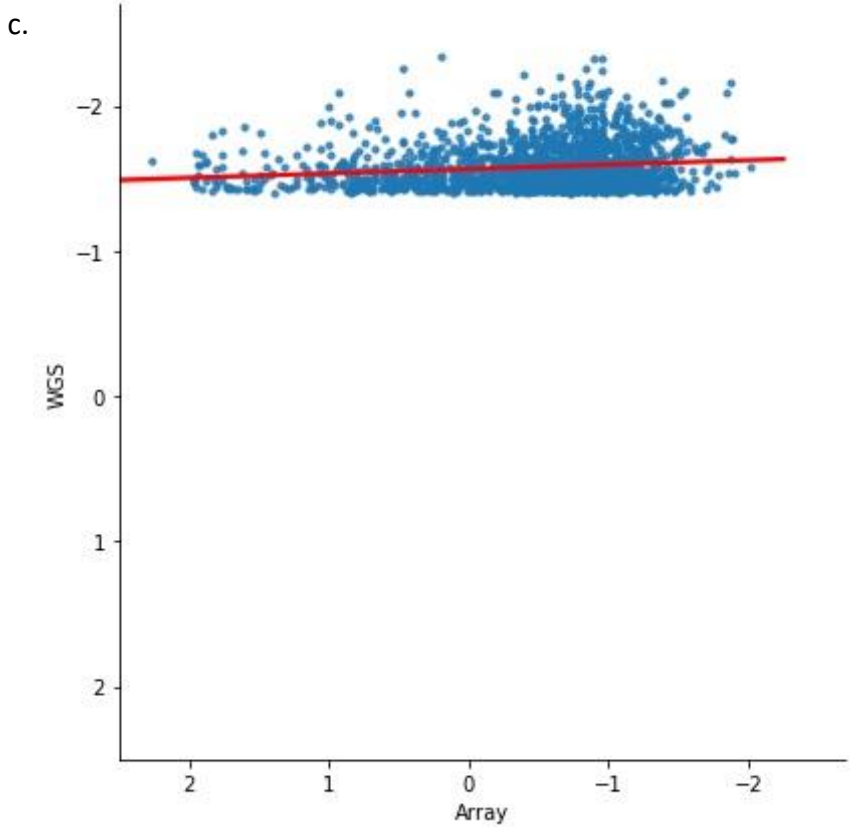
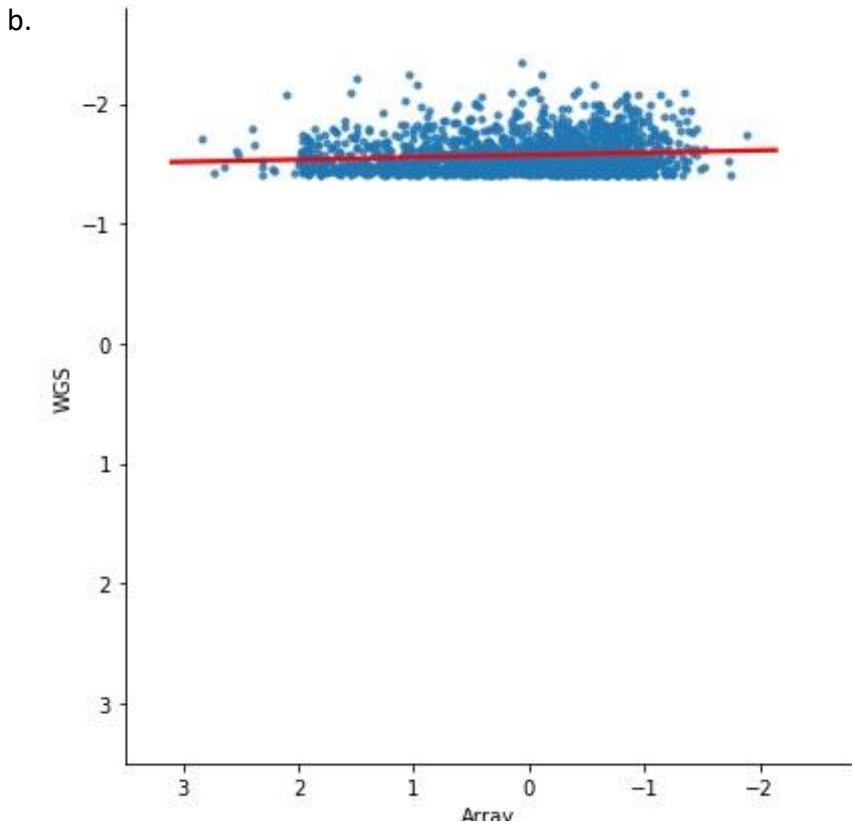
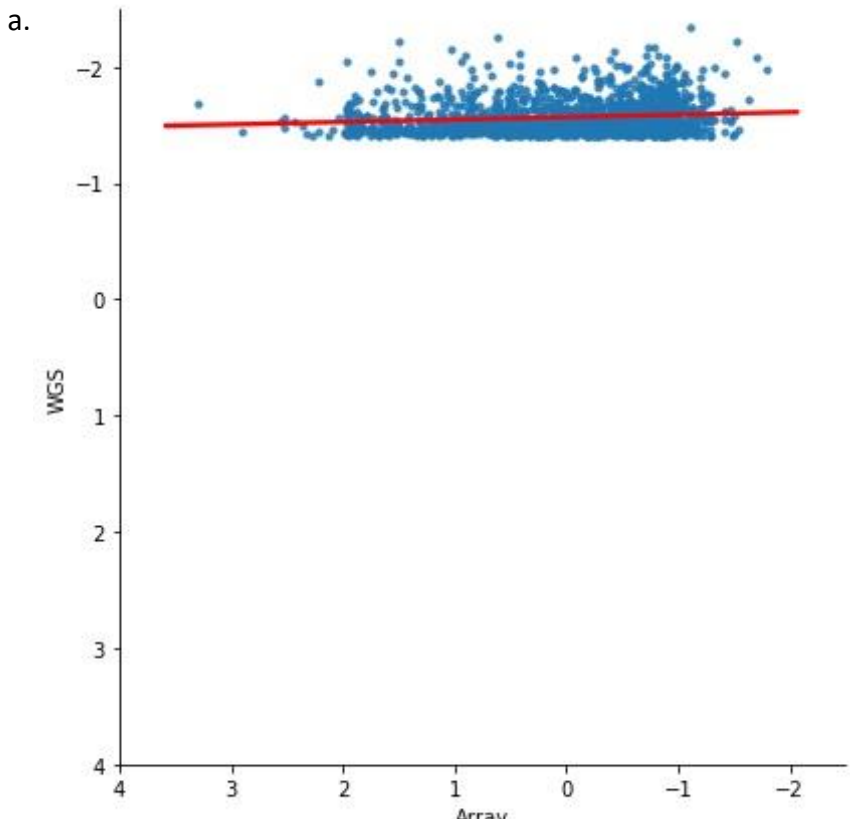
- a. XP-EHH; Baganda and Zulu; Affy 6
- b. XP-EHH; Baganda and Zulu; Omni1
- c. XP-EHH; Baganda and Zulu; Mega 2.5
- d. XP-EHH; Baganda and Zulu; H3A
- e. XP-EHH; Baganda and Zulu; PanAFR
- f. XP-EHH; Baganda and Zulu; Omni 2.5
- g. XP-EHH; Baganda and Zulu; Omni5

Appendix 6.9.



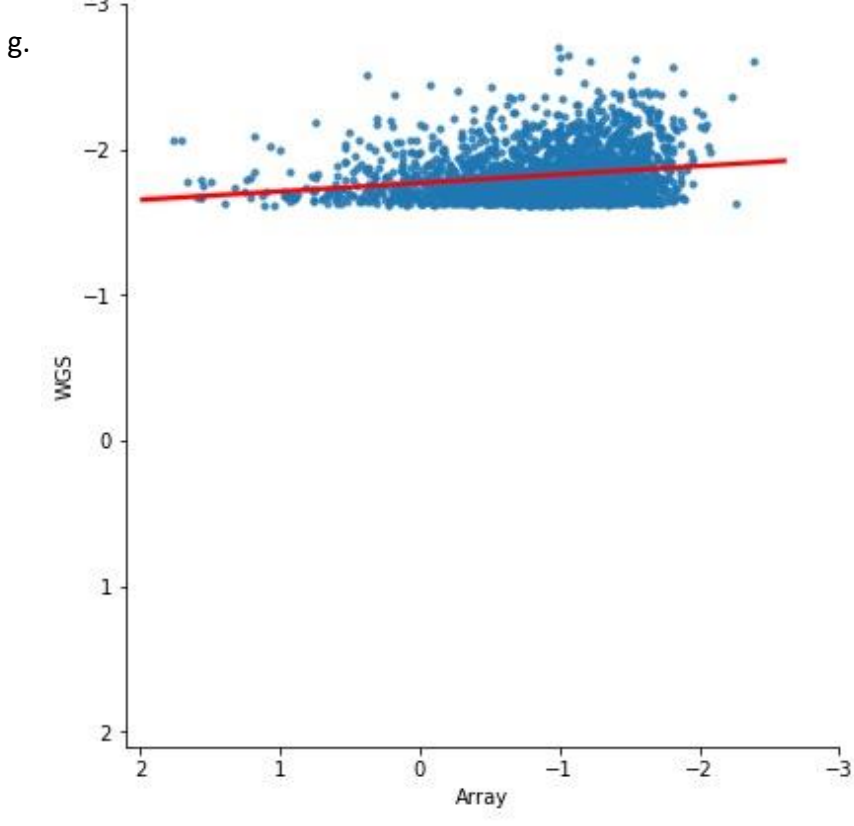
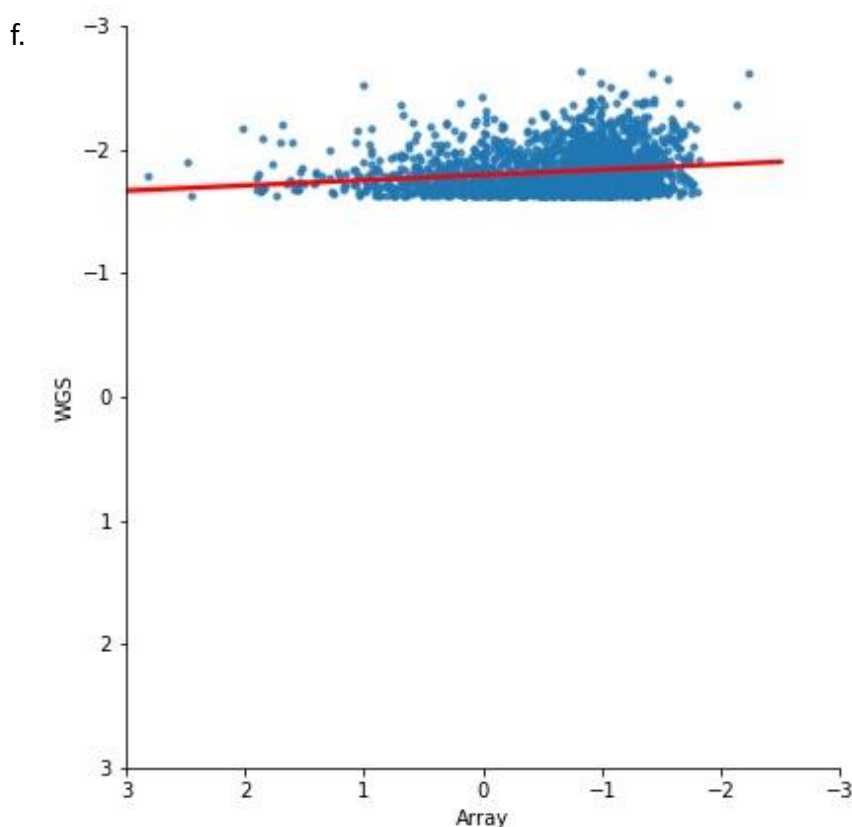
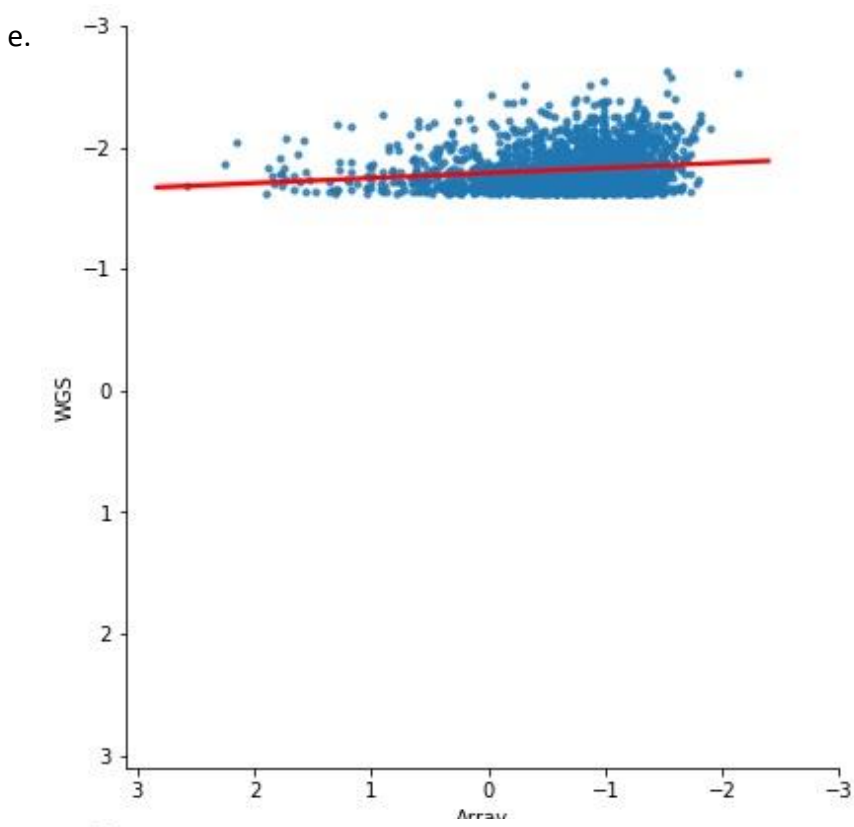
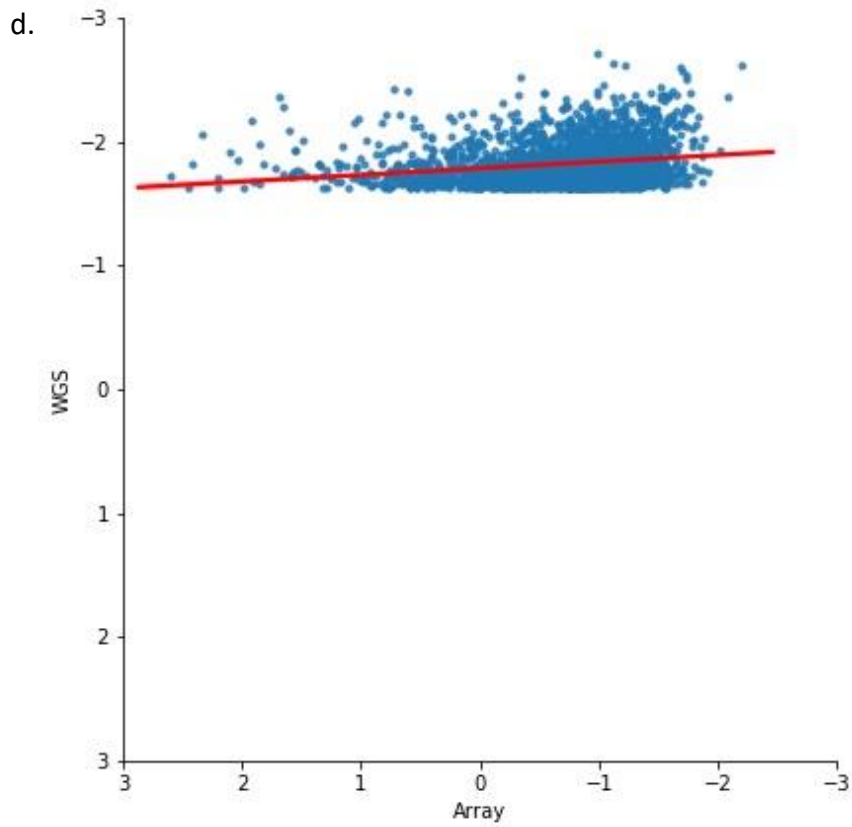
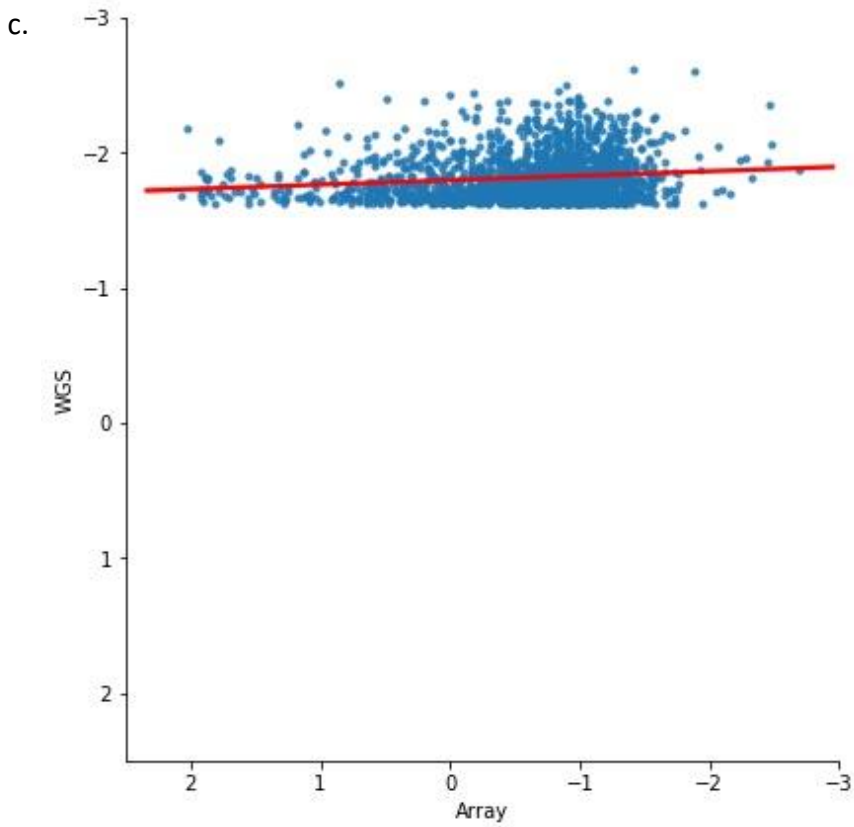
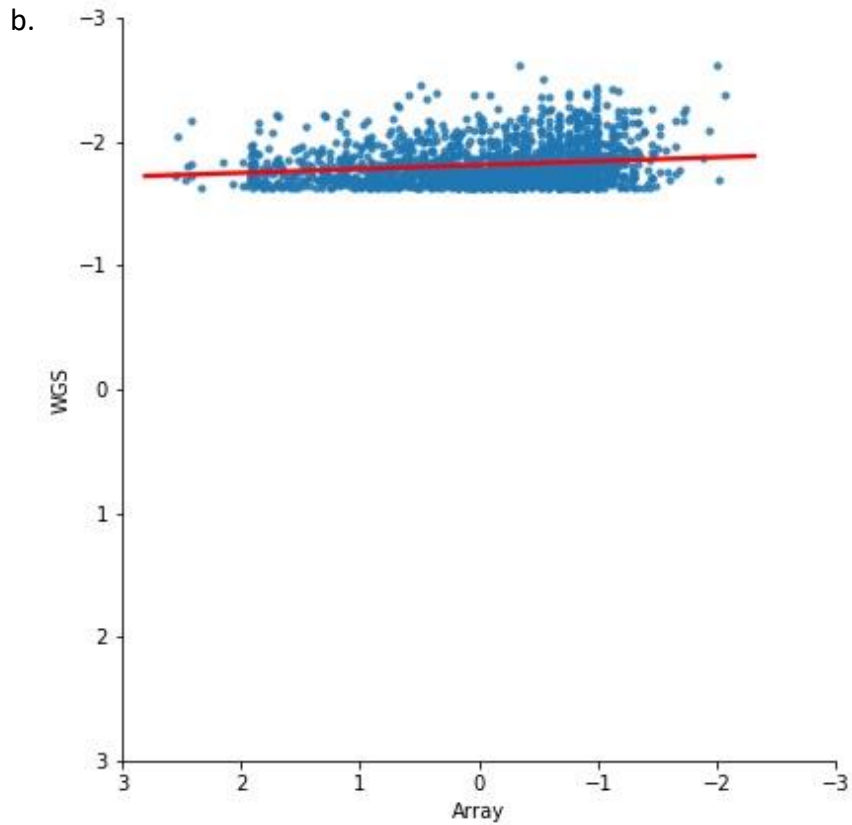
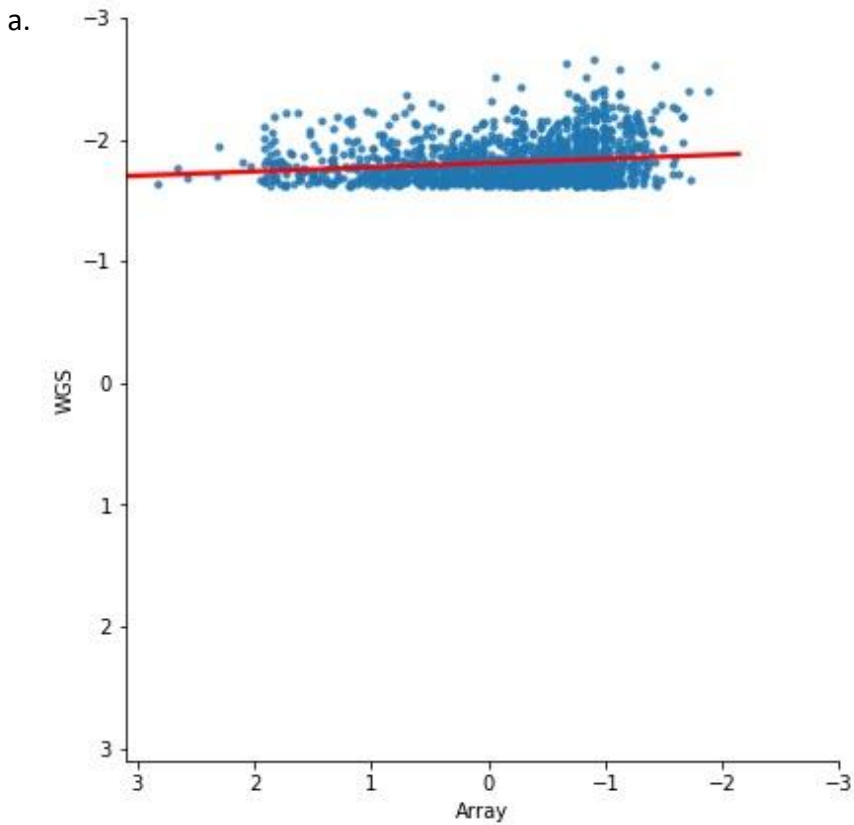
- a. XP-EHH; Ethiopia and Zulu; Affy 6
- b. XP-EHH; Ethiopia and Zulu; Omni1
- c. XP-EHH; Ethiopia and Zulu; Mega 2.5
- d. XP-EHH; Ethiopia and Zulu; H3A
- e. XP-EHH; Ethiopia and Zulu; PanAFR
- f. XP-EHH; Ethiopia and Zulu; Omni 2.5
- g. XP-EHH; Ethiopia and Zulu; Omni5

Appendix 6.10.



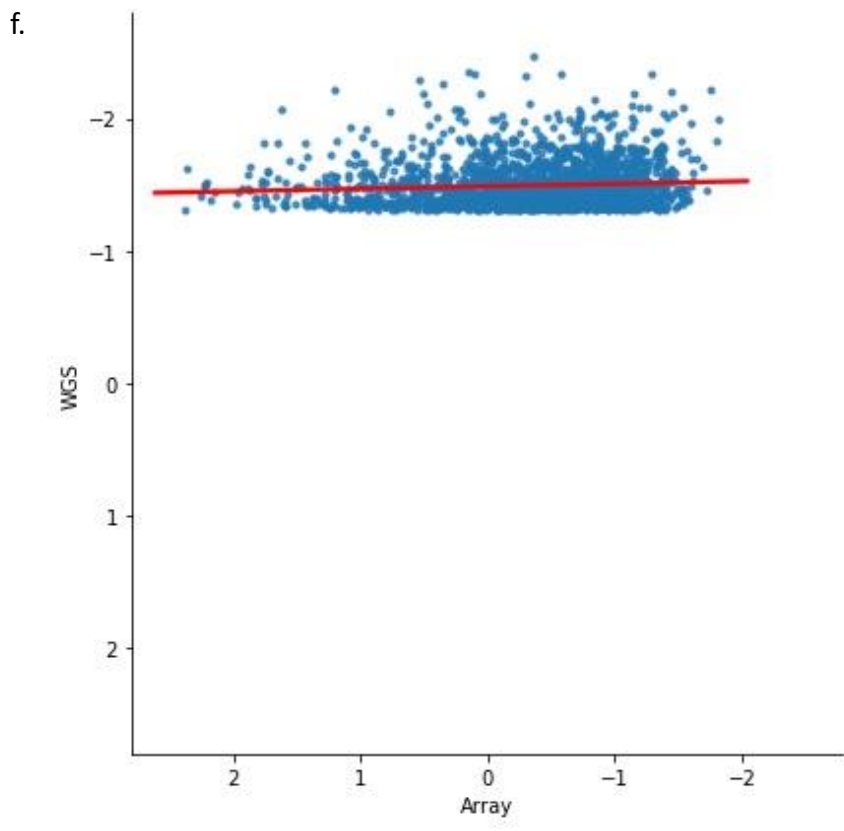
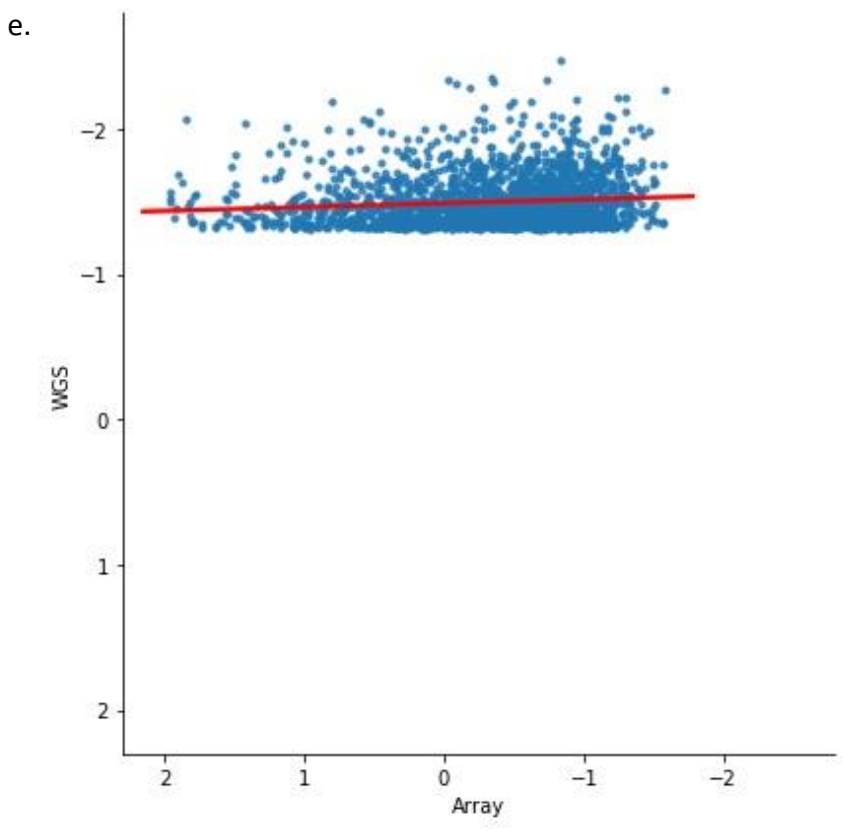
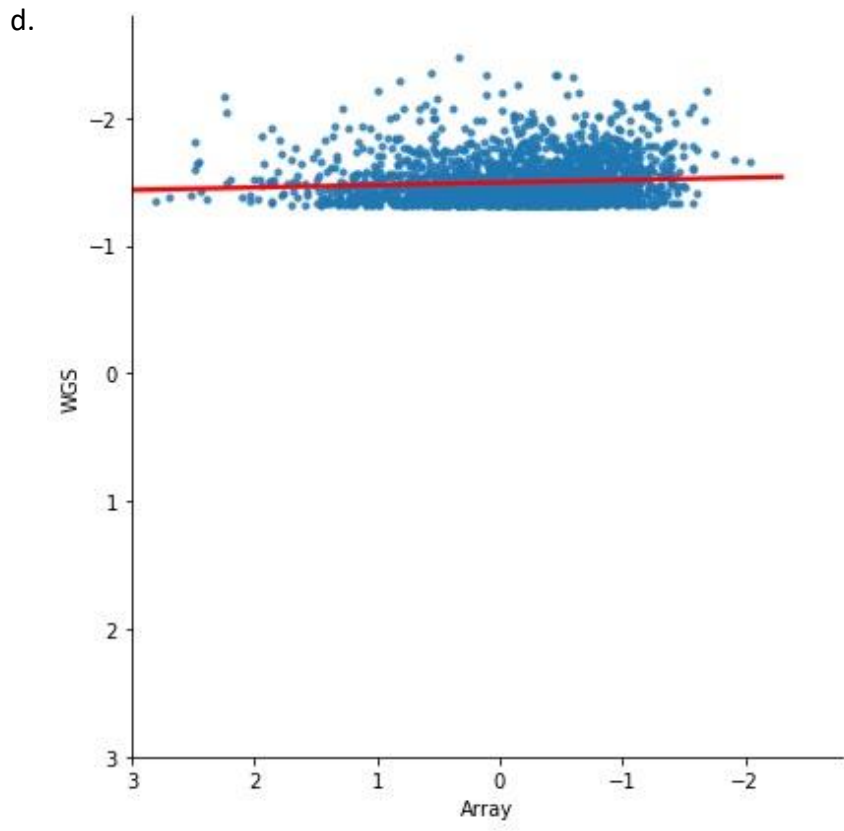
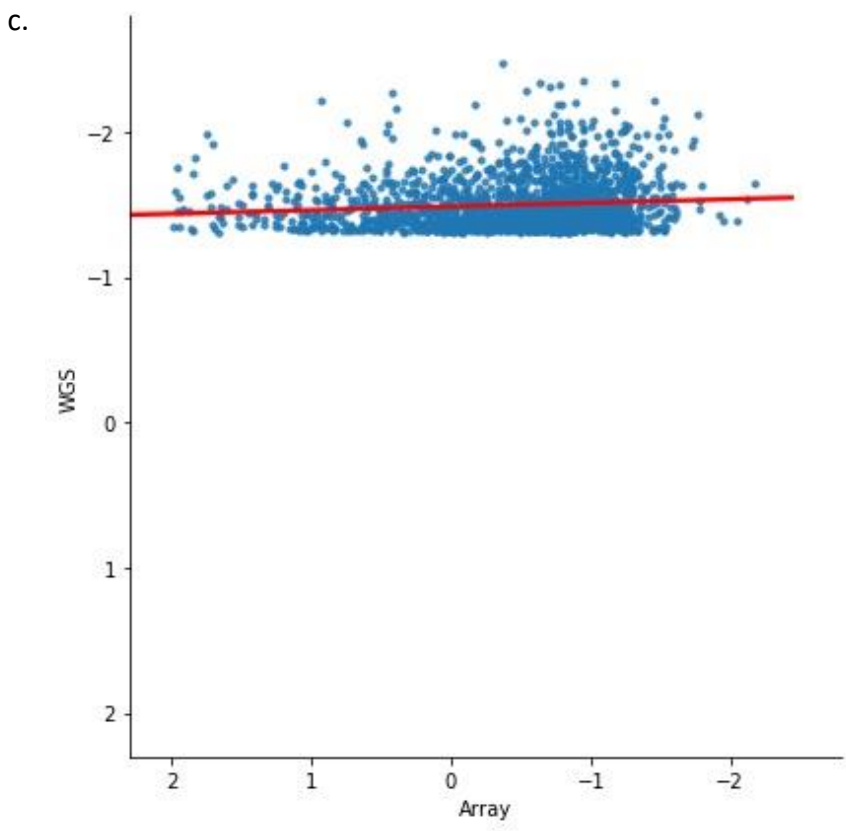
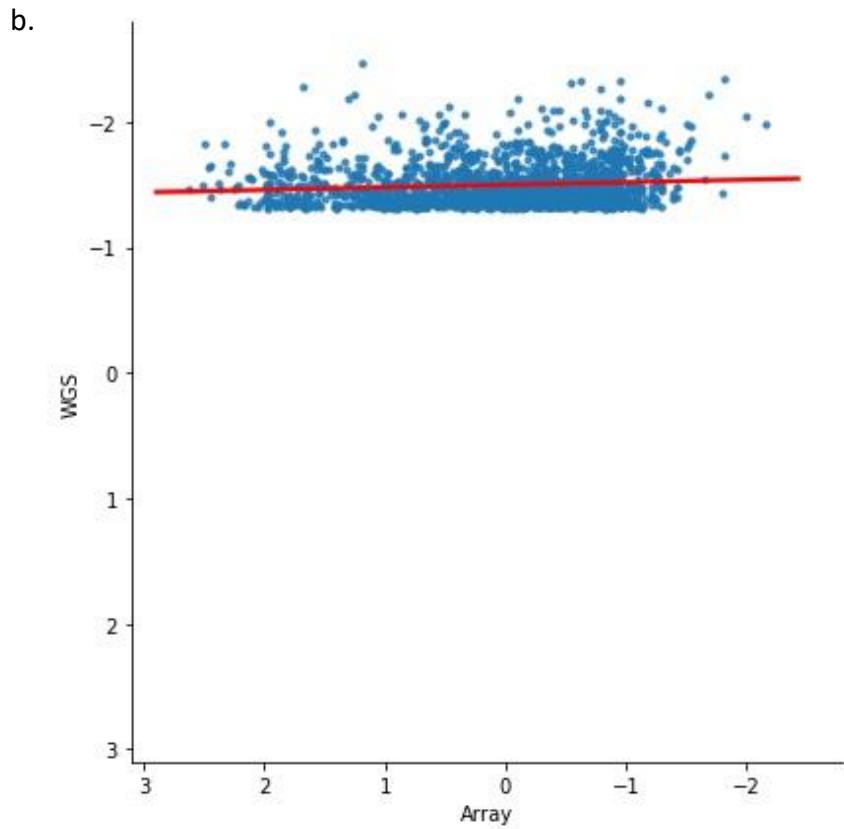
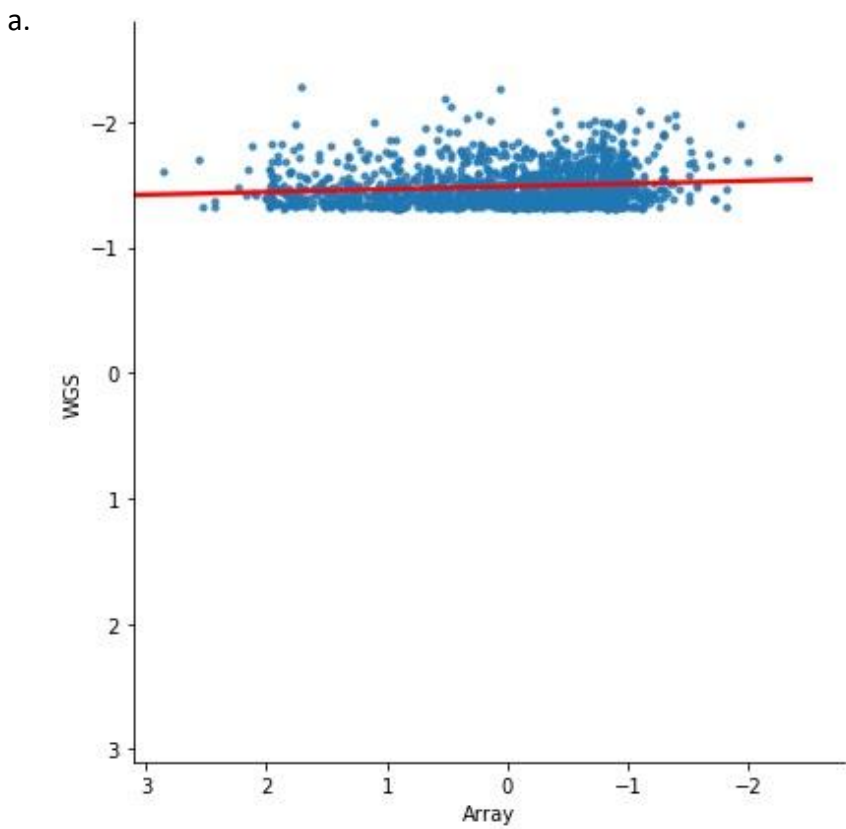
- a. Tajima's D; Baganda; Affy 6
- b. Tajima's D; Baganda; Omni1
- c. Tajima's D; Baganda; Mega 2.5
- d. Tajima's D; Baganda; H3A
- e. Tajima's D; Baganda; PanAFR
- f. Tajima's D; Baganda; Omni 2.5
- g. Tajima's D; Baganda; Omni5

Appendix 6.11.



- a. Tajima's D; Ethiopia; Affy 6
- b. Tajima's D; Ethiopia; Omni1
- c. Tajima's D; Ethiopia; Mega 2.5
- d. Tajima's D; Ethiopia; H3A
- e. Tajima's D; Ethiopia; PanAFR
- f. Tajima's D; Ethiopia; Omni 2.5
- g. Tajima's D; Ethiopia; Omni5

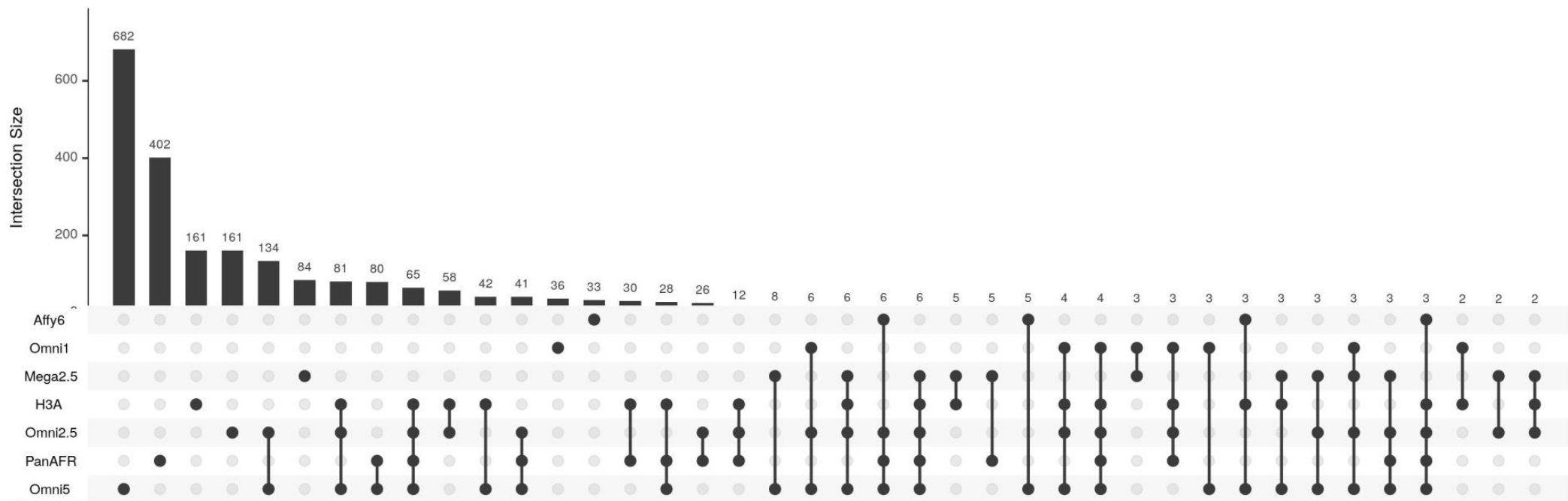
Appendix 6.12.



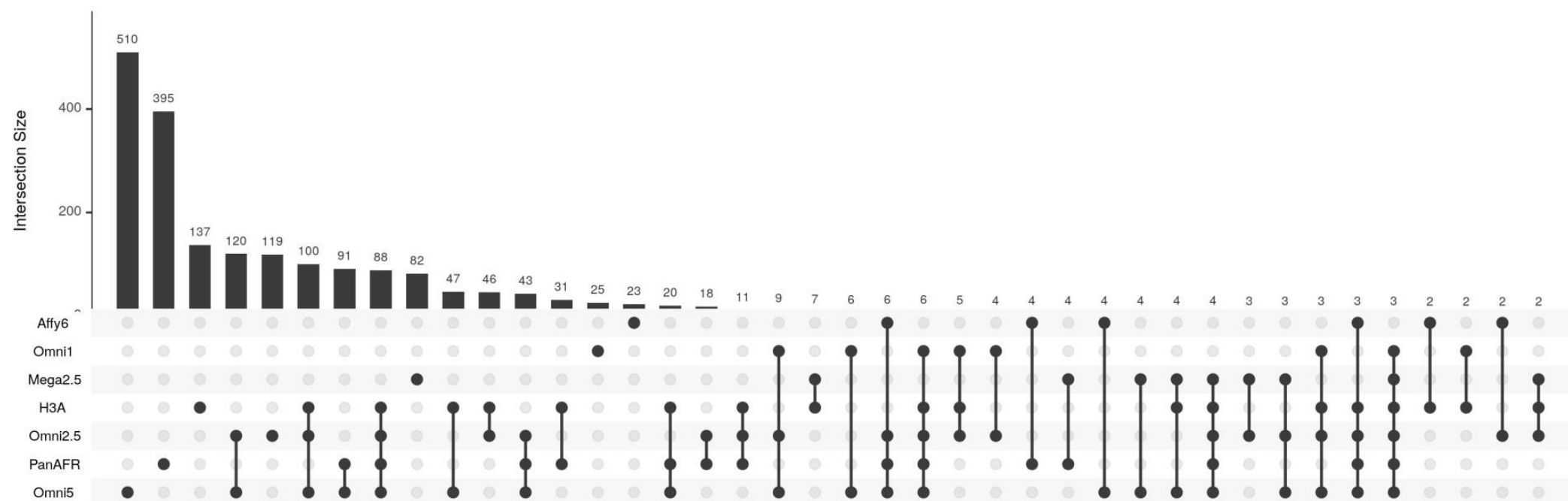
- a. Tajima's D; Zulu; Affy 6
- b. Tajima's D; Zulu; Omni1
- c. Tajima's D; Zulu; Mega 2.5
- d. Tajima's D; Zulu; H3A
- e. Tajima's D; Zulu; PanAFR
- f. Tajima's D; Zulu; Omni 2.5
- g. Tajima's D; Zulu; Omni5

Appendix 7.1.

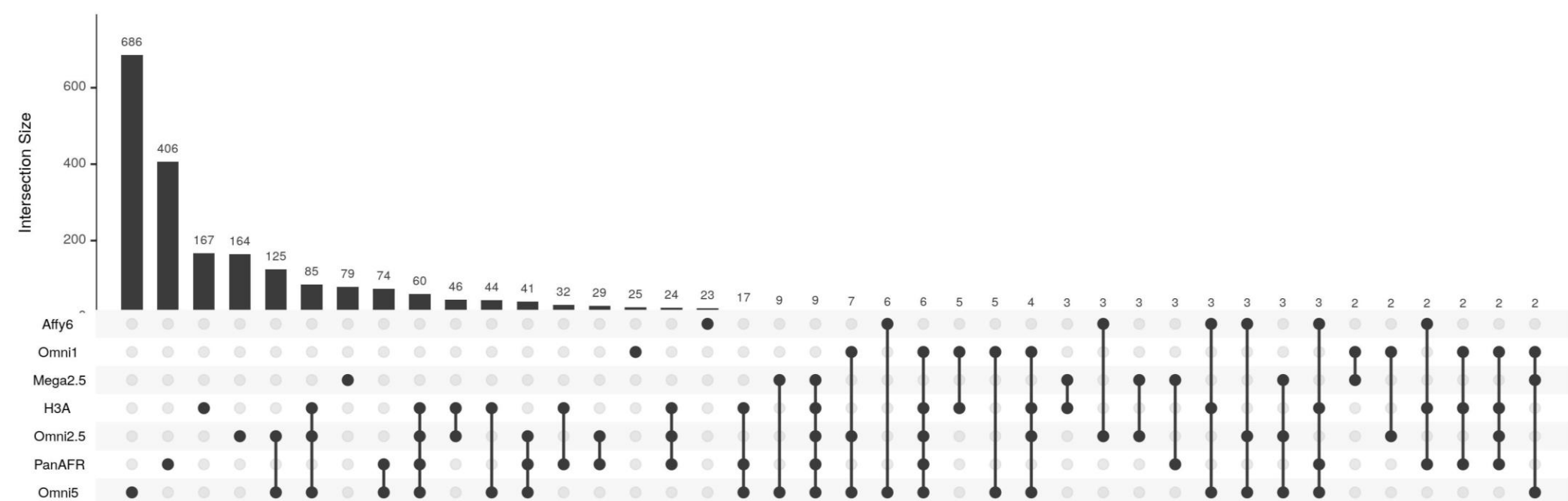
a.



b.

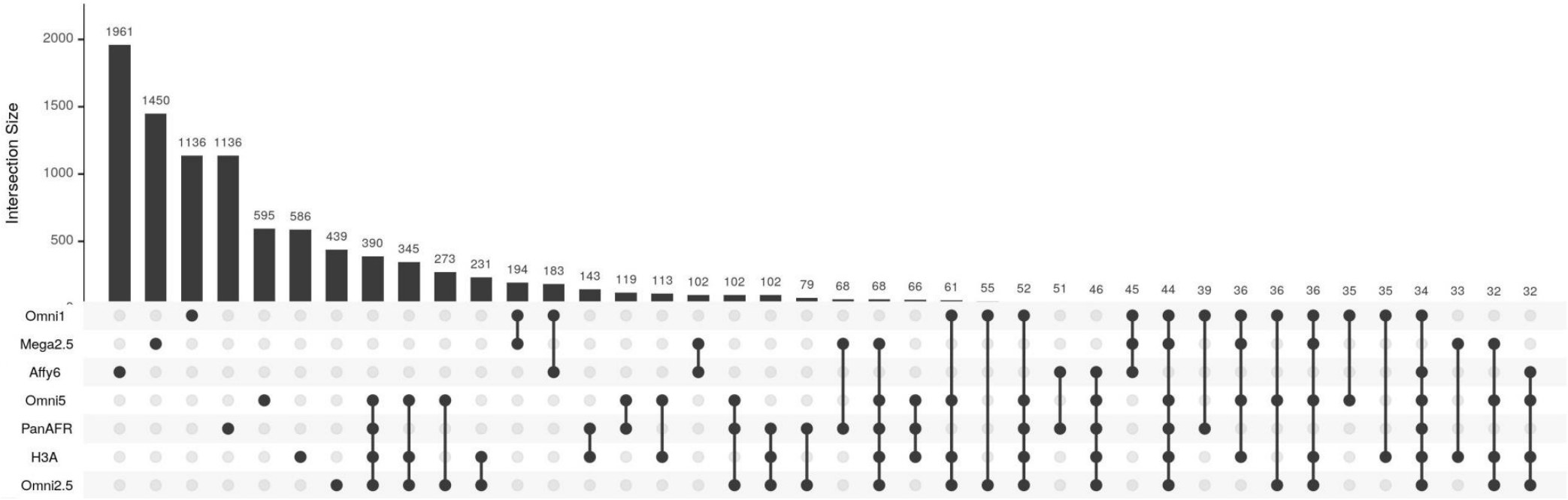


C.

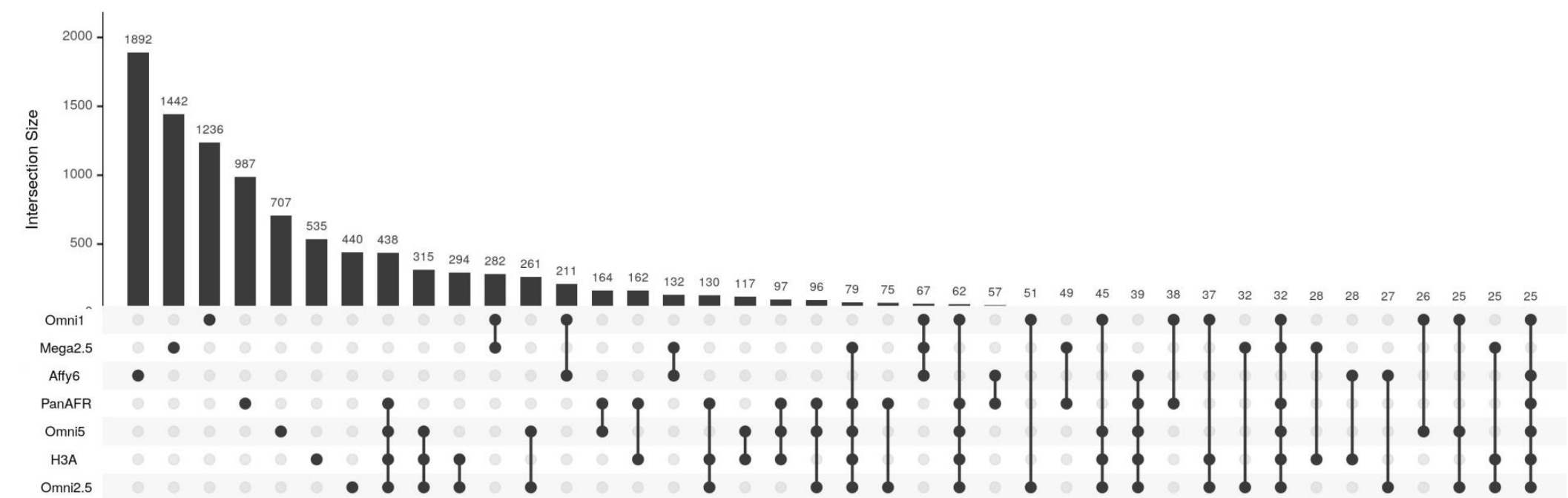


Appendix 7.2.

a.

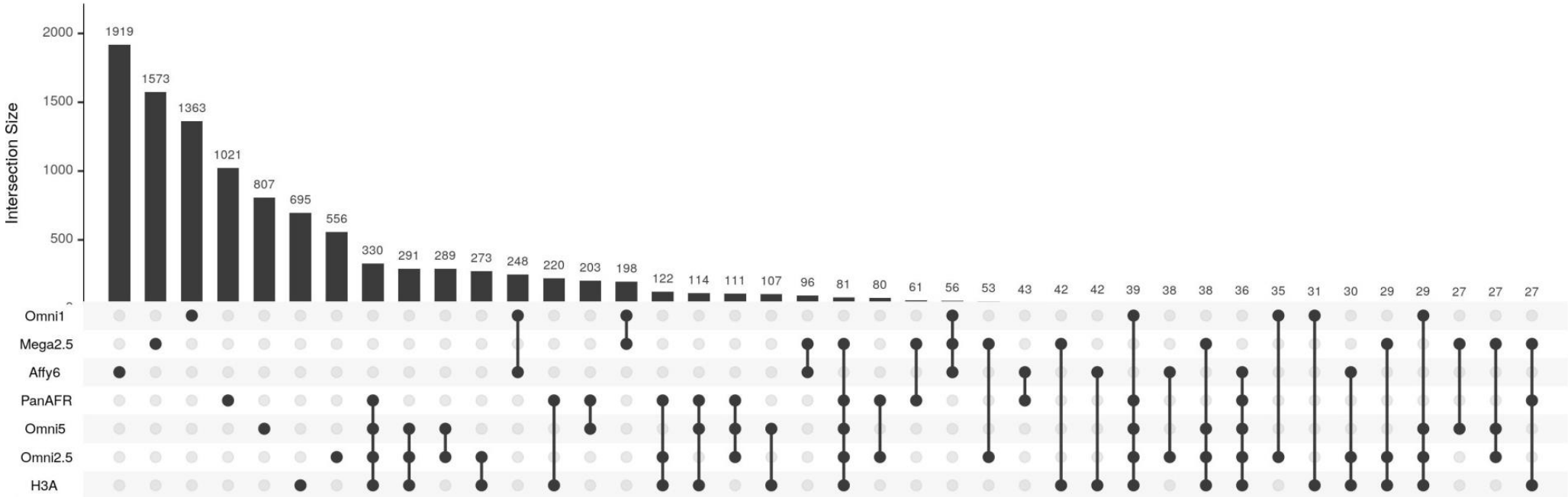


b.

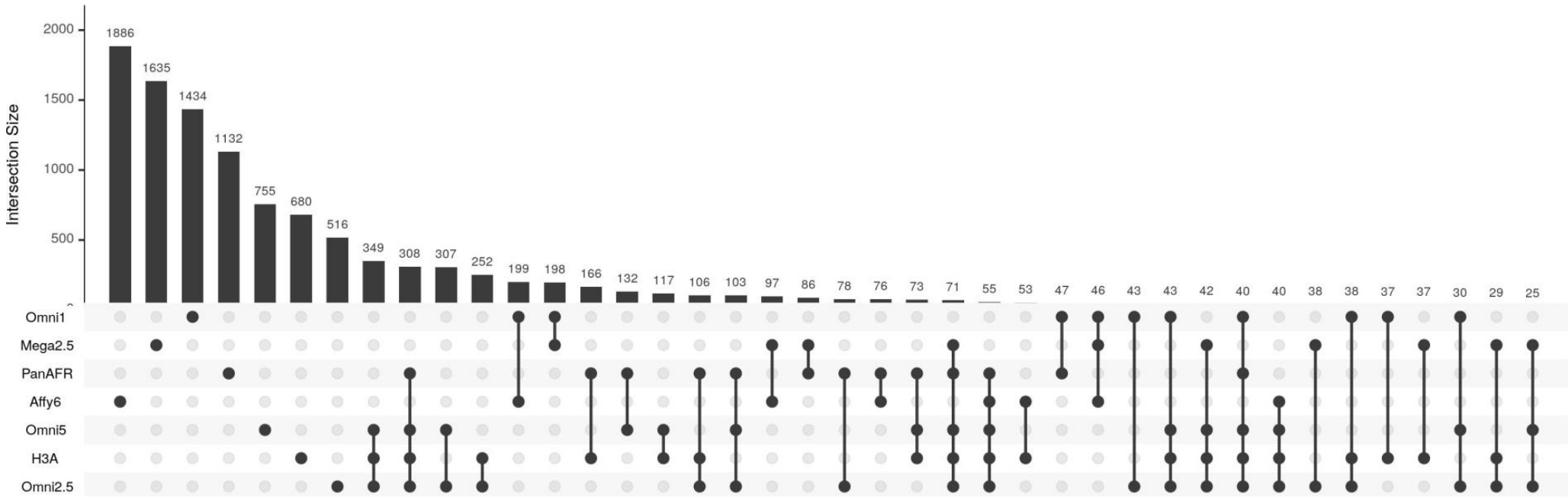


Appendix 7.3.

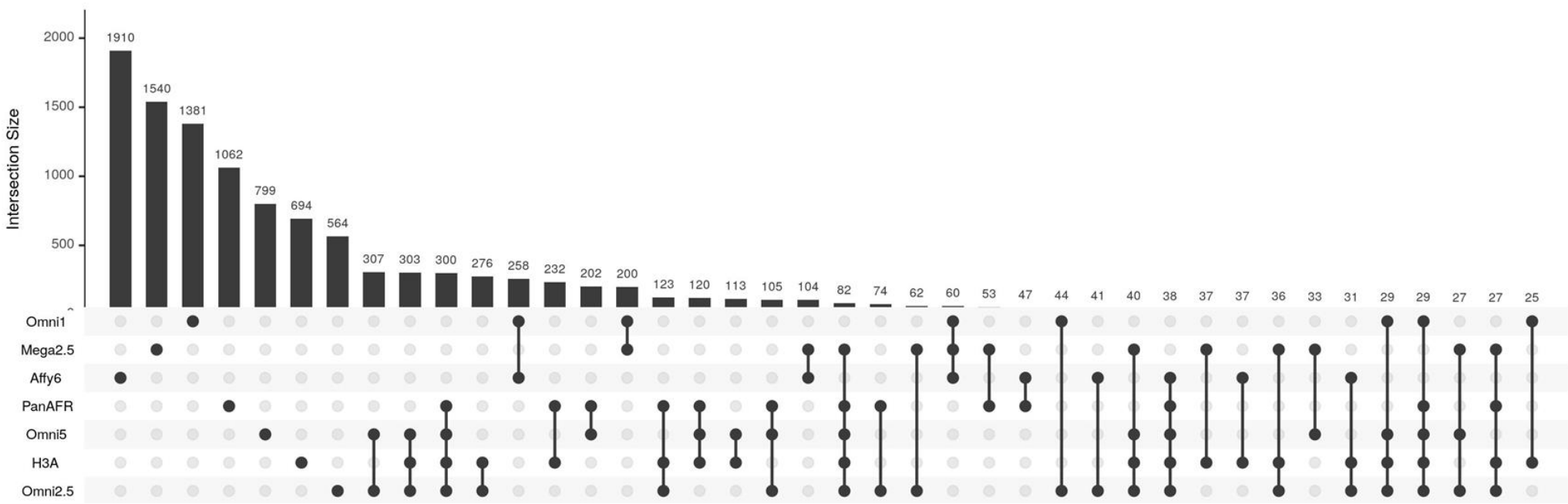
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b.

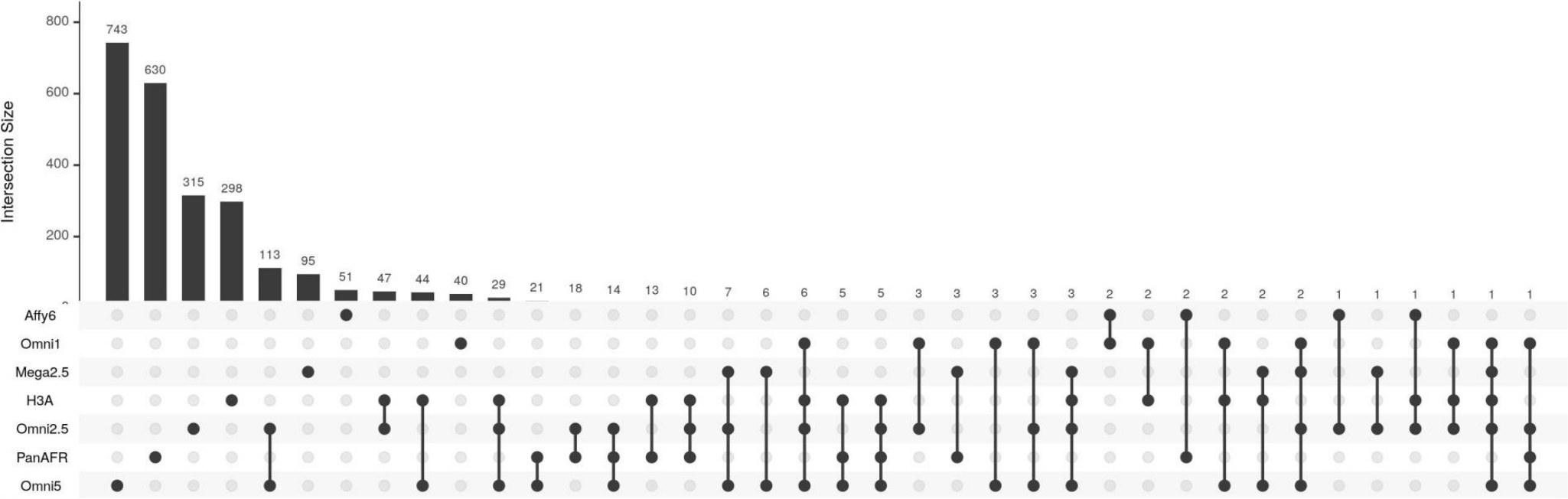


c.

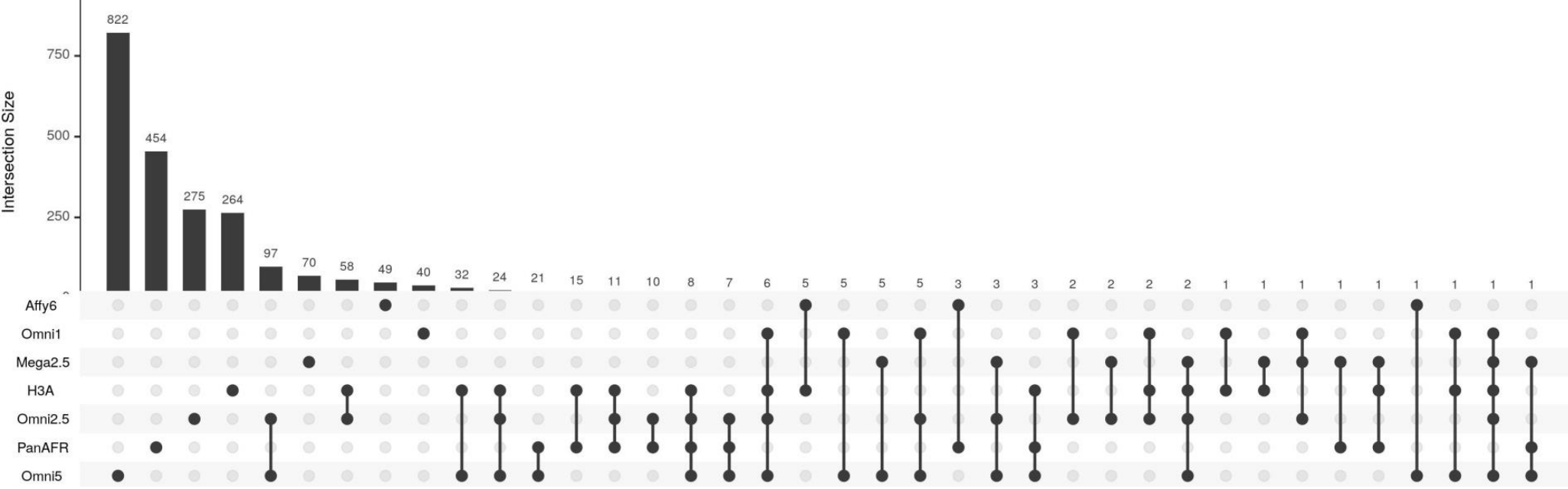


Appendix 7.4.

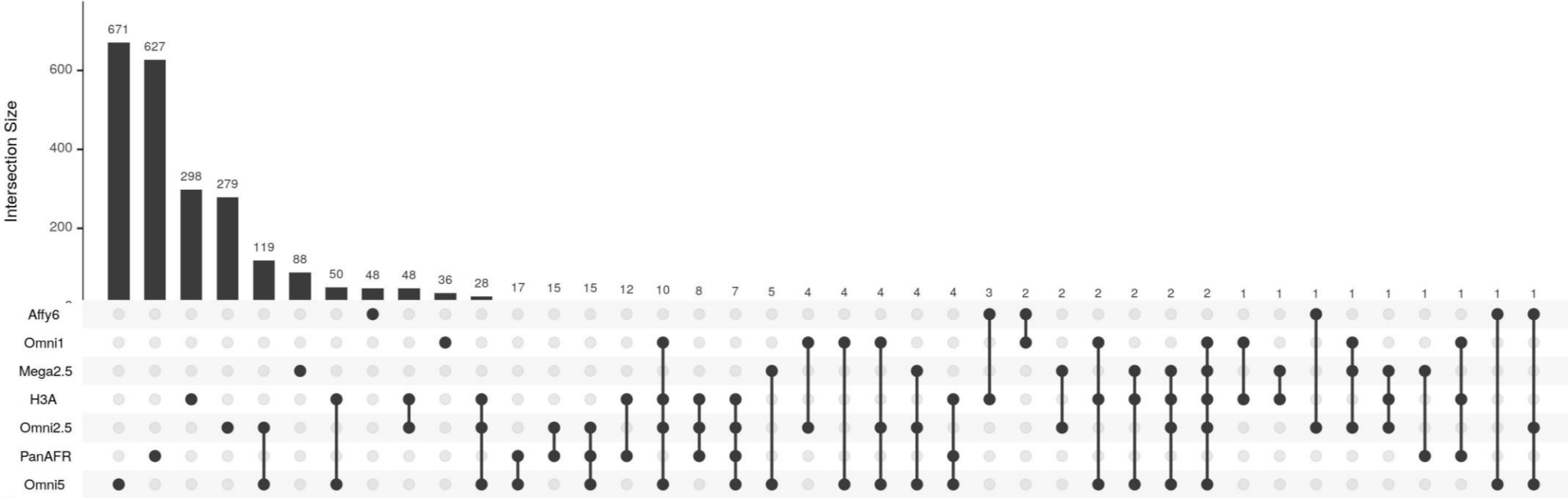
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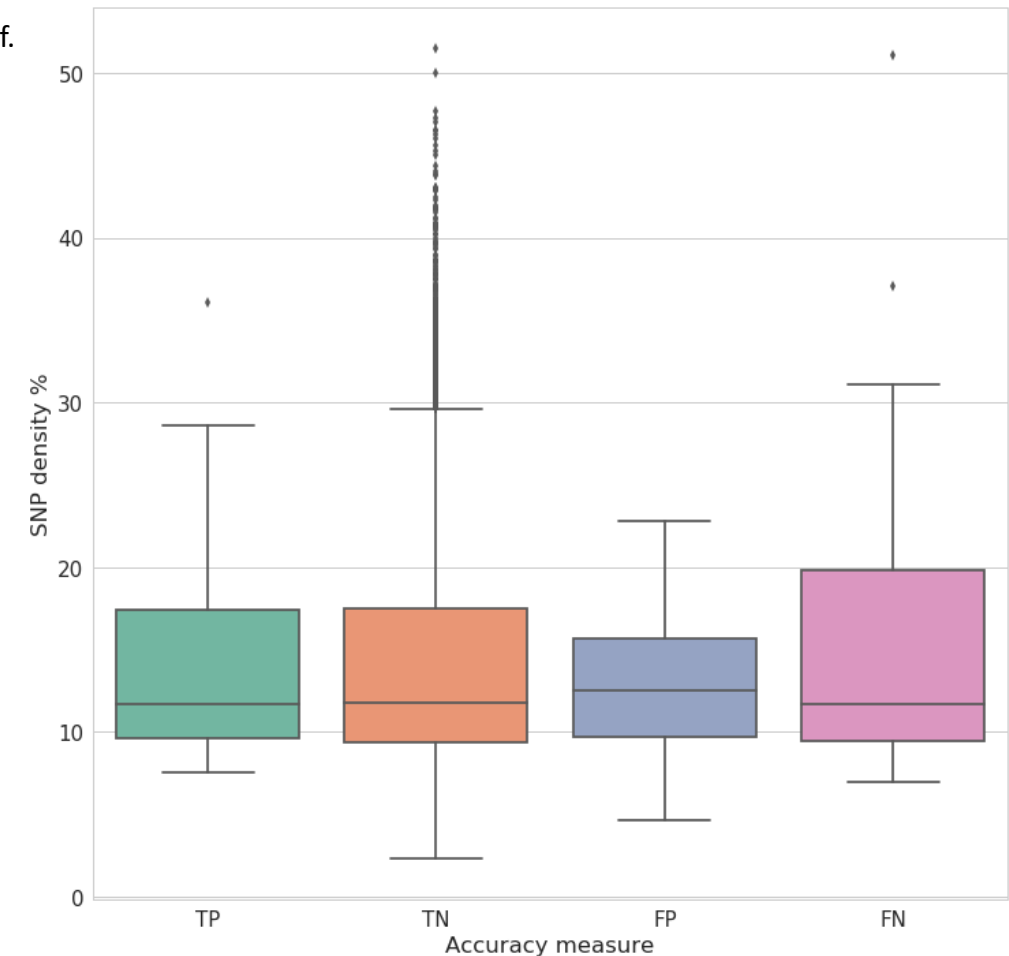
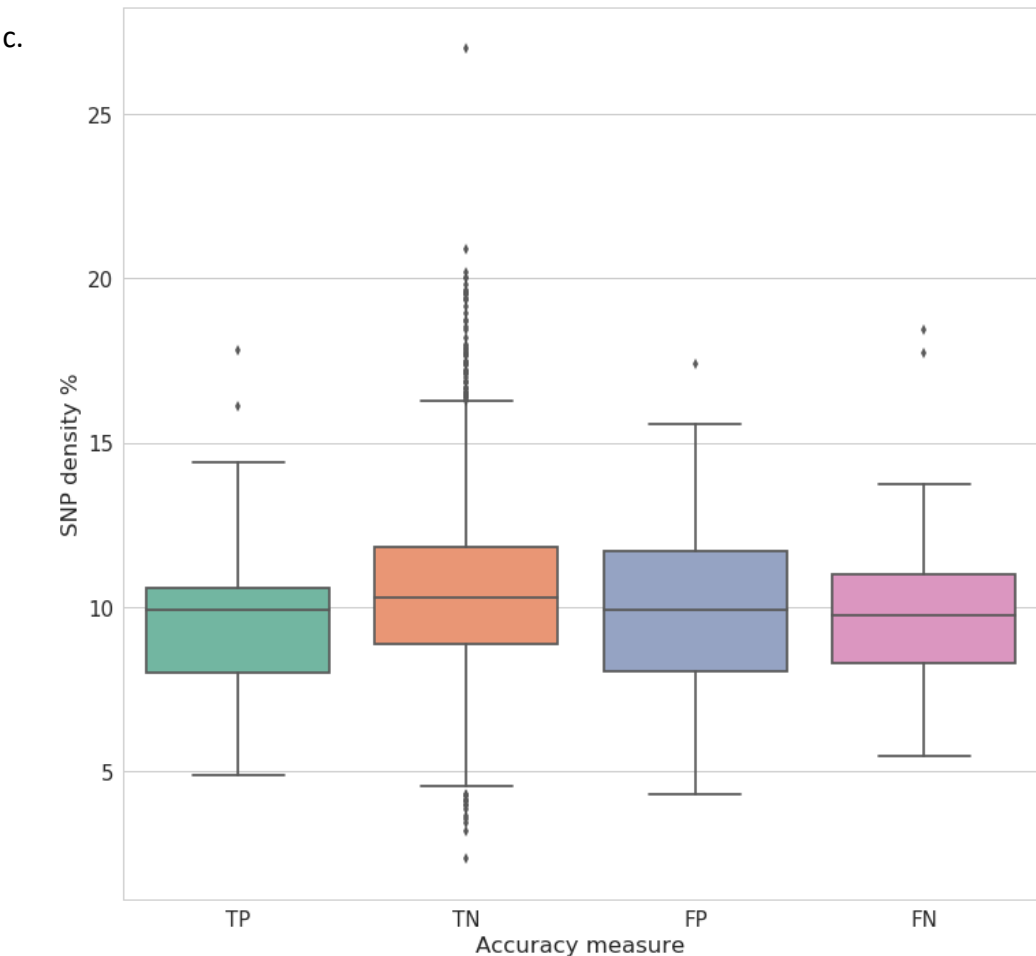
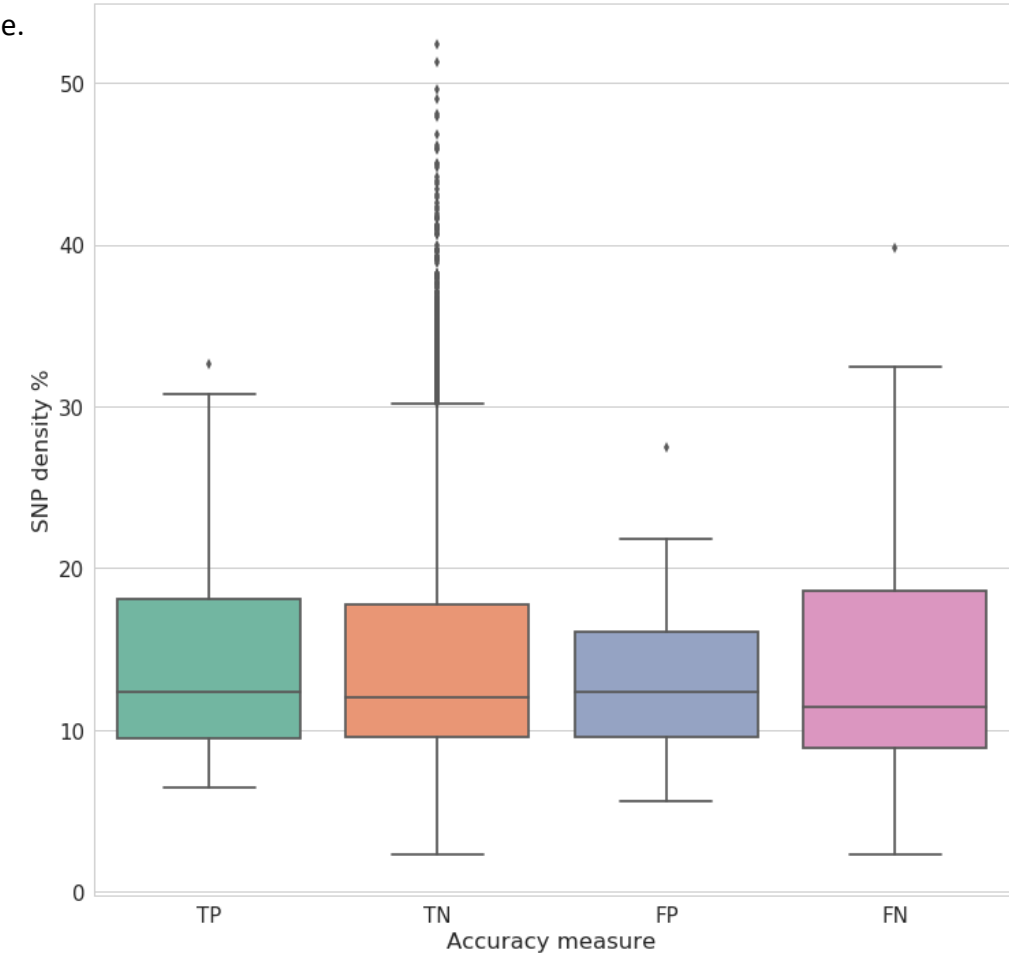
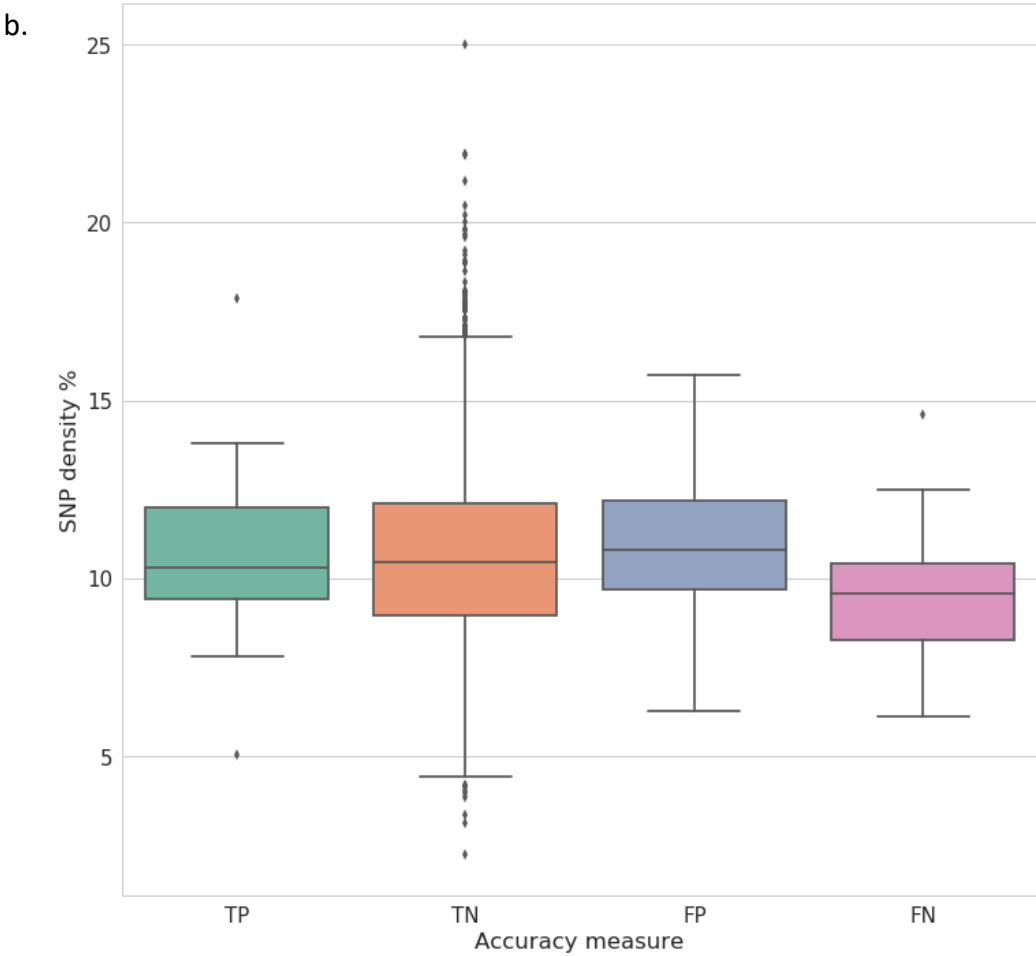
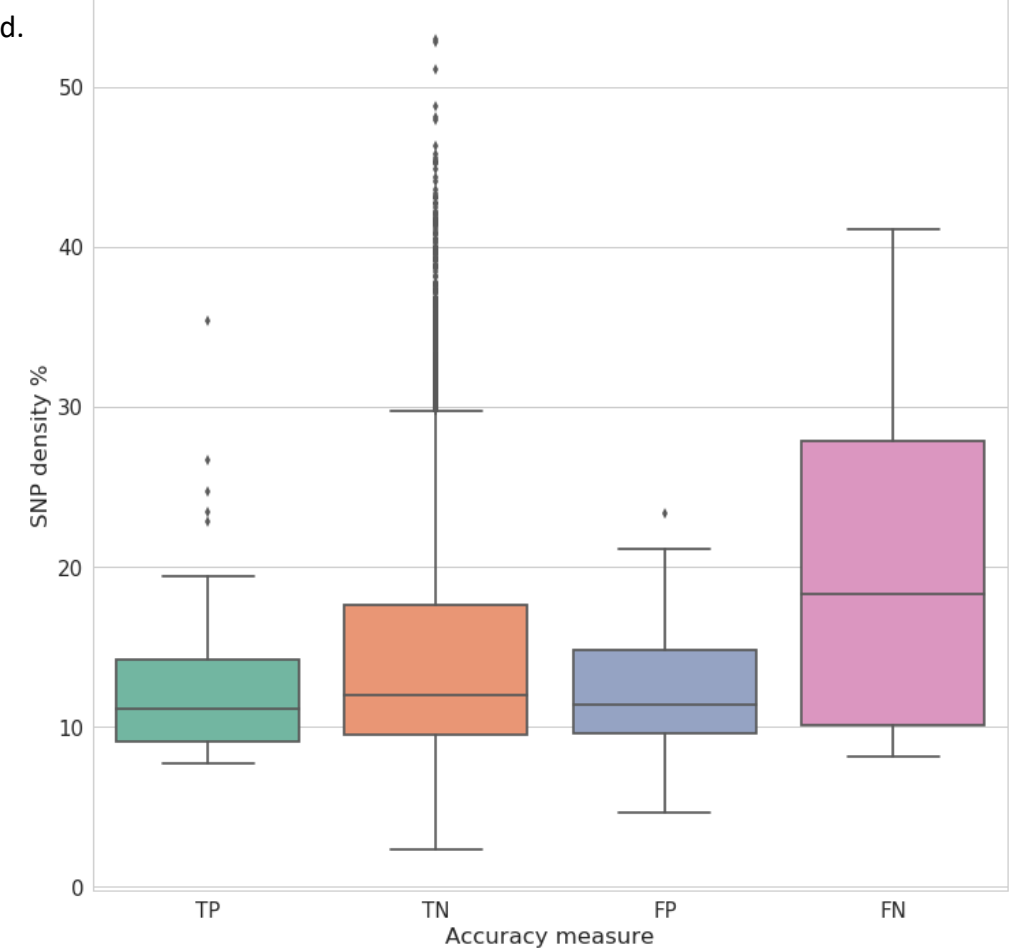
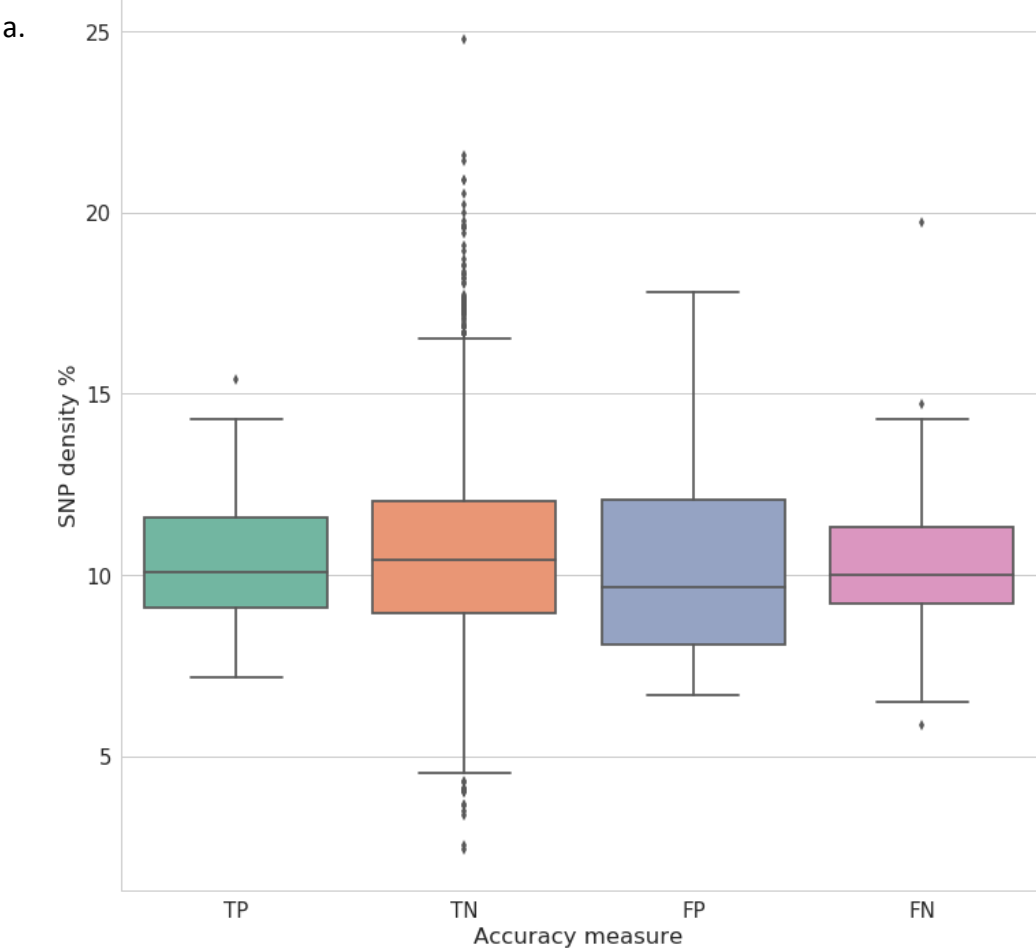
b.



c.

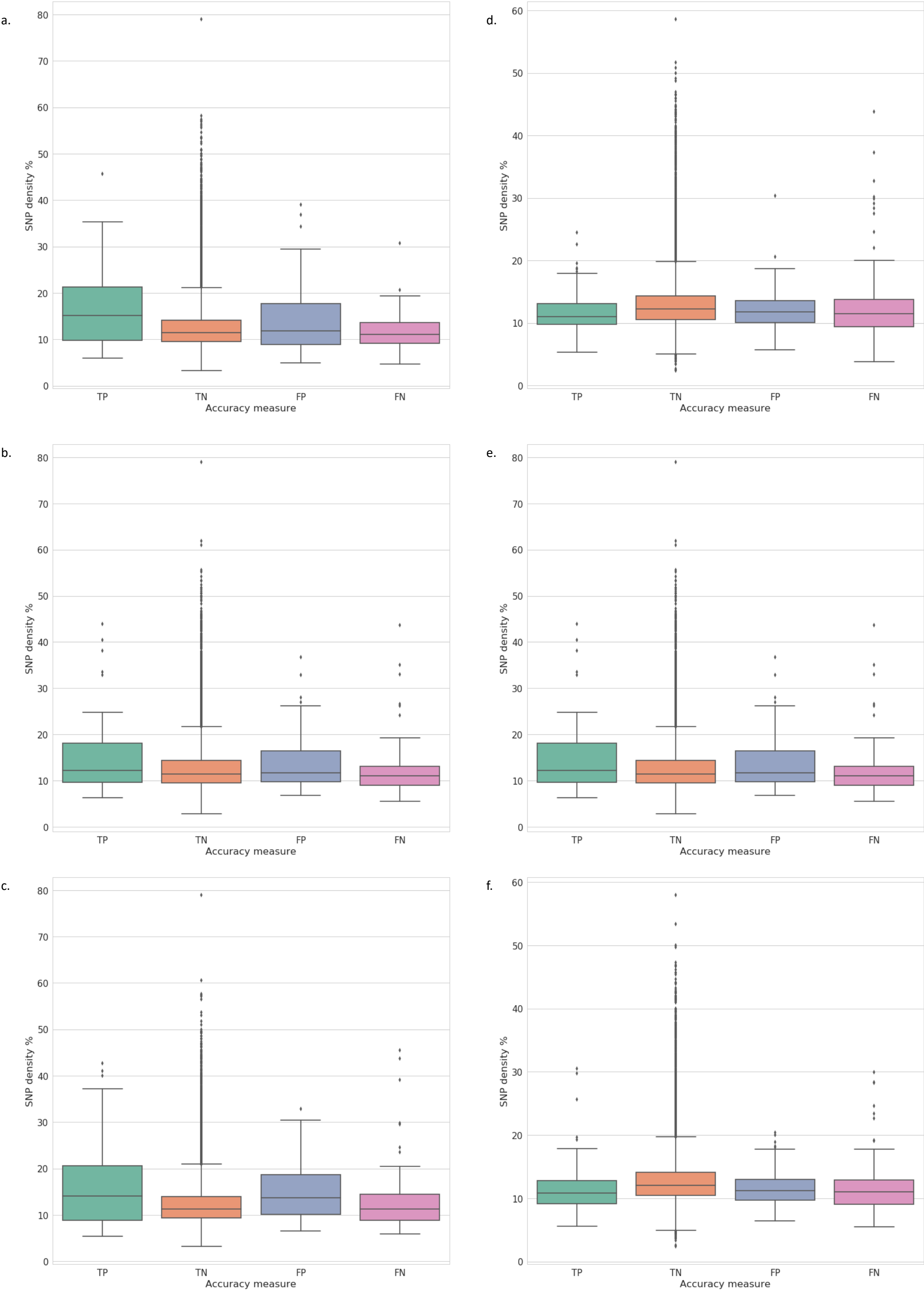


Appendix 8.1.1.



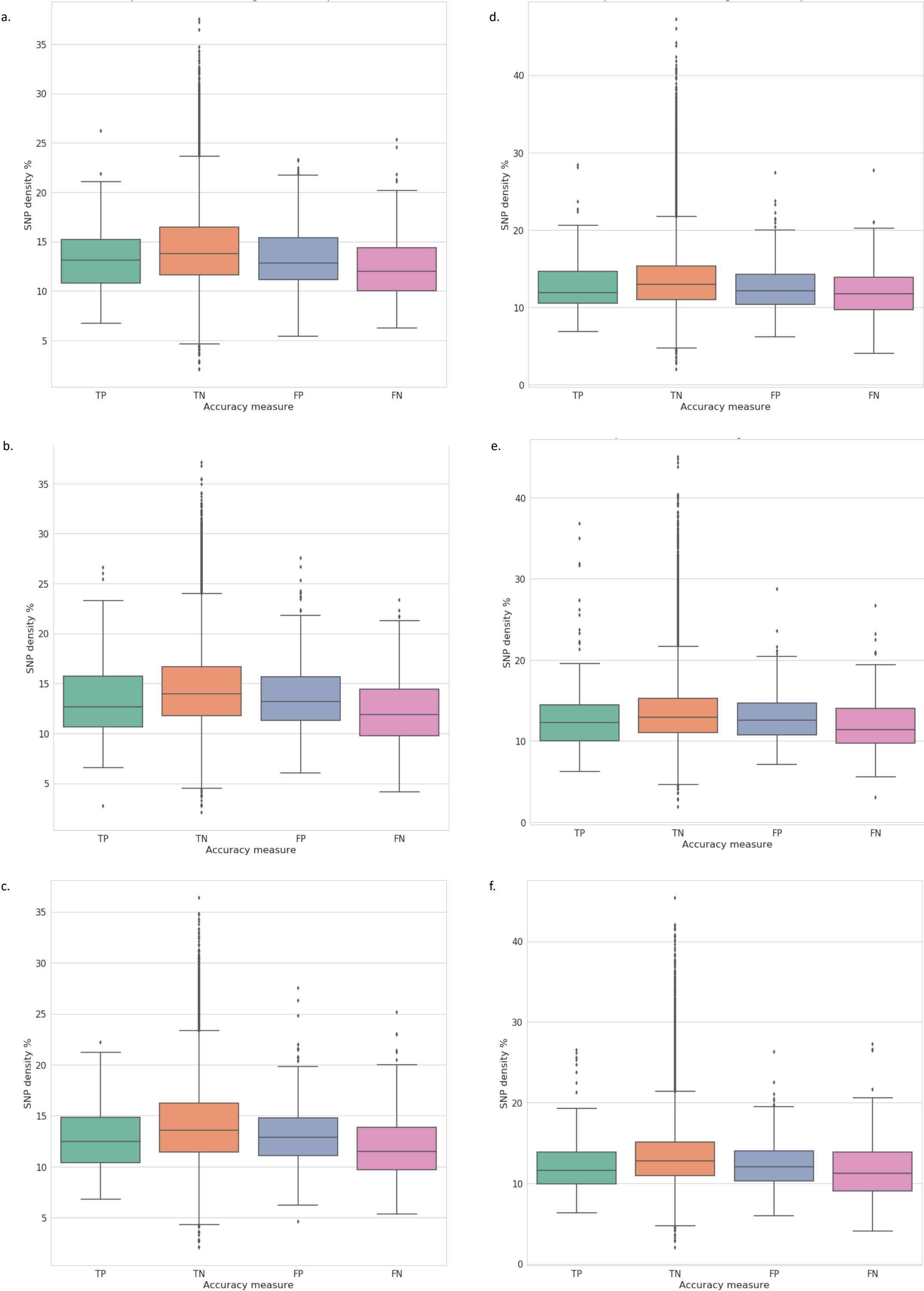
- a. F_{ST} ; Baganda and Ethiopia; Affy 6
- b. F_{ST} ; Baganda and Zulu; Affy 6
- c. F_{ST} ; Ethiopia and Zulu; Affy 6
- d. F_{ST} ; Baganda and Ethiopia; Omni 1
- e. F_{ST} ; Baganda and Zulu; Omni 1
- f. F_{ST} ; Ethiopia and Zulu; Omni 1

Appendix 8.1.2.



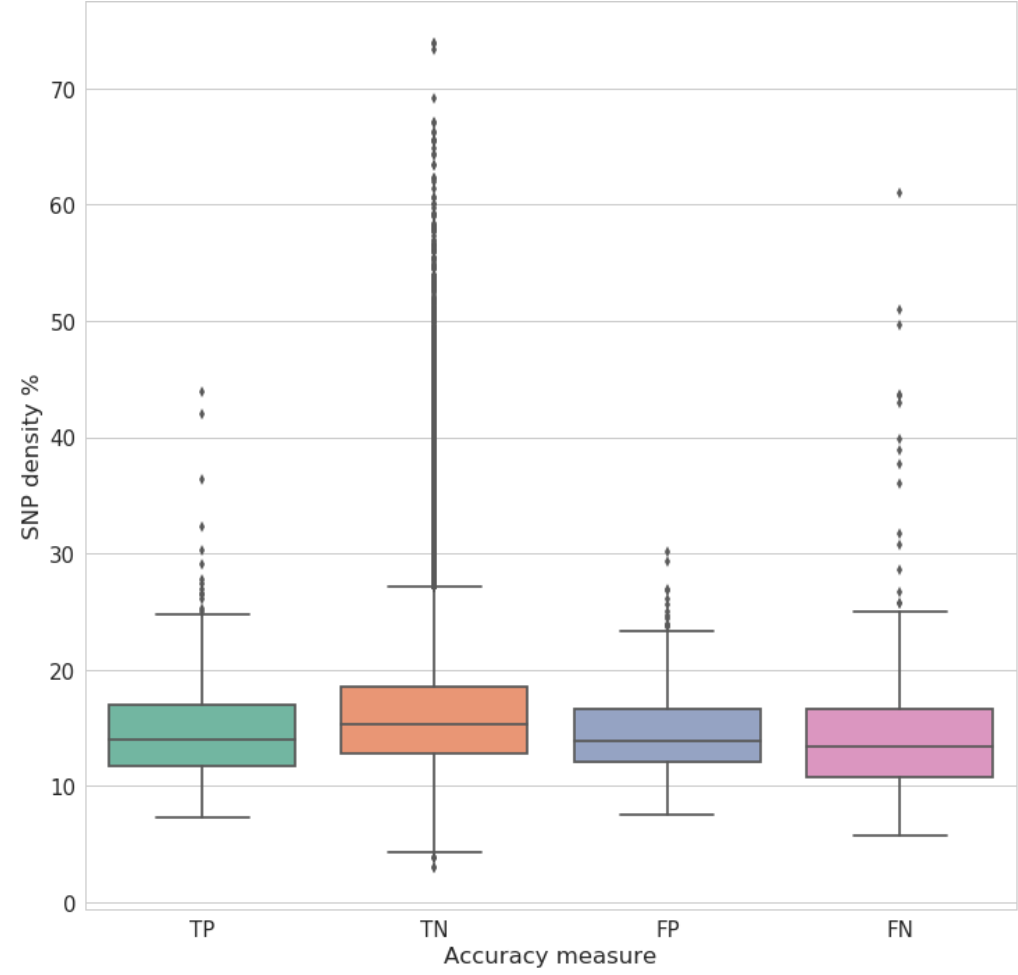
- a. F_{ST} ; Baganda and Ethiopia; Mega 2.5
- b. F_{ST} ; Baganda and Zulu; Mega 2.5
- c. F_{ST} ; Ethiopia and Zulu; Mega 2.5
- d. F_{ST} ; Baganda and Ethiopia; H3A
- e. F_{ST} ; Baganda and Zulu; H3A
- f. F_{ST} ; Ethiopia and Zulu; H3A

Appendix 8.1.3.

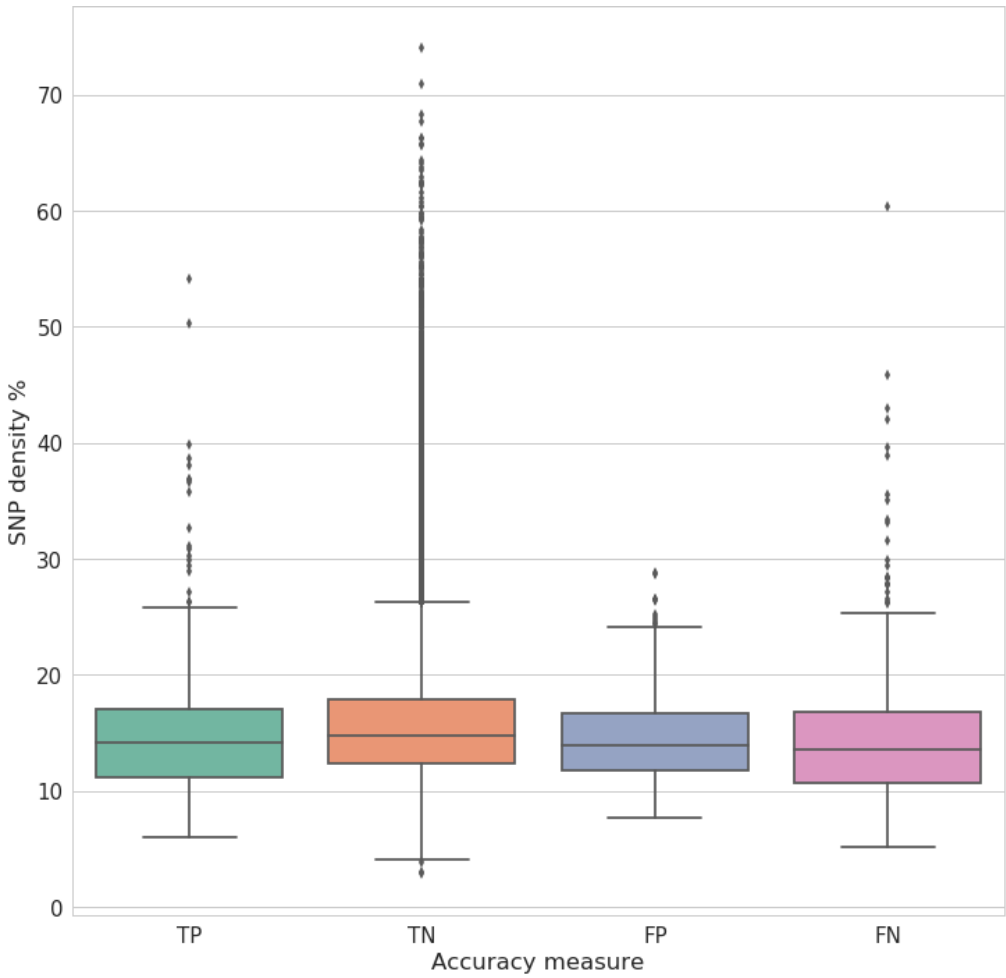


Appendix 8.1.4.

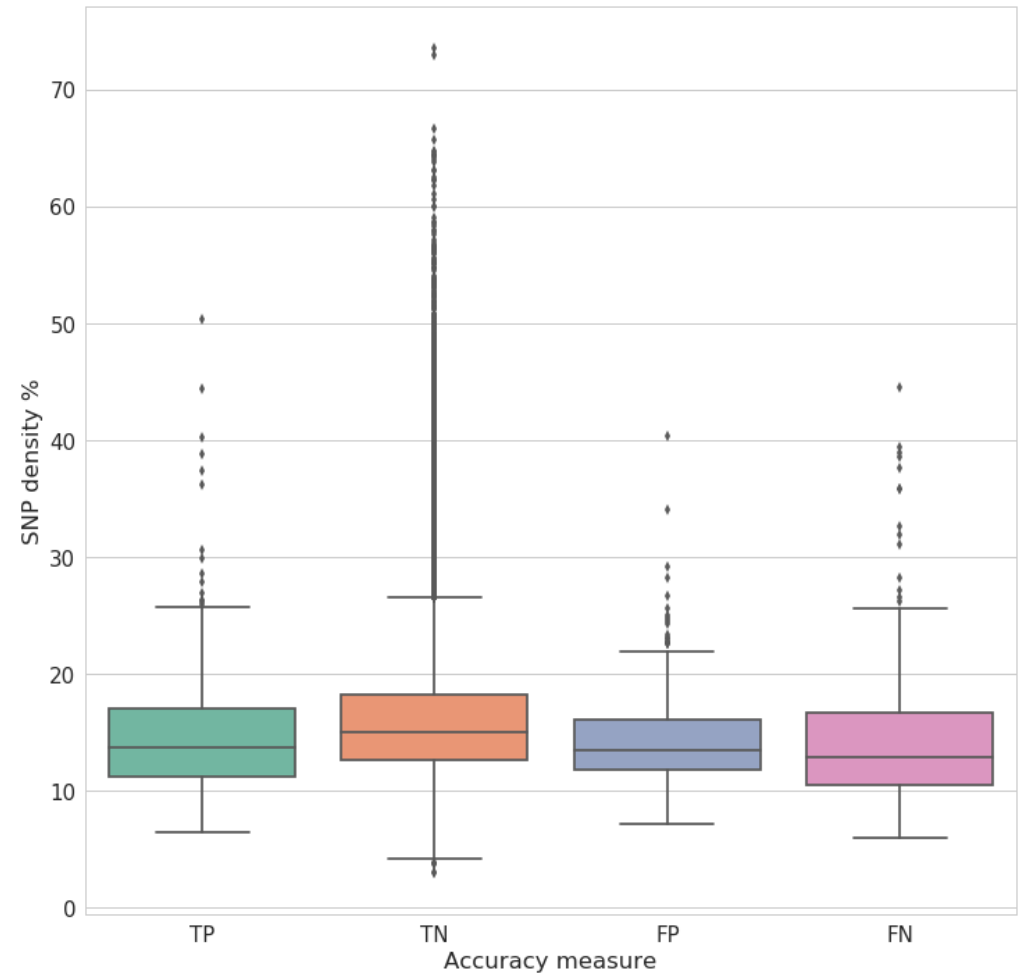
a.



b.

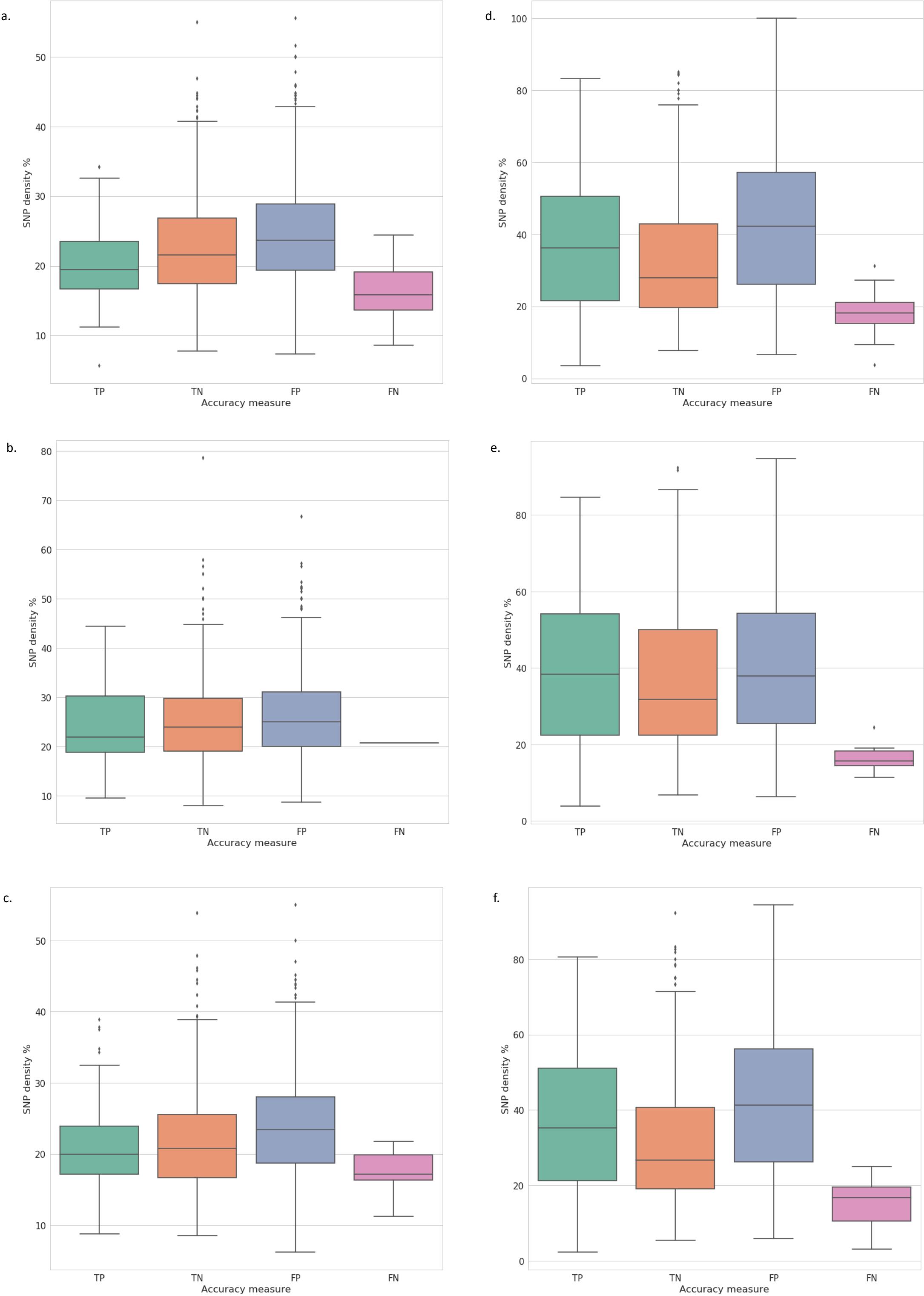


c.



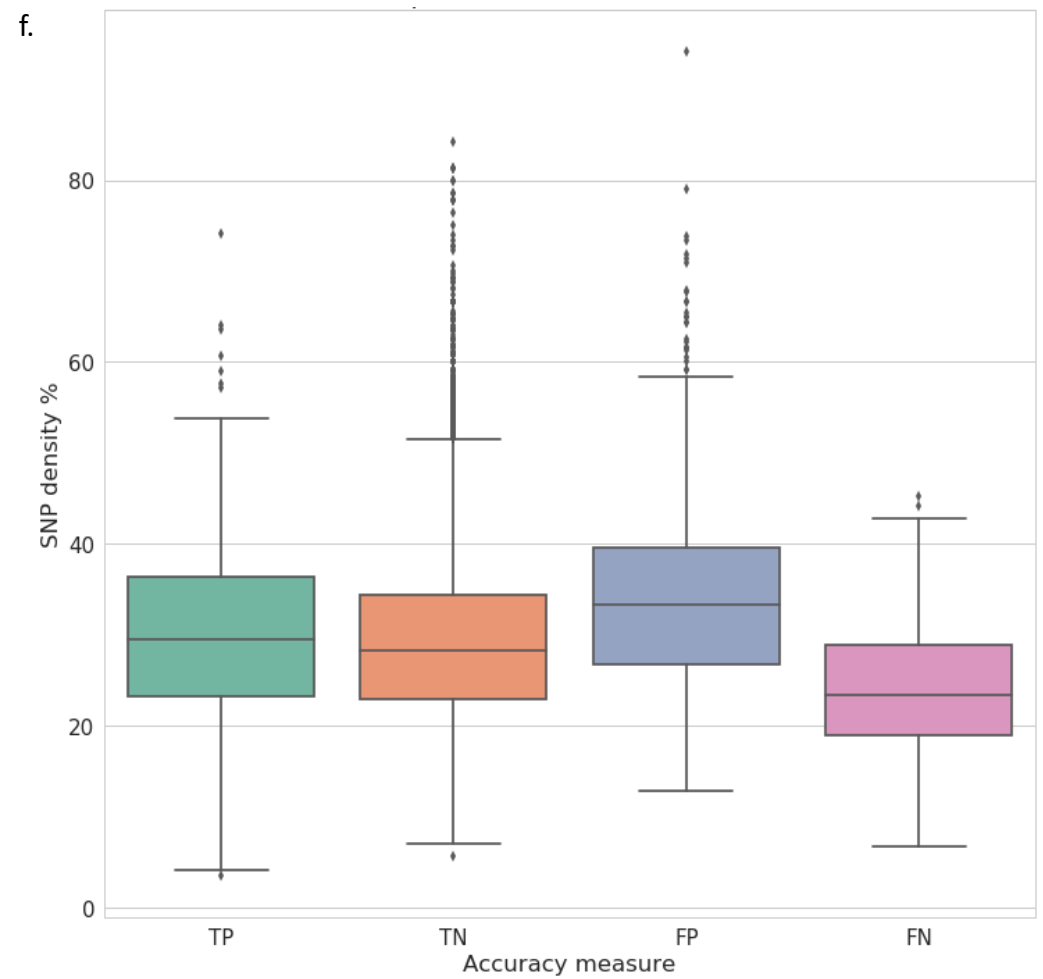
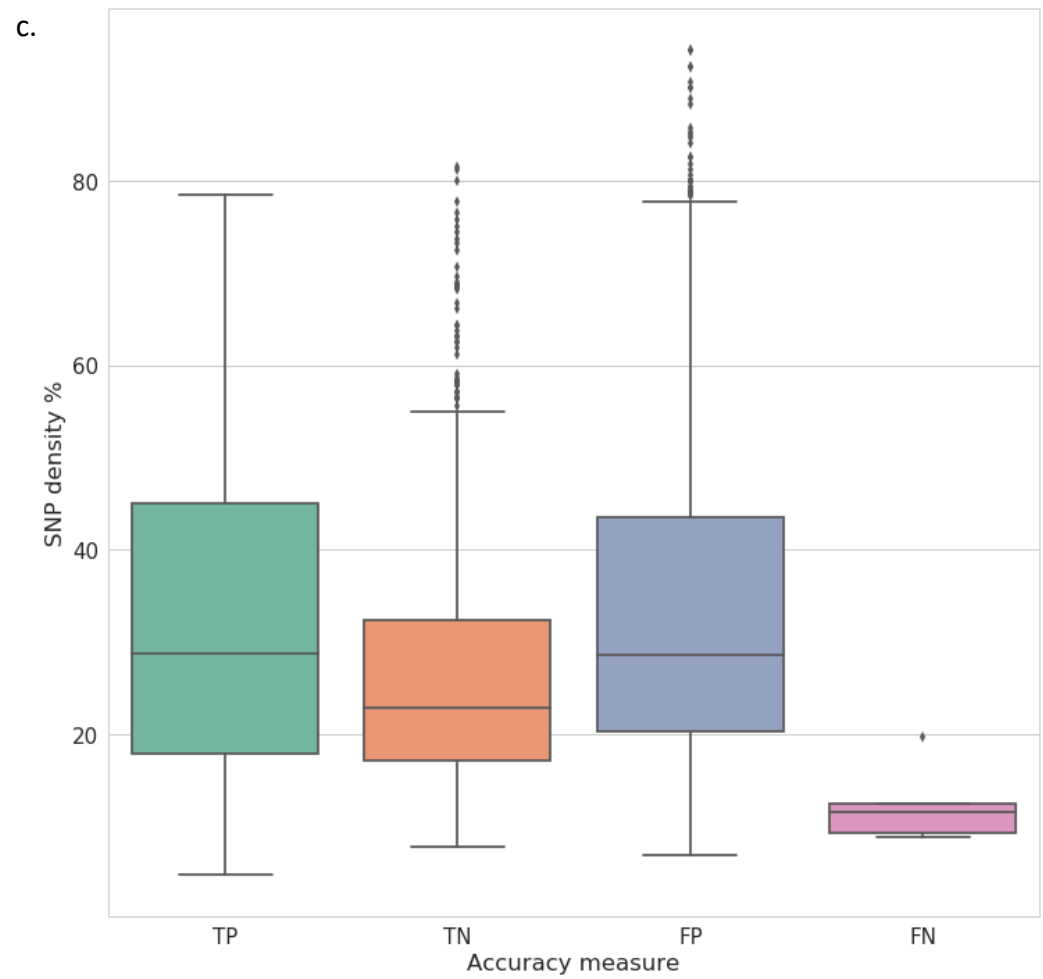
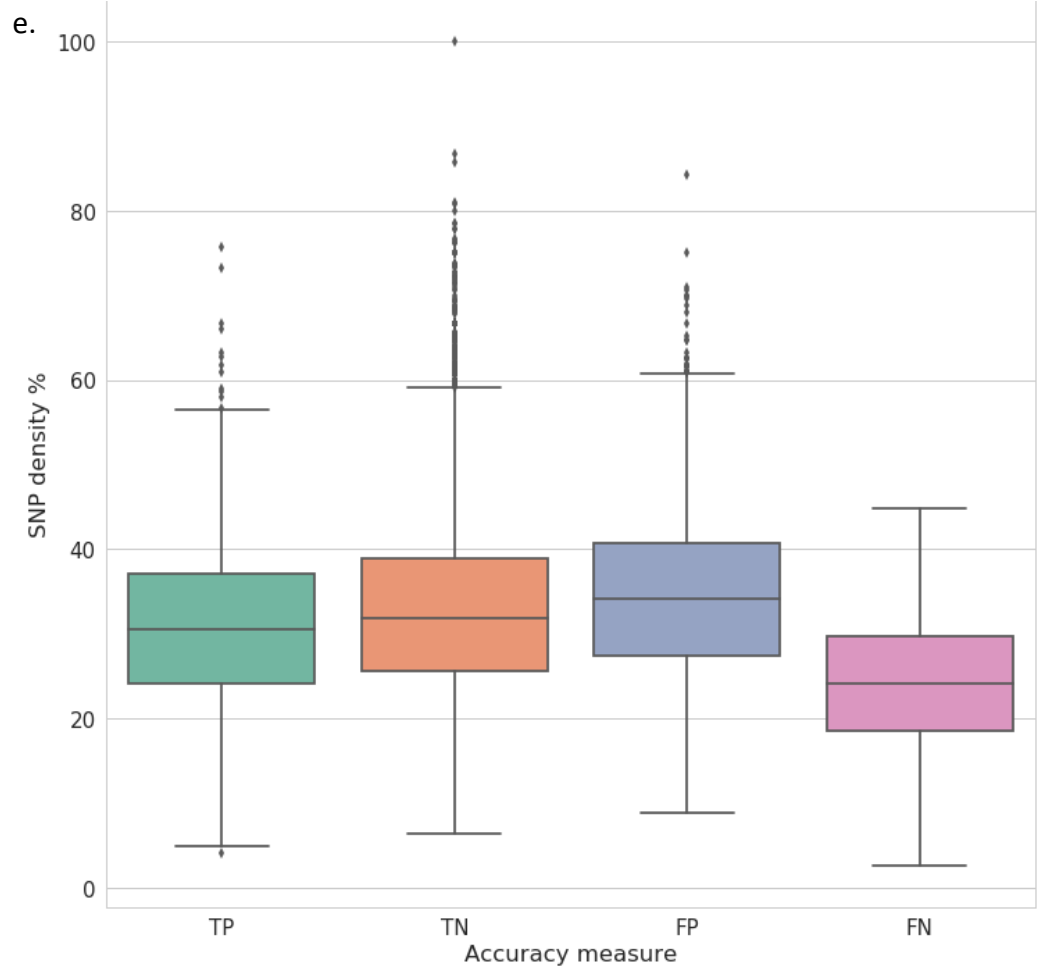
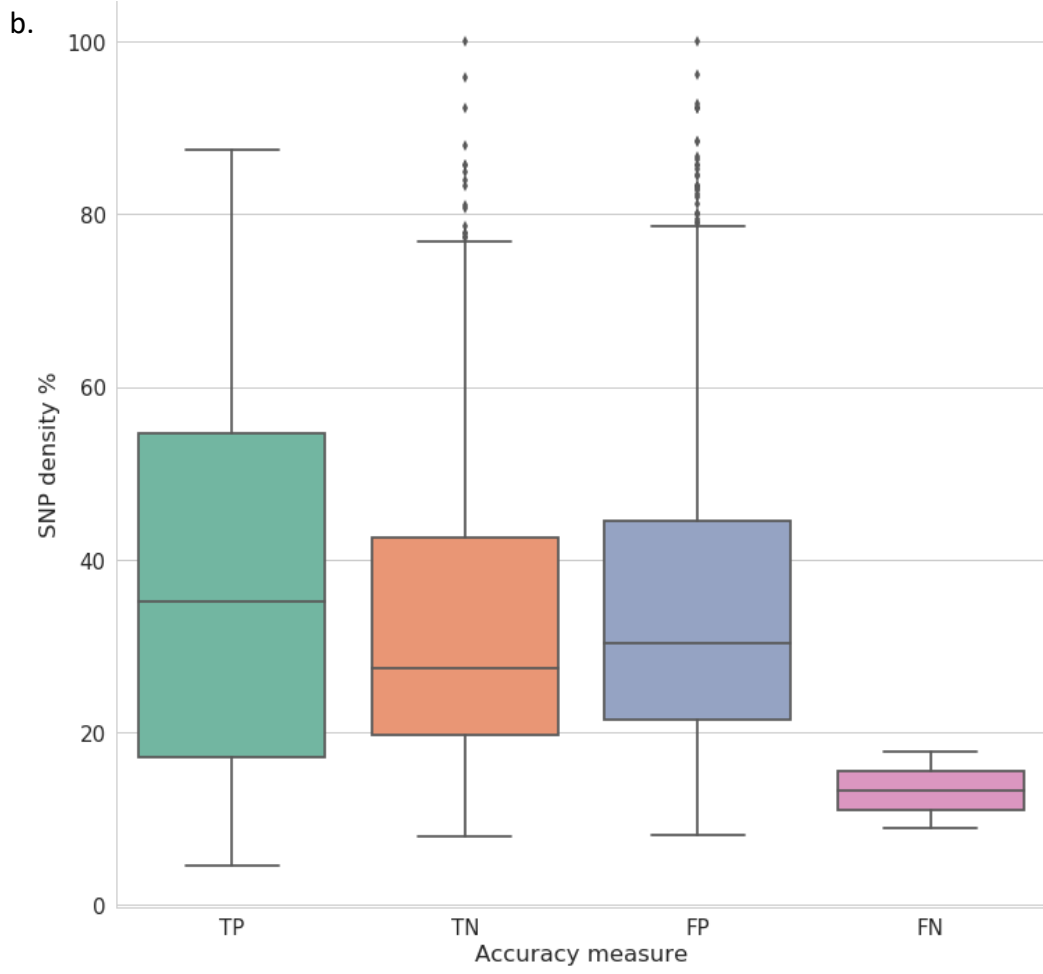
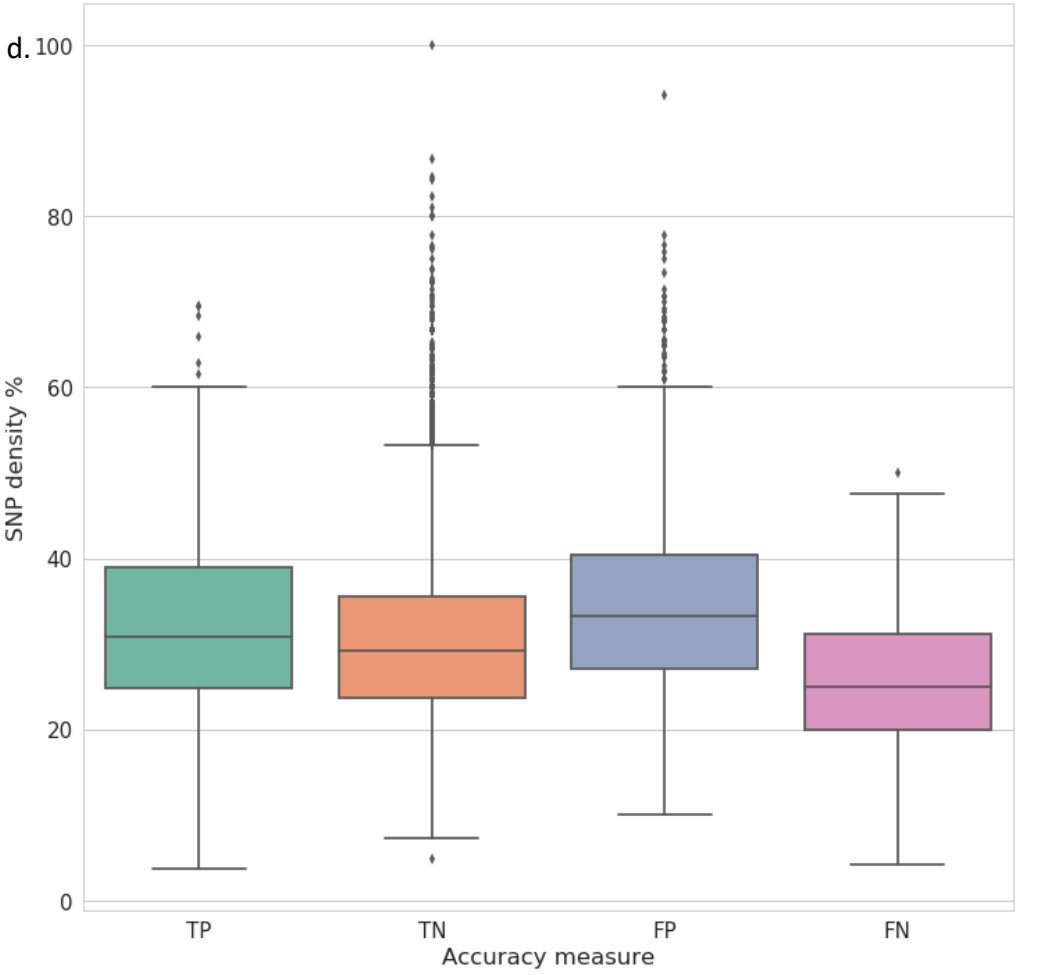
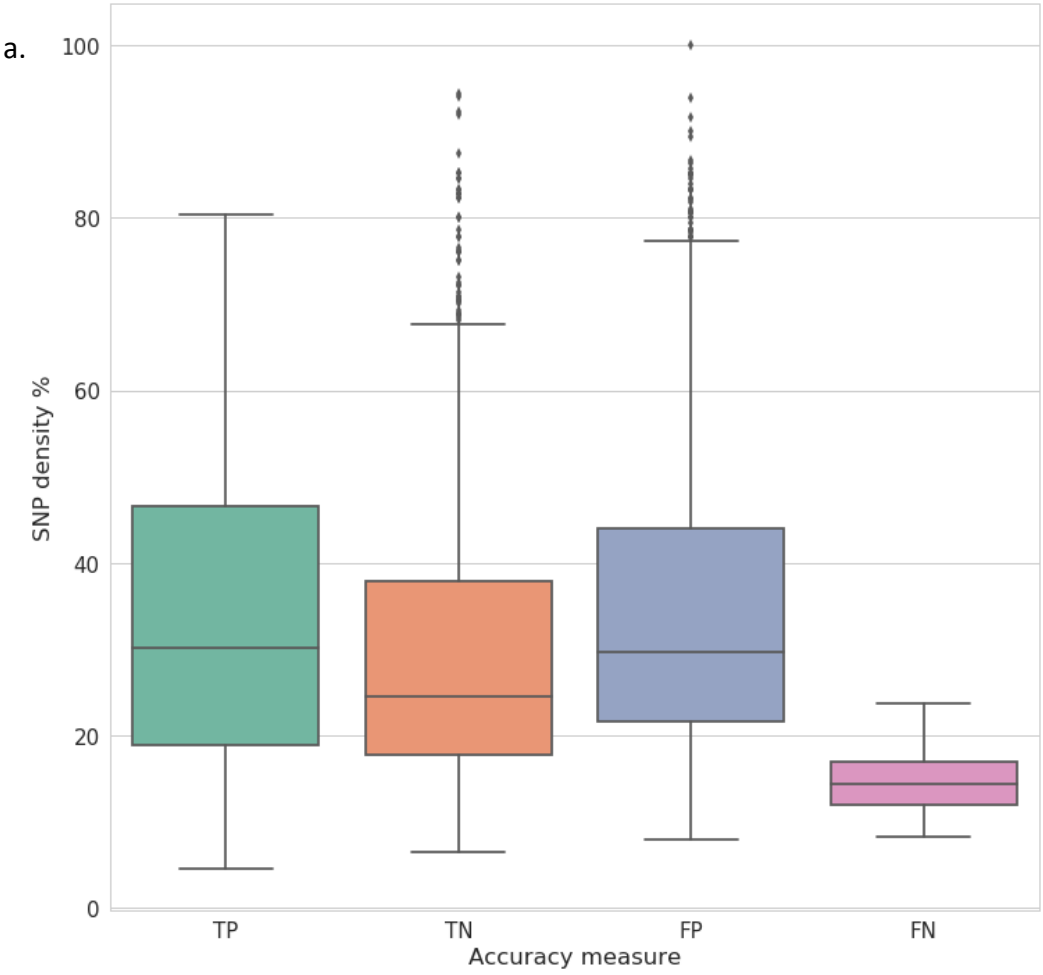
- a. F_{ST} ; Baganda and Ethiopia; Omni5
- b. F_{ST} ; Baganda and Zulu; Omni5
- c. F_{ST} ; Ethiopia and Zulu; Omni 5

Appendix 8.2.1.



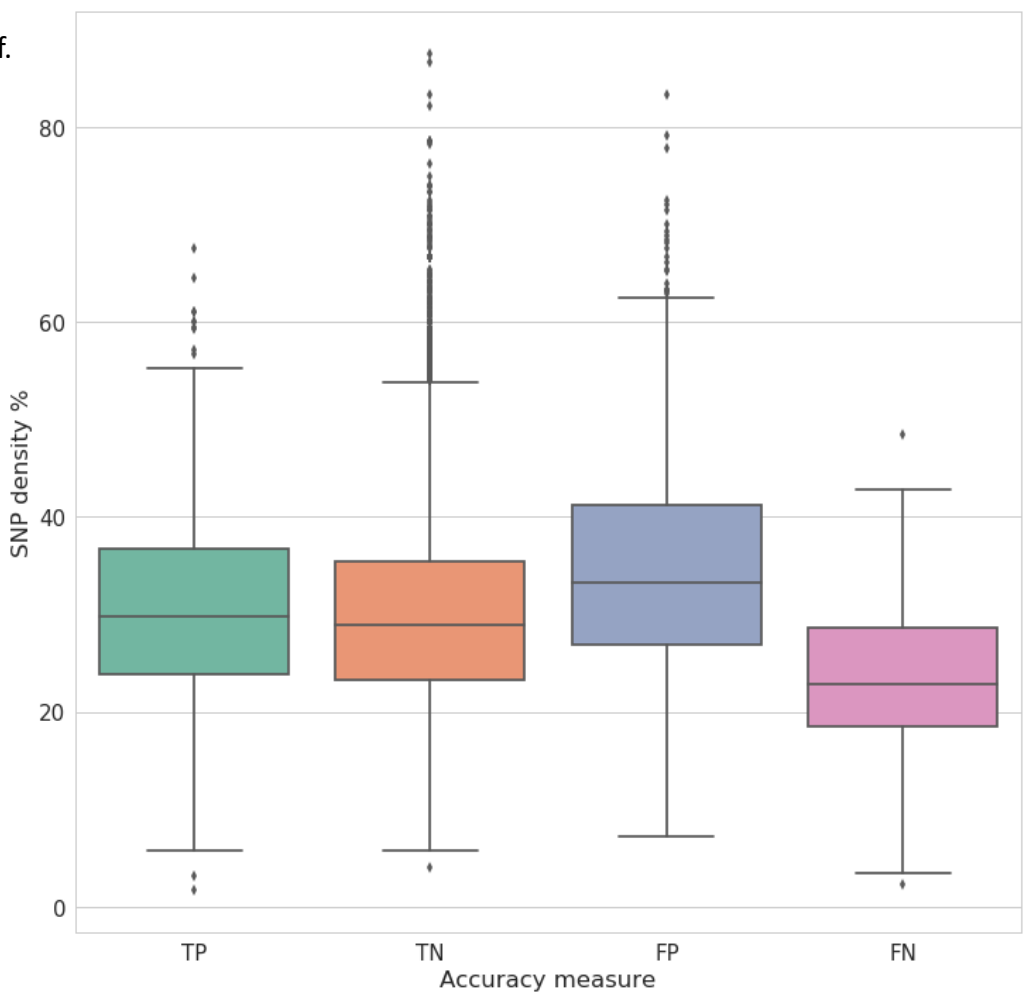
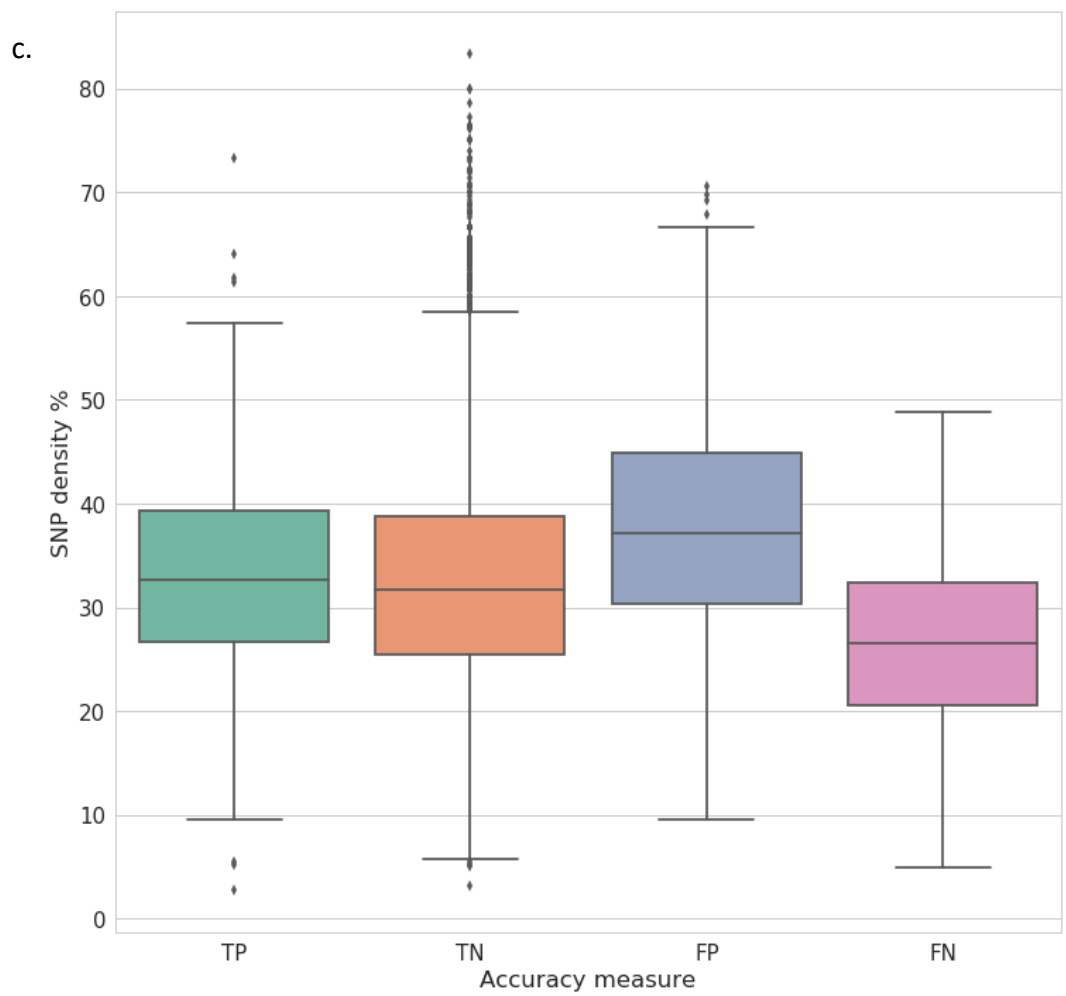
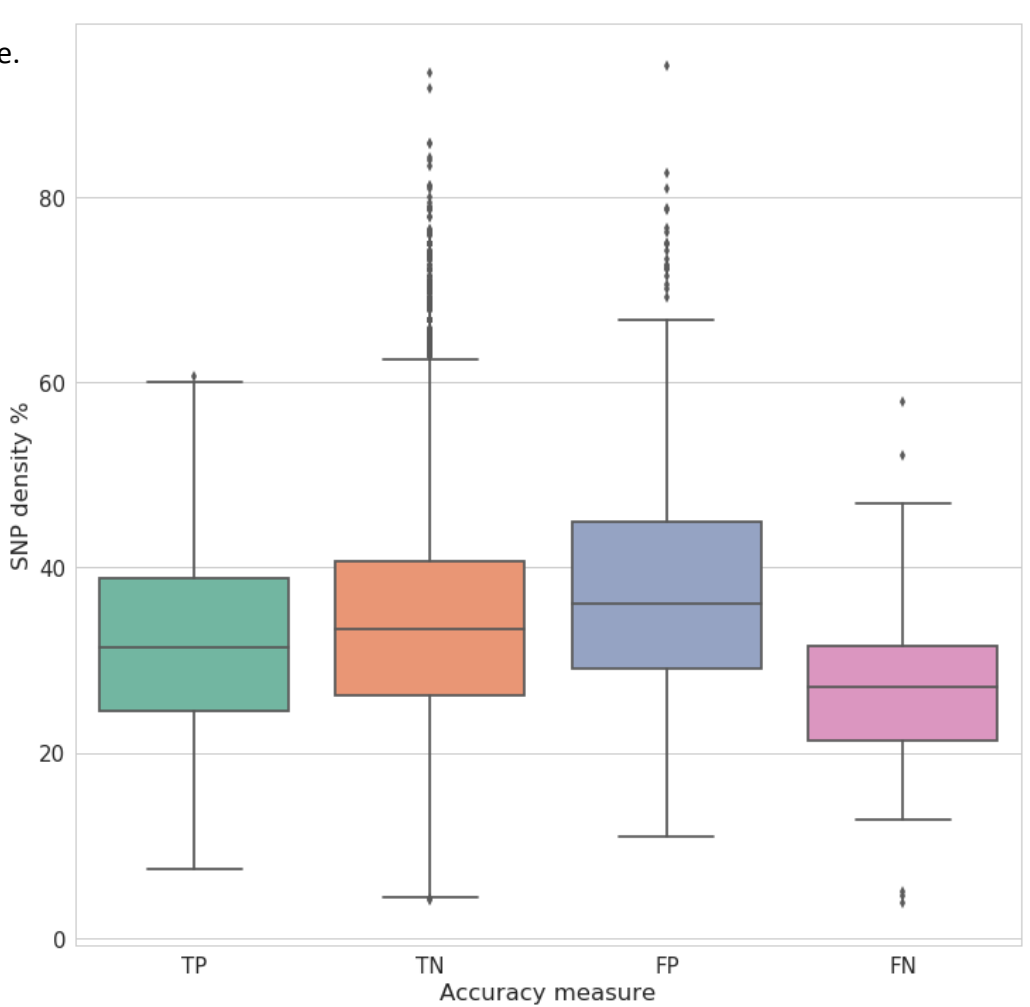
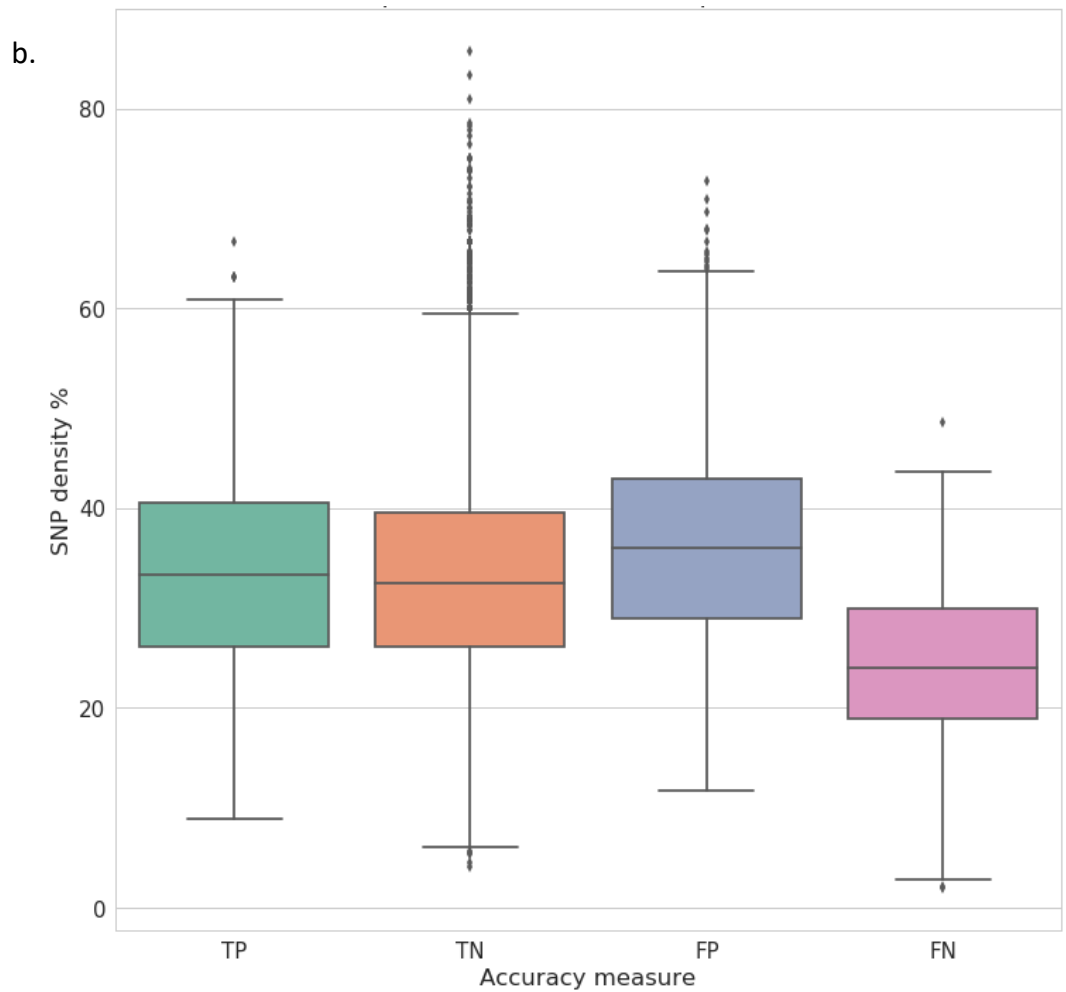
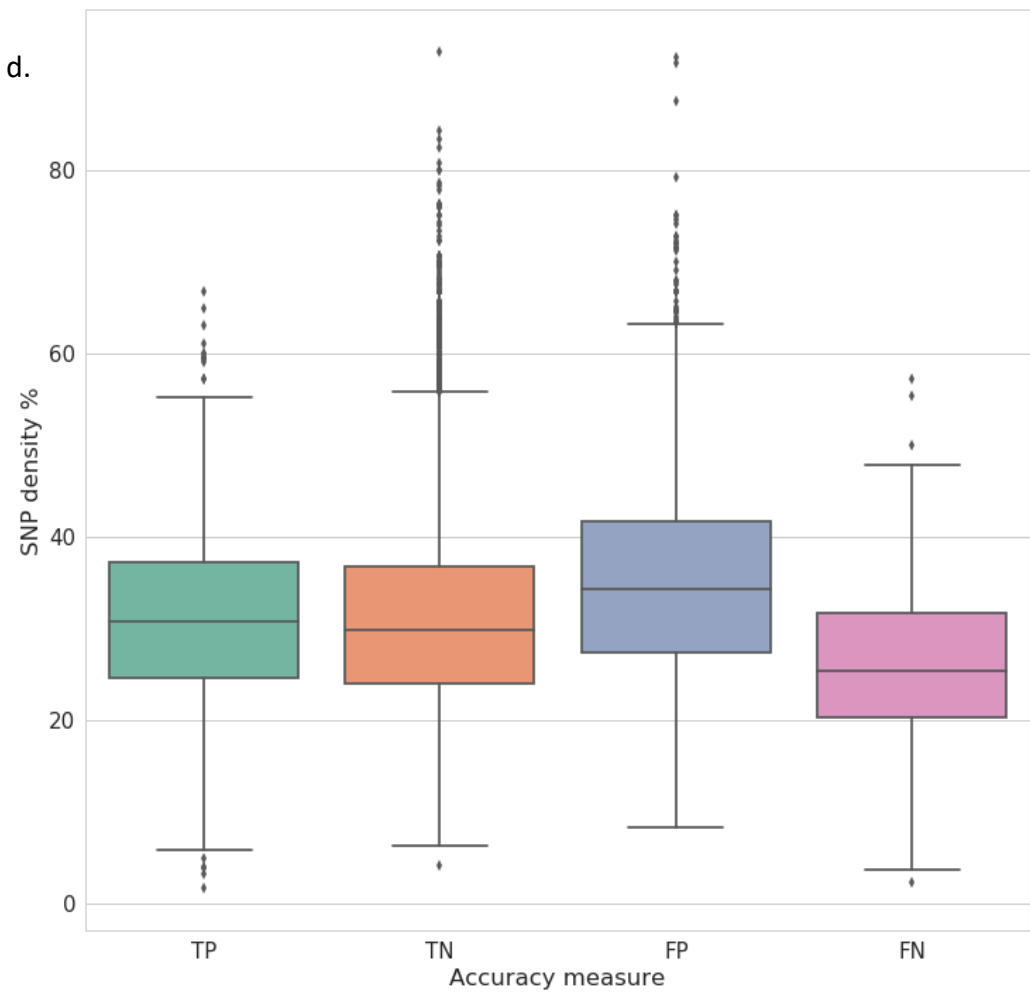
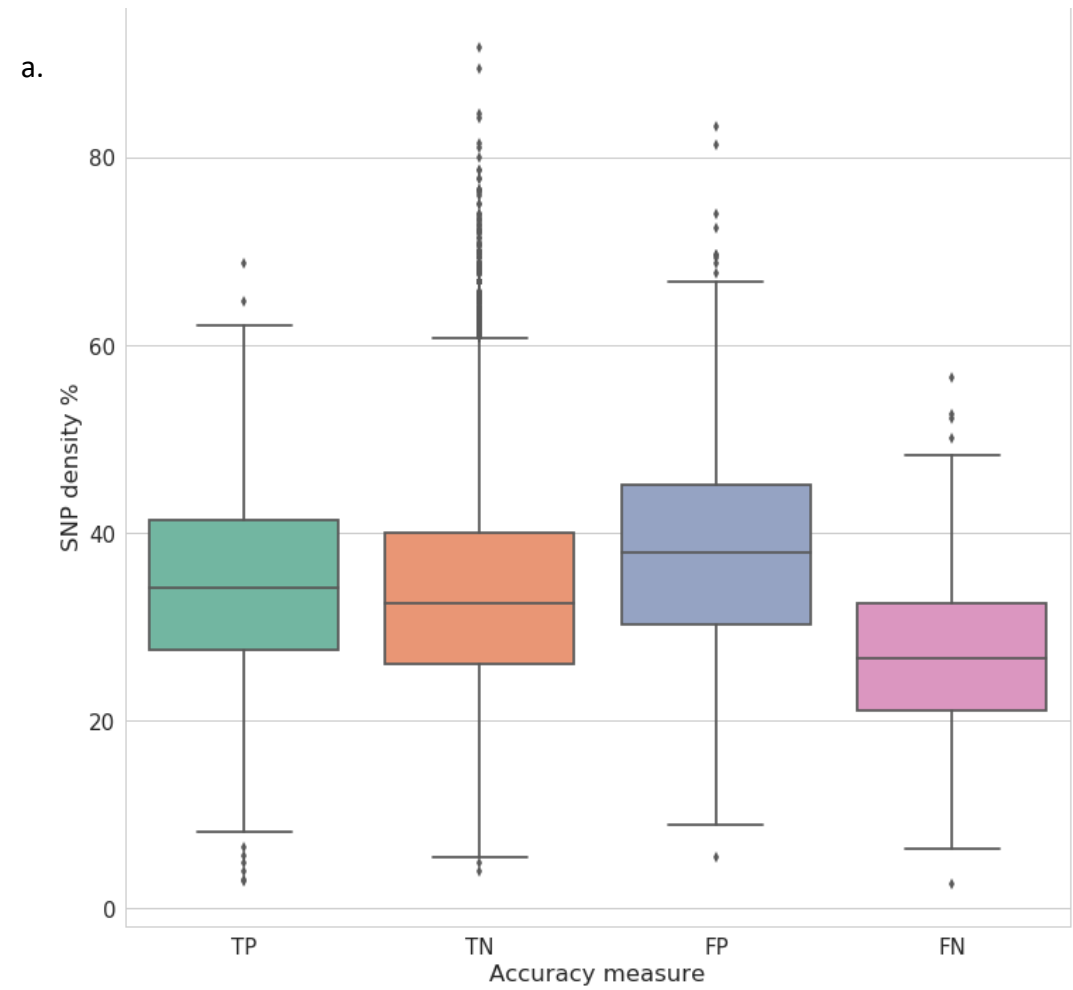
- a. iHS; Baganda; Affy 6
- b. iHS; Ethiopia; Affy 6
- c. iHS; Zulu; Affy 6
- d. iHS; Baganda; Omni 1
- e. iHS; Ethiopia; Omni 1
- f. iHS; Zulu; Omni 1

Appendix 8.2.2.



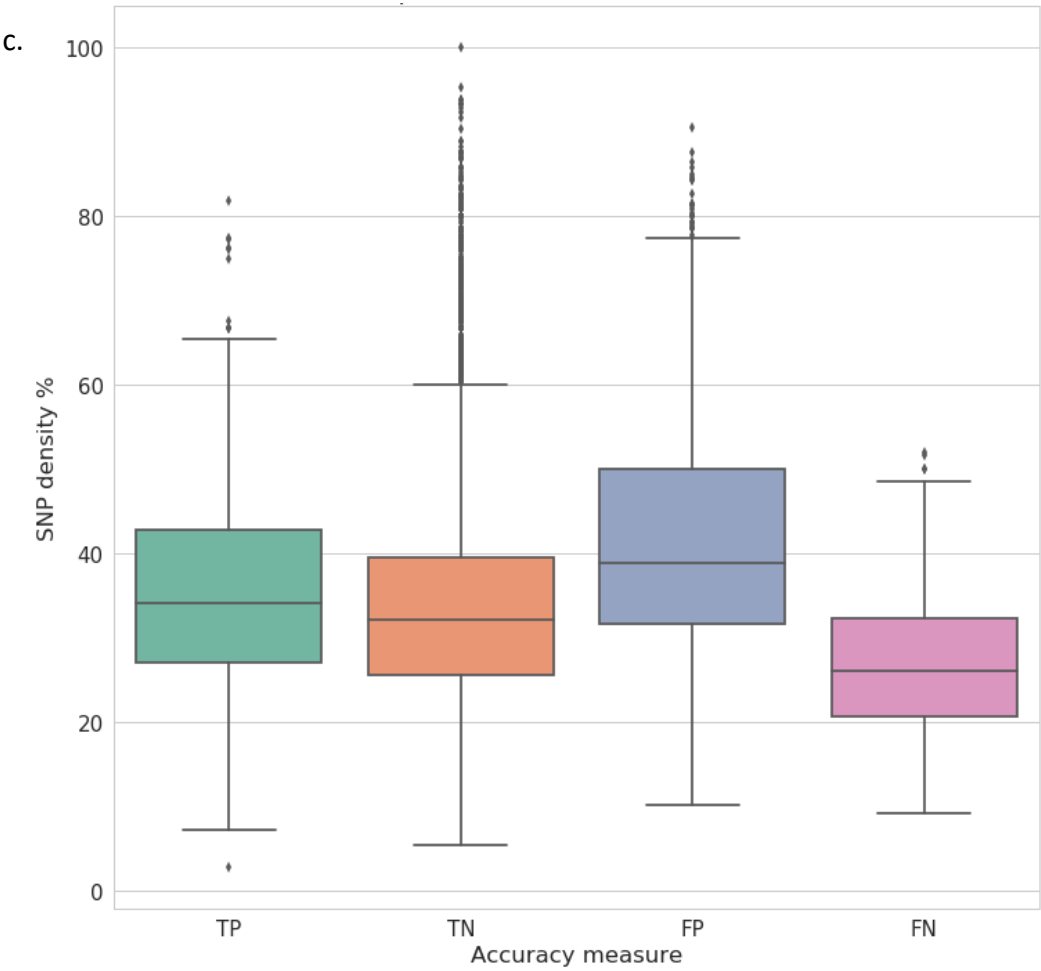
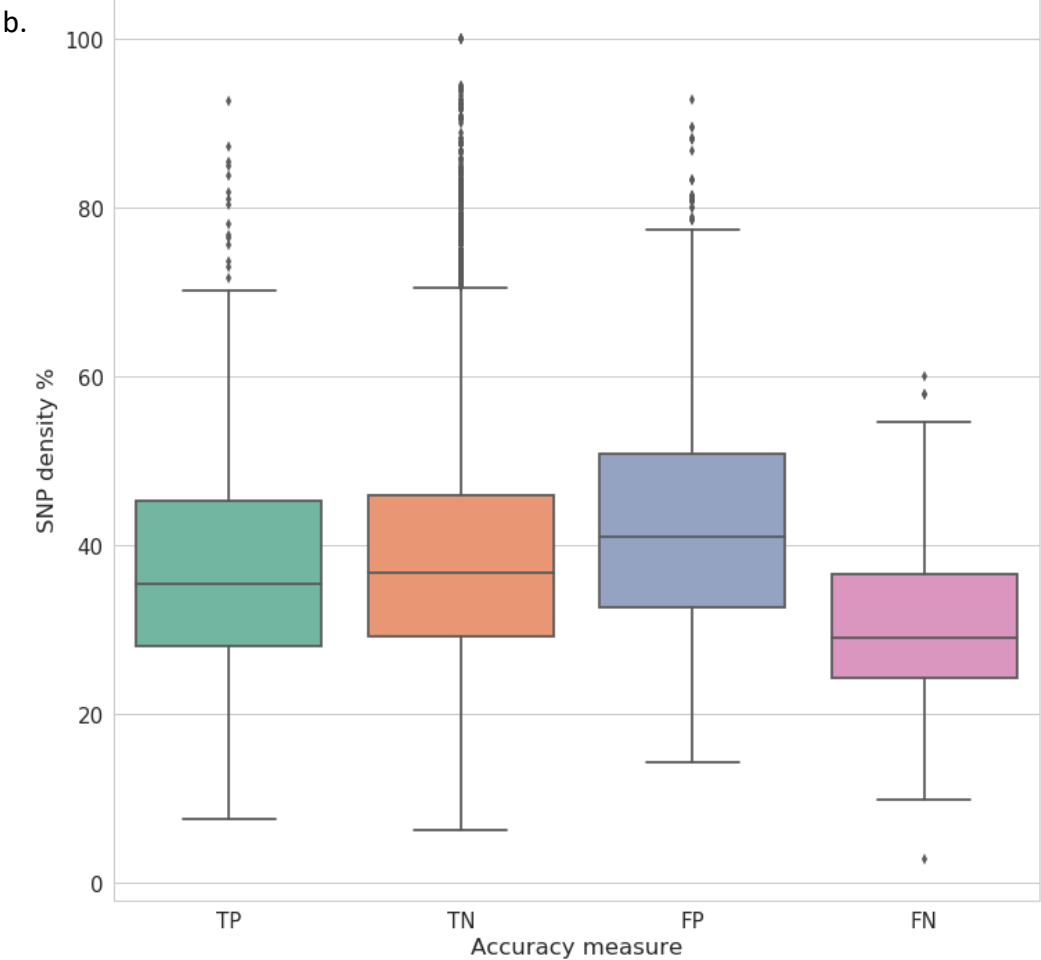
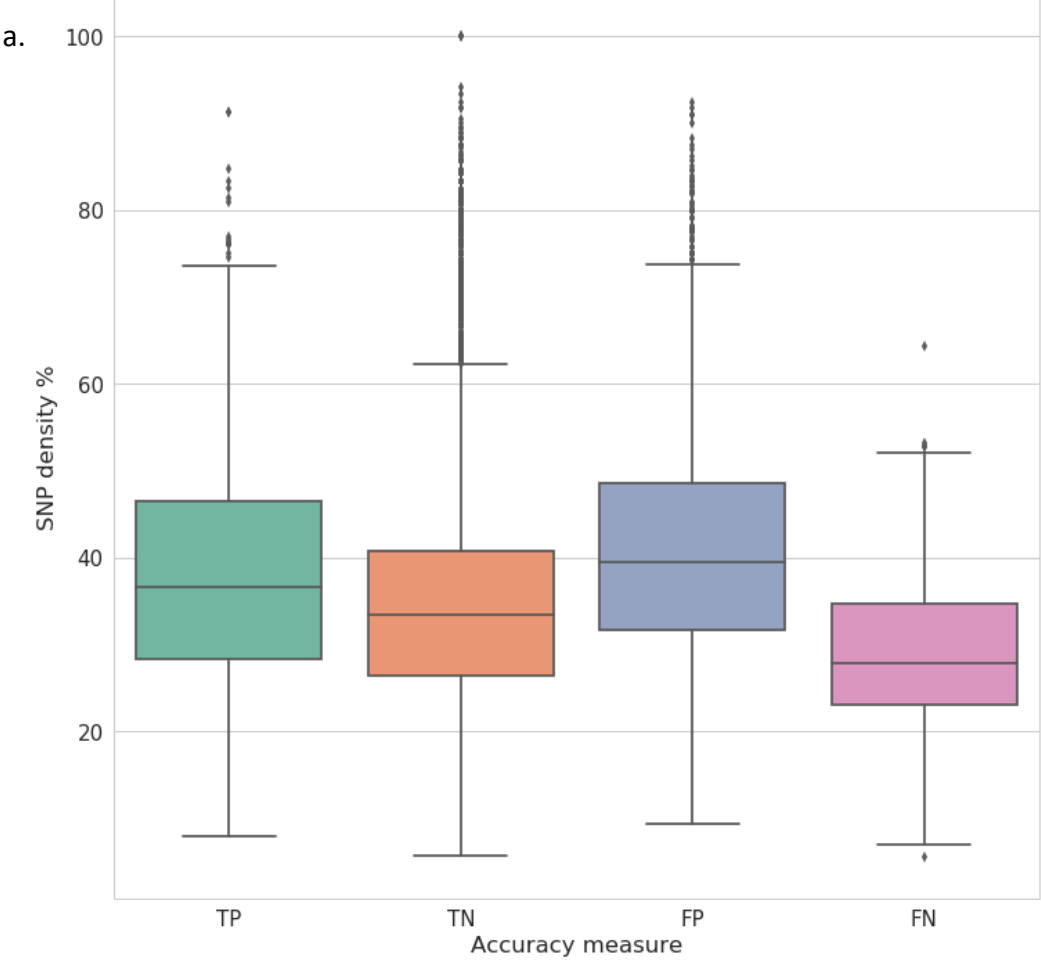
- a. iHS; Baganda; Mega 2.5
- b. iHS; Ethiopia; Mega 2.5
- c. iHS; Zulu; Mega 2.5
- d. iHS; Baganda; H3A
- e. iHS; Ethiopia; H3A
- f. iHS; Zulu; H3A

Appendix 8.2.3.



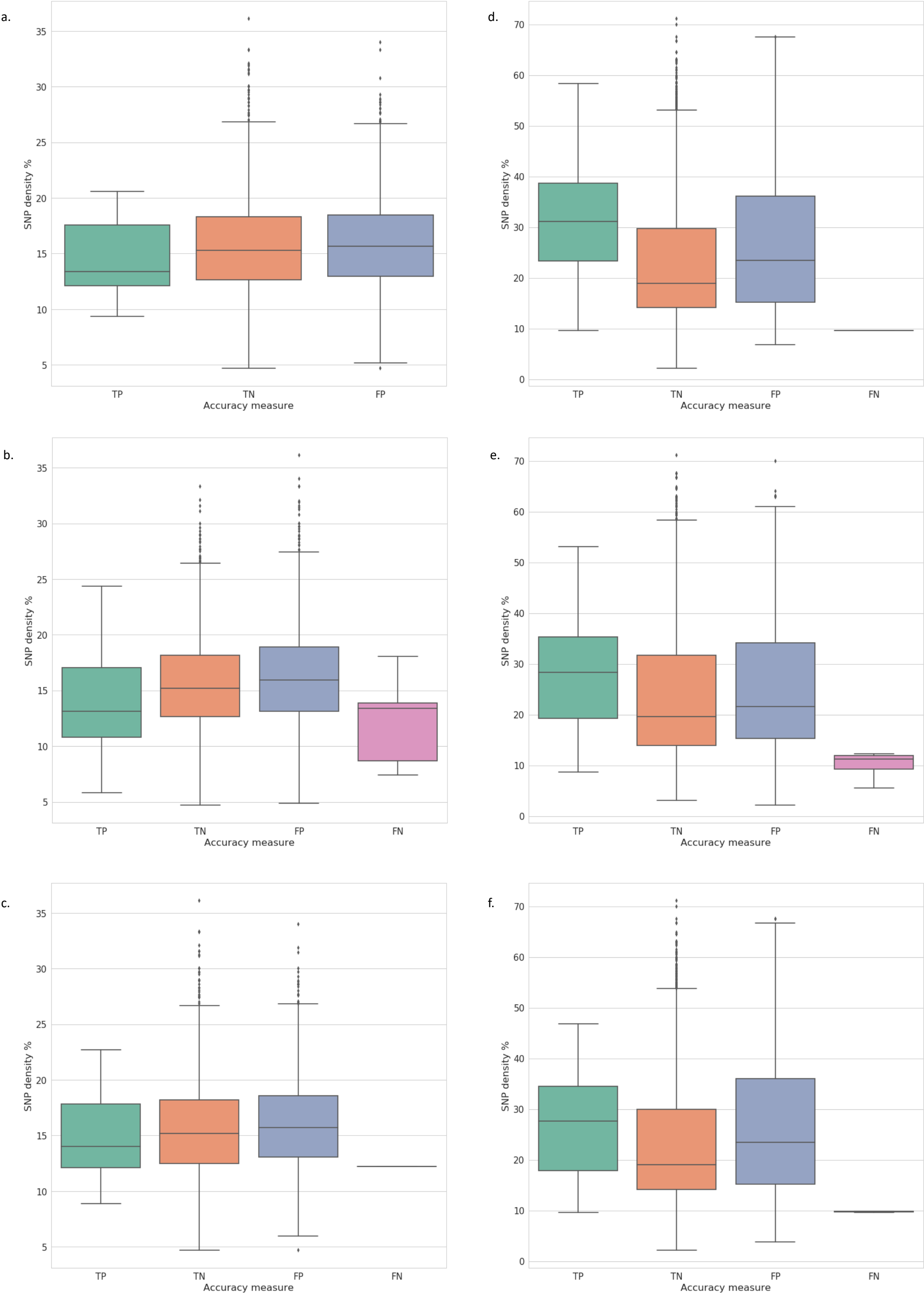
- a. iHS; Baganda; PanAFR
- b. iHS; Ethiopia; PanAFR
- c. iHS; Zulu; PanAFR
- d. iHS; Baganda; Omni 2.5
- e. iHS; Ethiopia; Omni 2.5
- f. iHS; Zulu; Omni 2.5

Appendix 8.2.4.



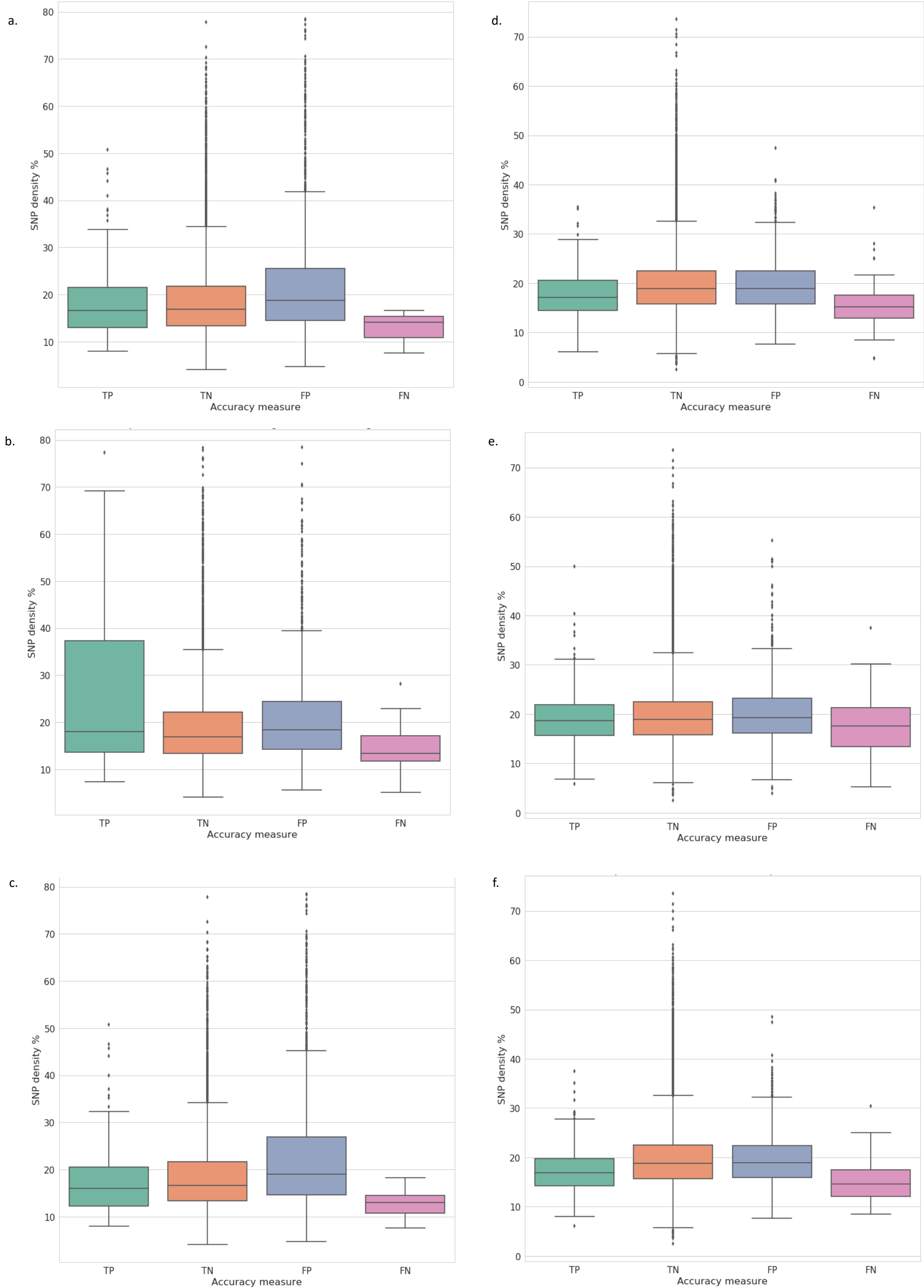
- a. iHS; Baganda; Omni5
- b. iHS; Ethiopia; Omni5
- c. iHS; Zulu; Omni 5

Appendix 8.3.1.

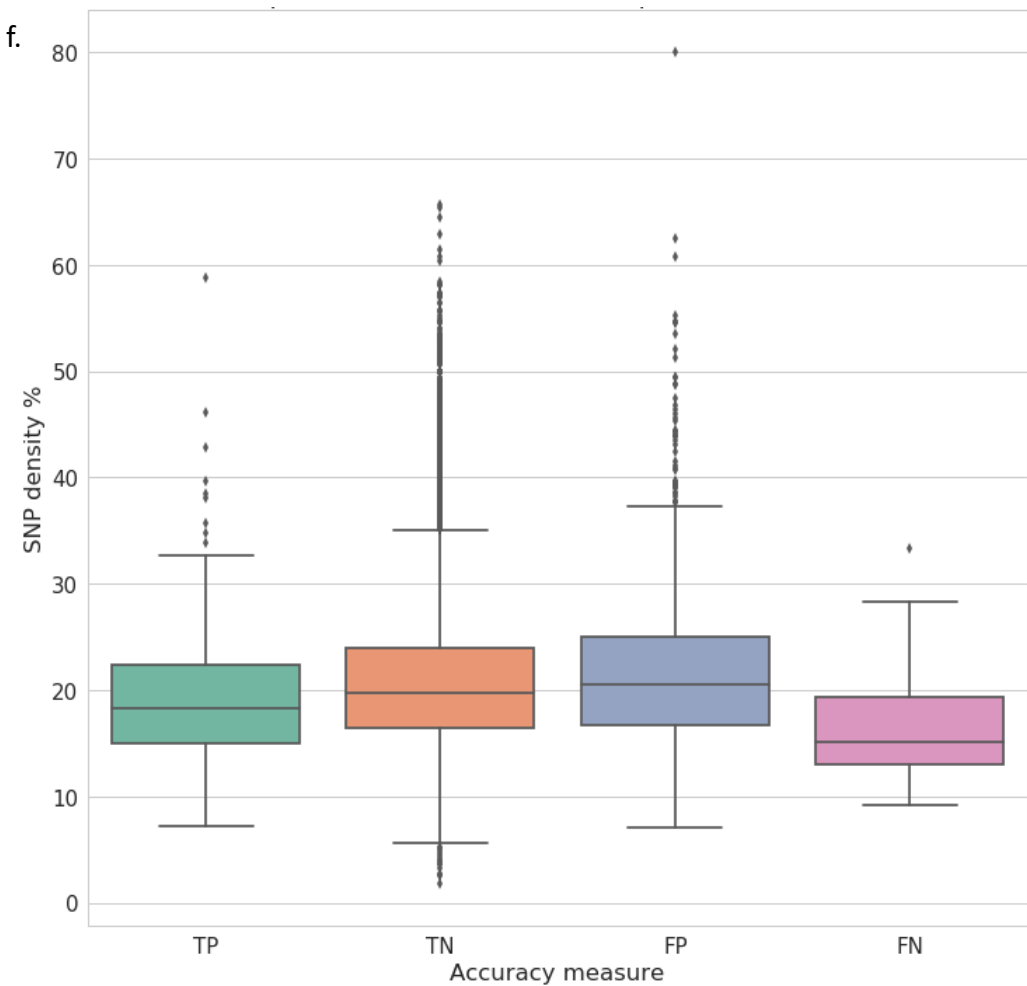
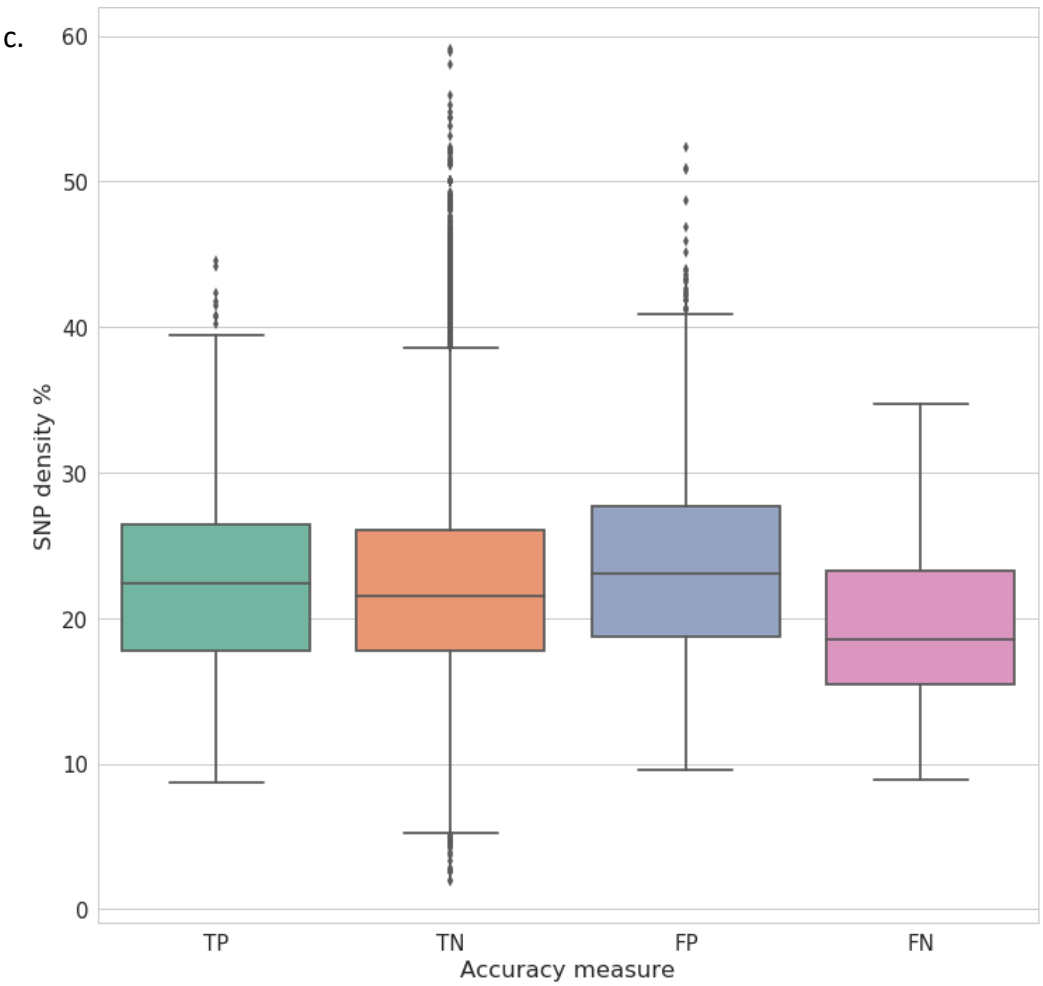
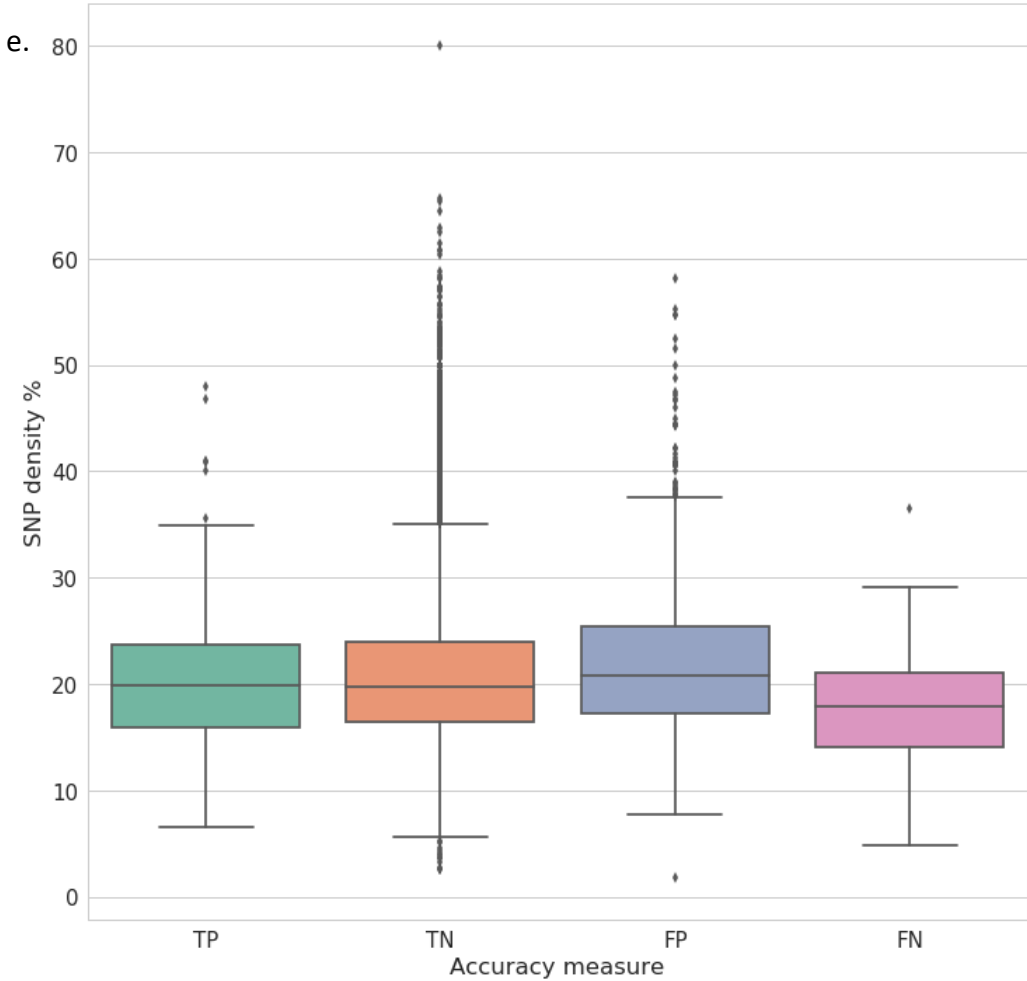
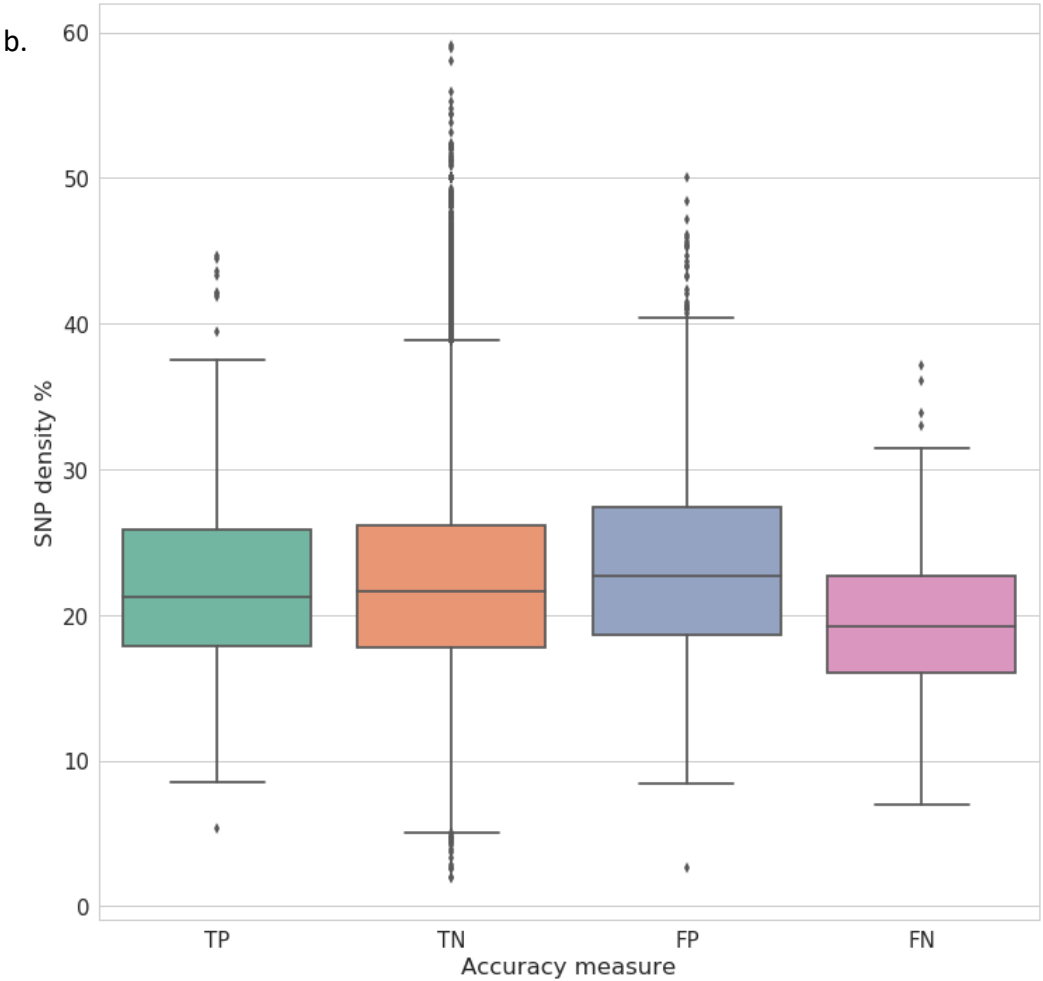
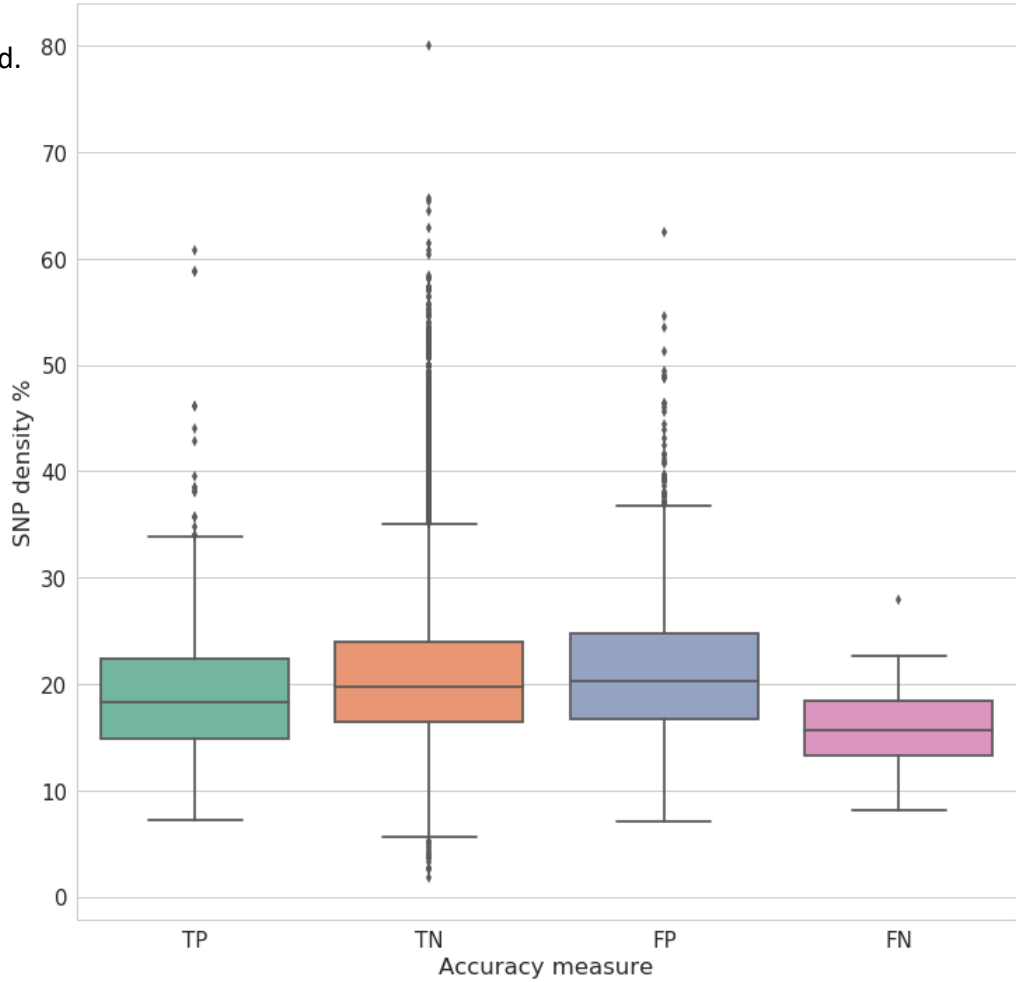
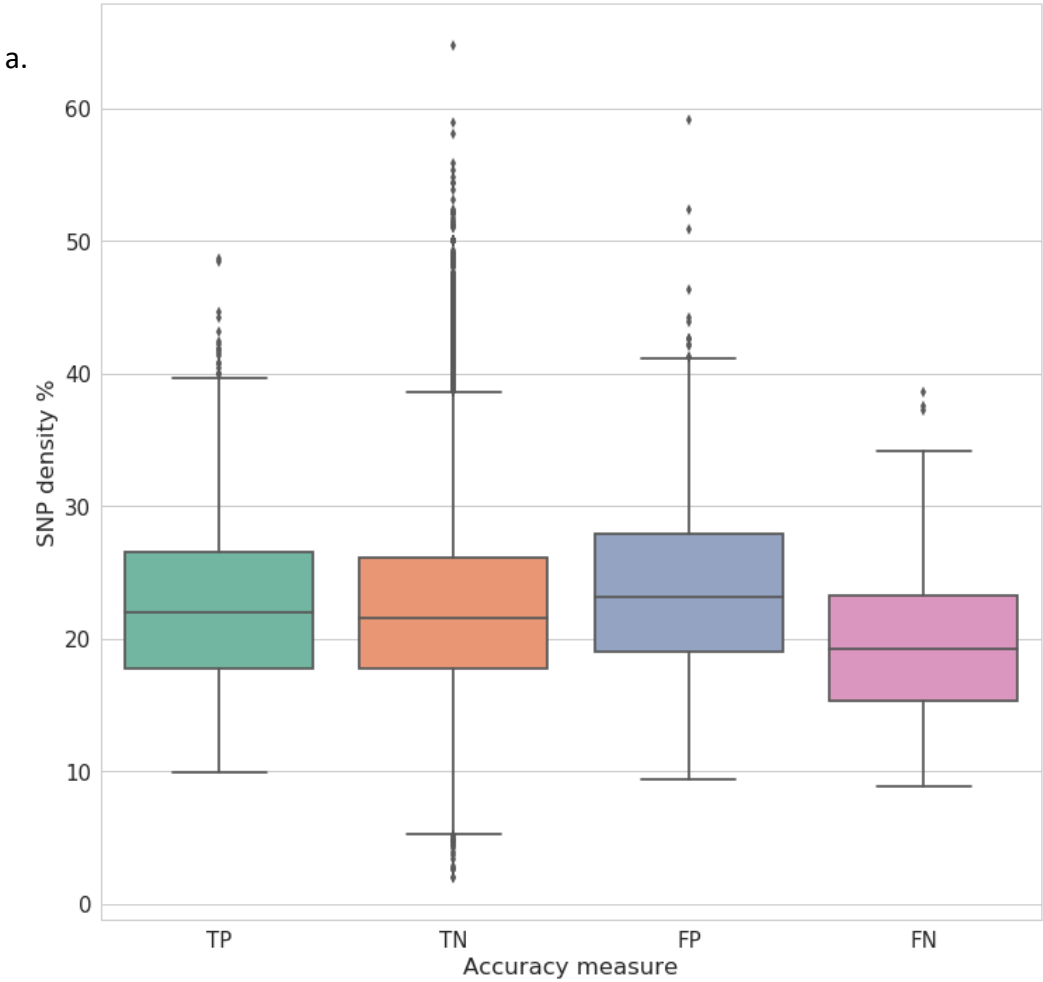


a. XP-EHH; Baganda and Ethiopia; Affy 6
b. XP-EHH; Baganda and Zulu; Affy 6
c. XP-EHH; Ethiopia and Zulu; Affy 6
d. XP-EHH; Baganda and Ethiopia; Omni 1
e. XP-EHH; Baganda and Zulu; Omni 1
f. XP-EHH; Ethiopia and Zulu; Omni 1

Appendix 8.3.2.

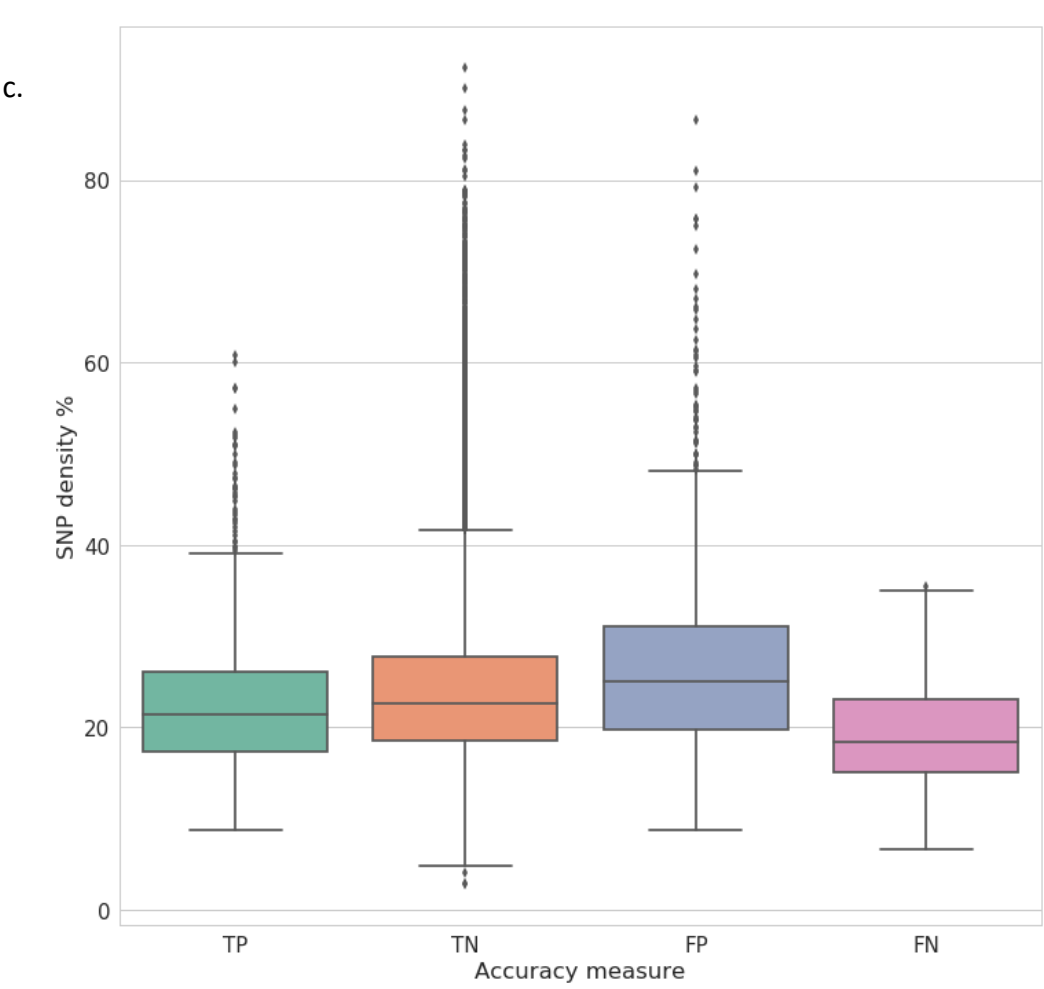
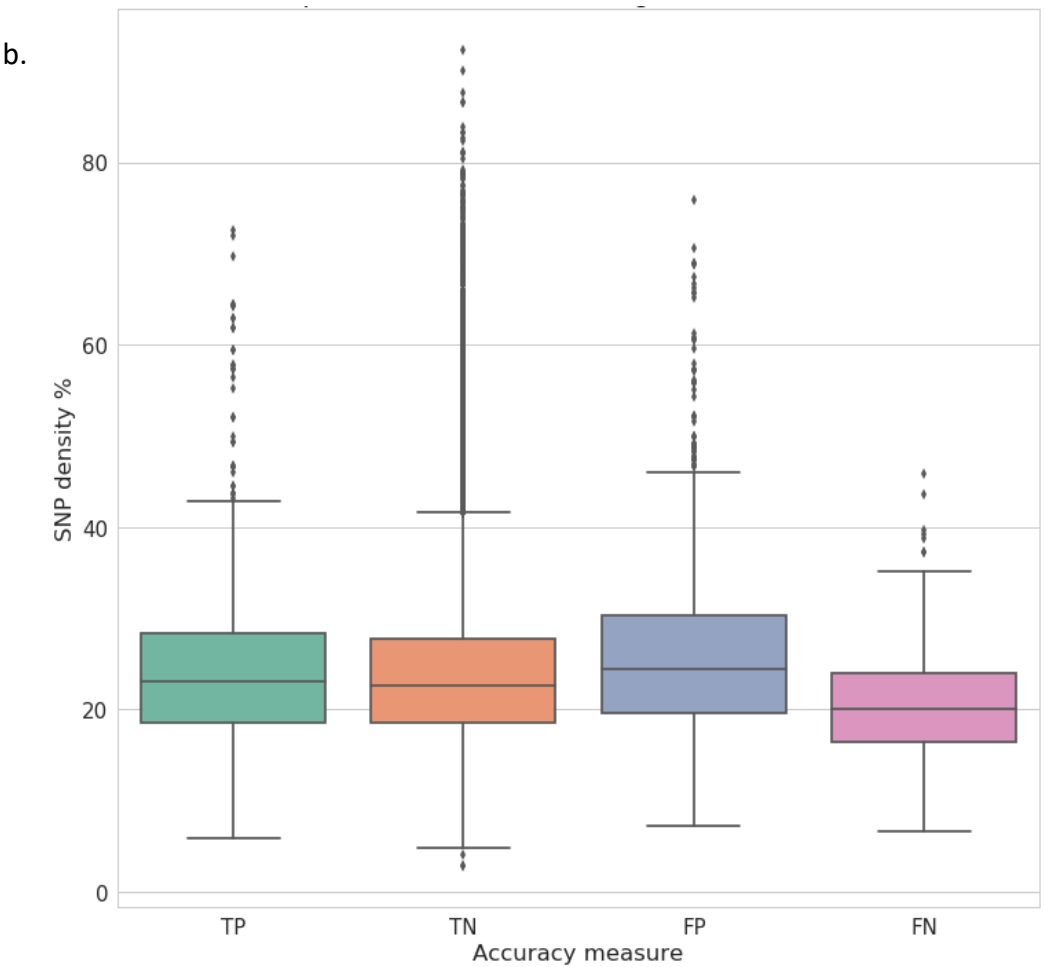
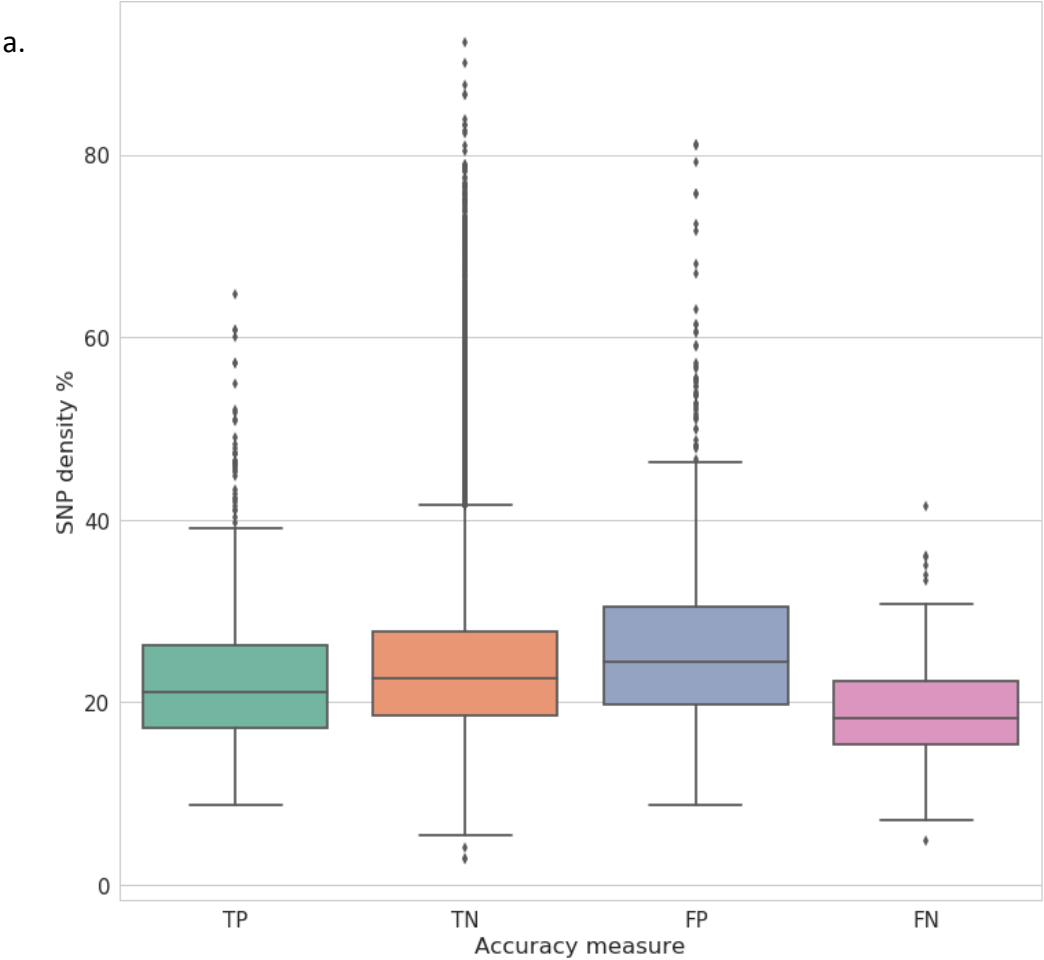


Appendix 8.3.3.



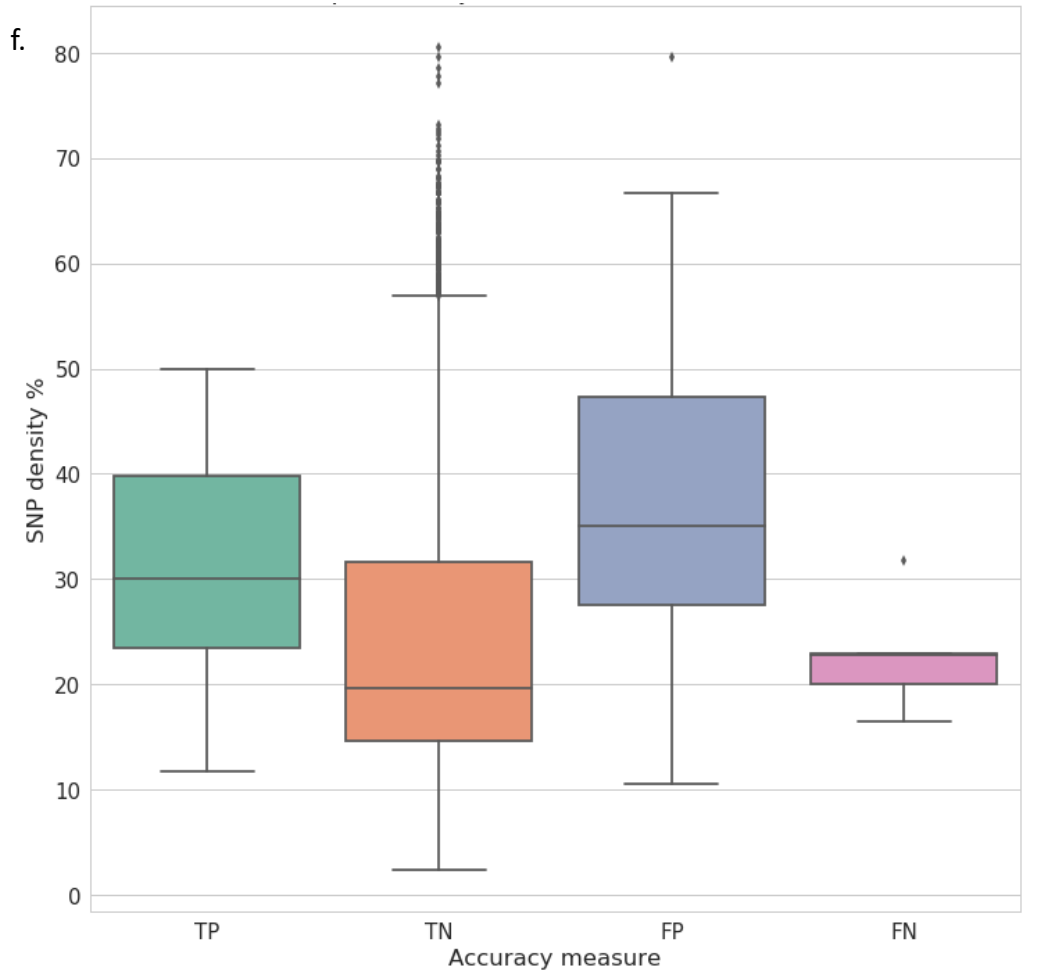
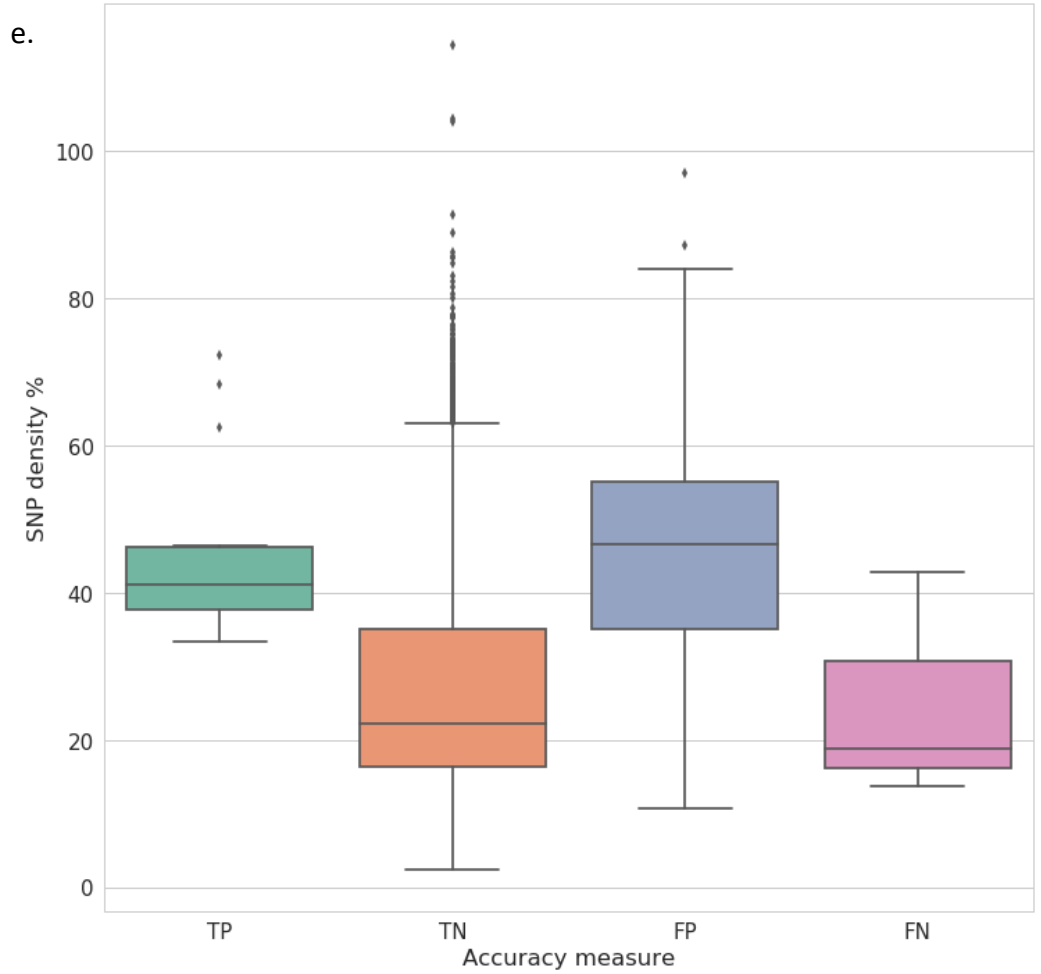
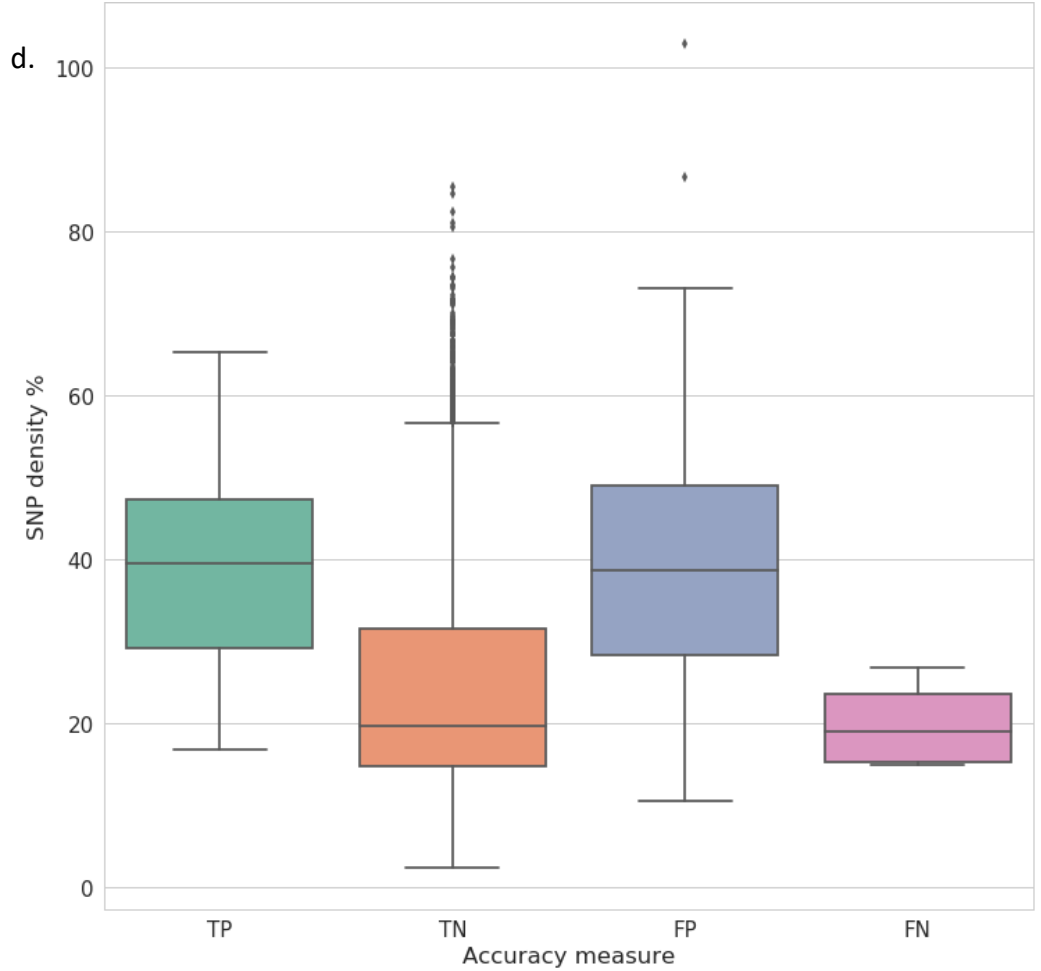
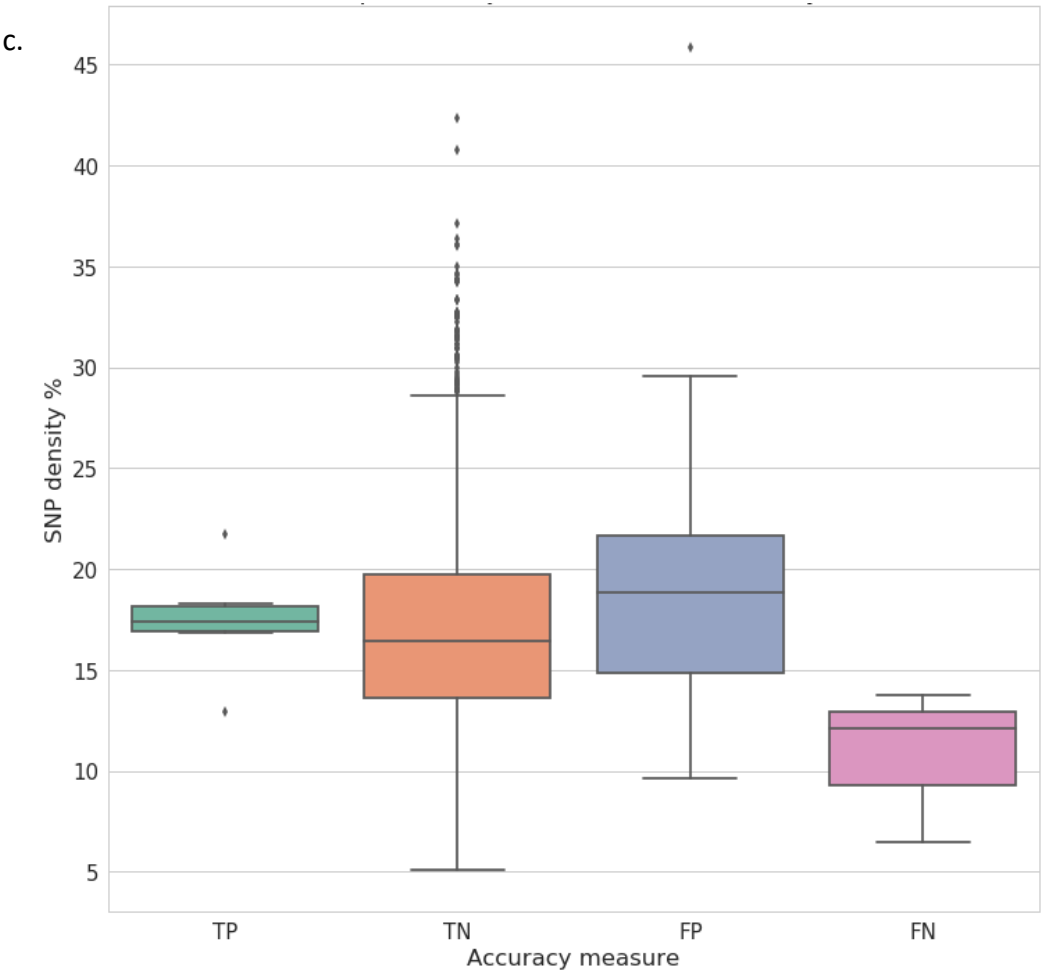
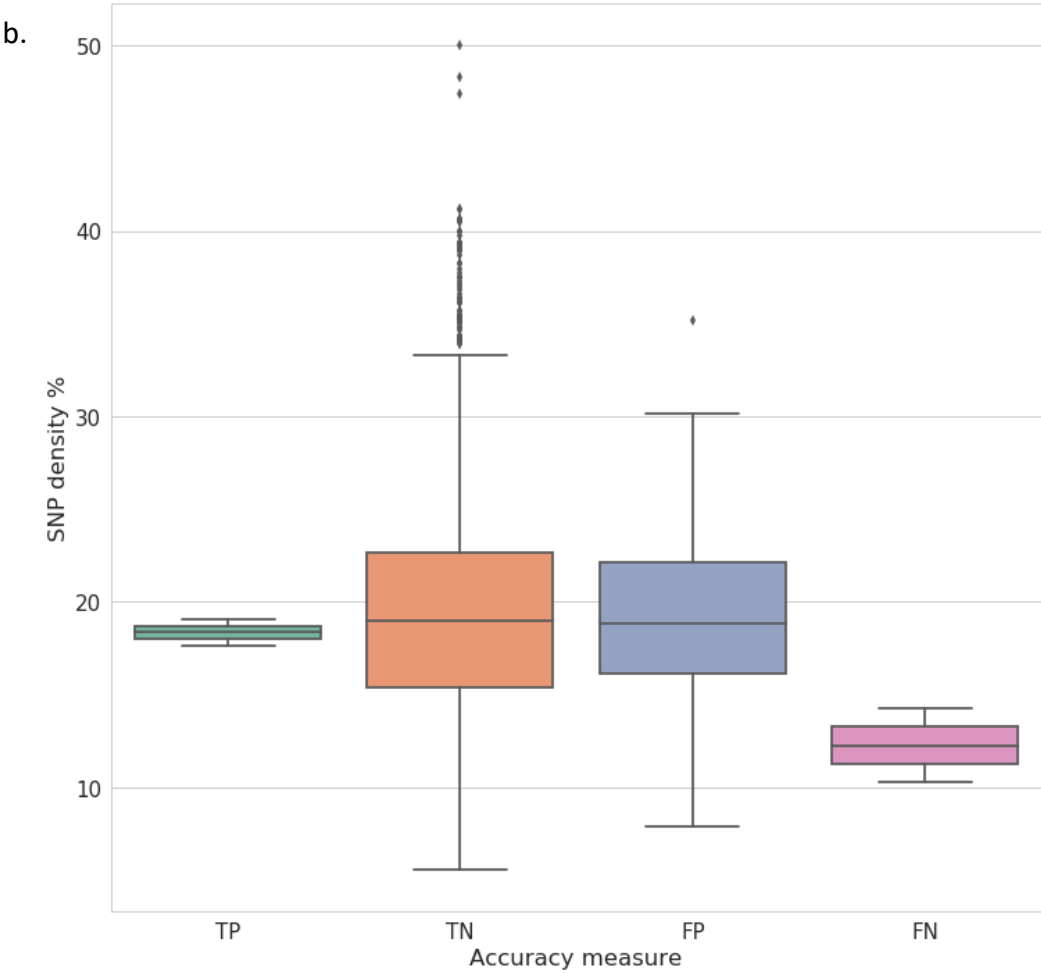
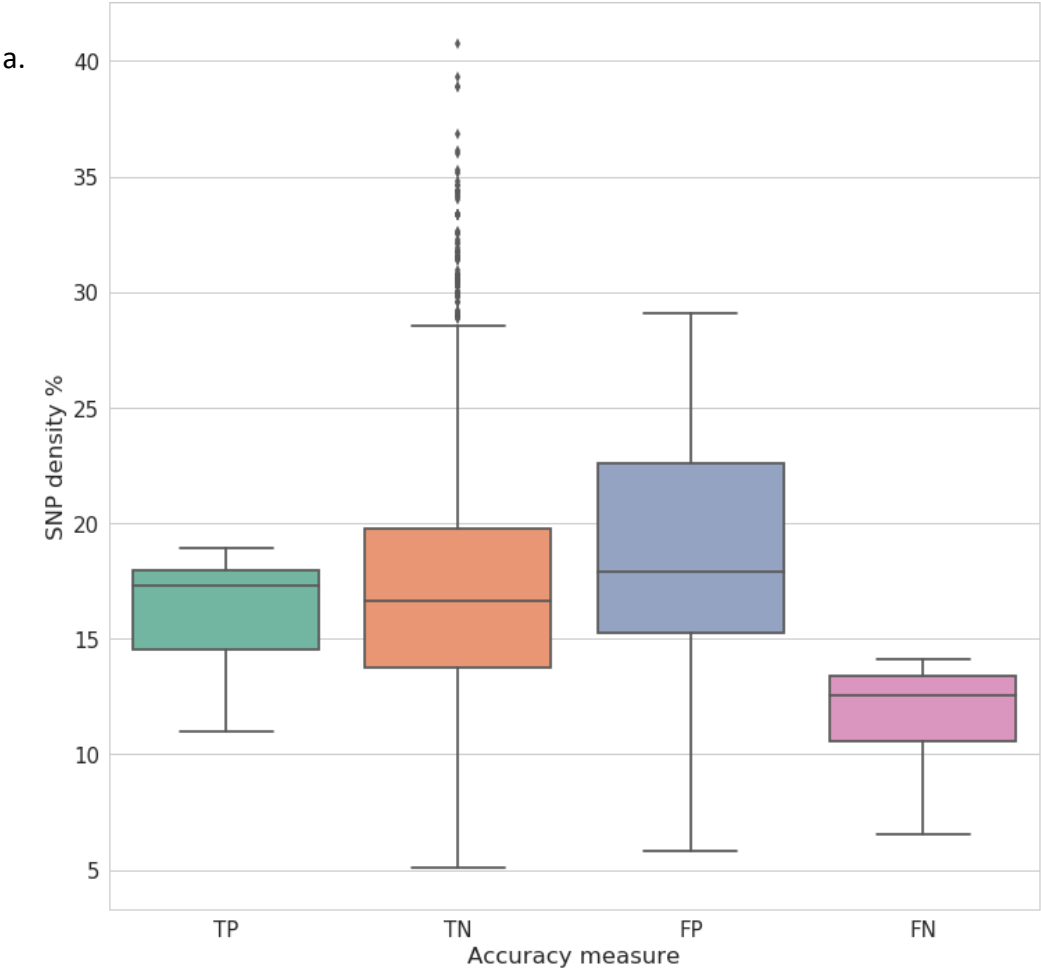
- a. XP-EHH; Baganda and Ethiopia; PanAFR
- b. XP-EHH; Baganda and Zulu; PanAFR
- c. XP-EHH; Ethiopia and Zulu; PanAFR
- d. XP-EHH; Baganda and Ethiopia; Omni 2.5
- e. XP-EHH; Baganda and Zulu; Omni 2.5
- f. XP-EHH; Ethiopia and Zulu; Omni 2.5

Appendix 8.3.4.



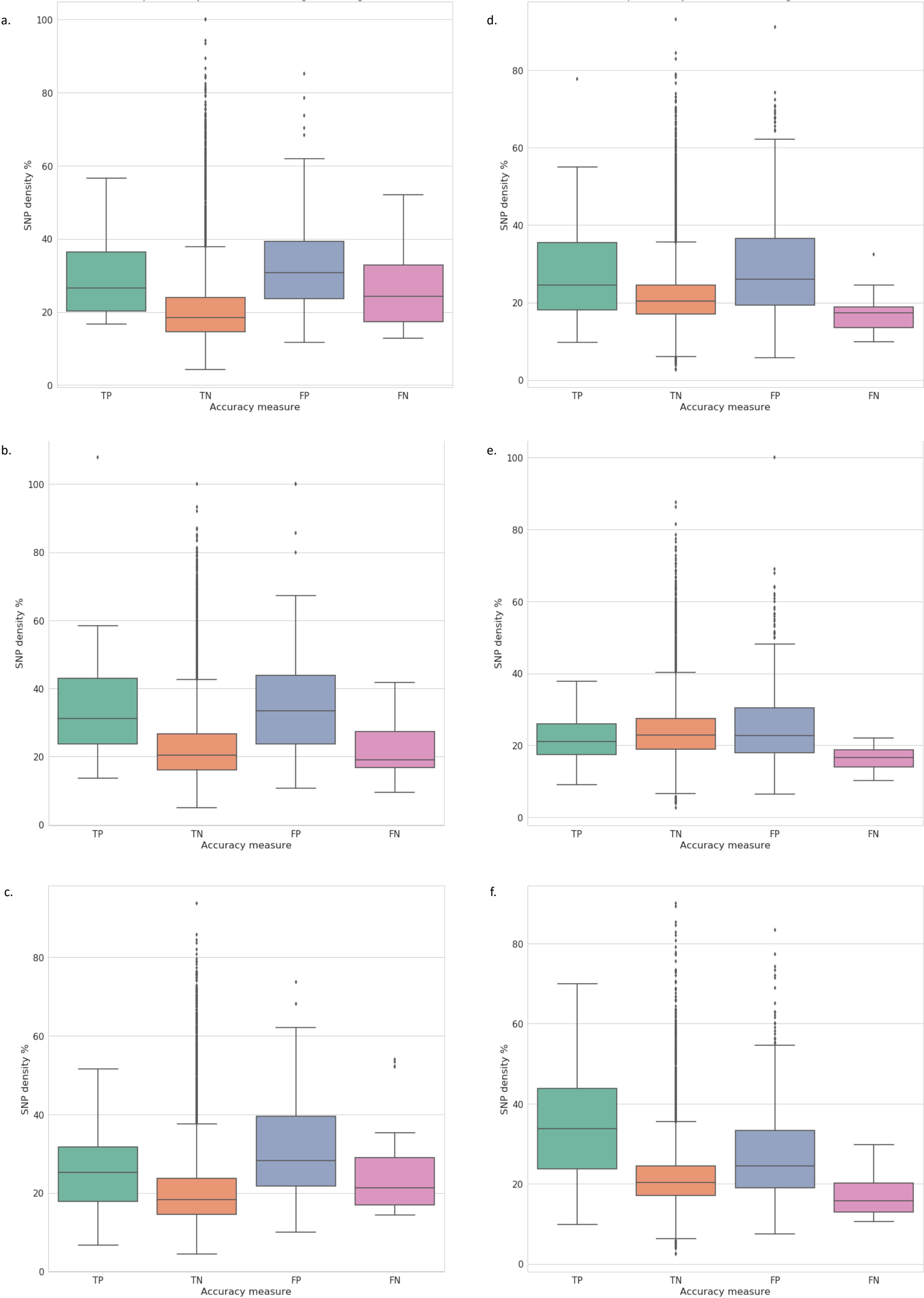
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- b. XP-EHH; Baganda and Zulu; Omni5
- c. XP-EHH; Ethiopia and Zulu; Omni 5

Appendix 8.4.1.



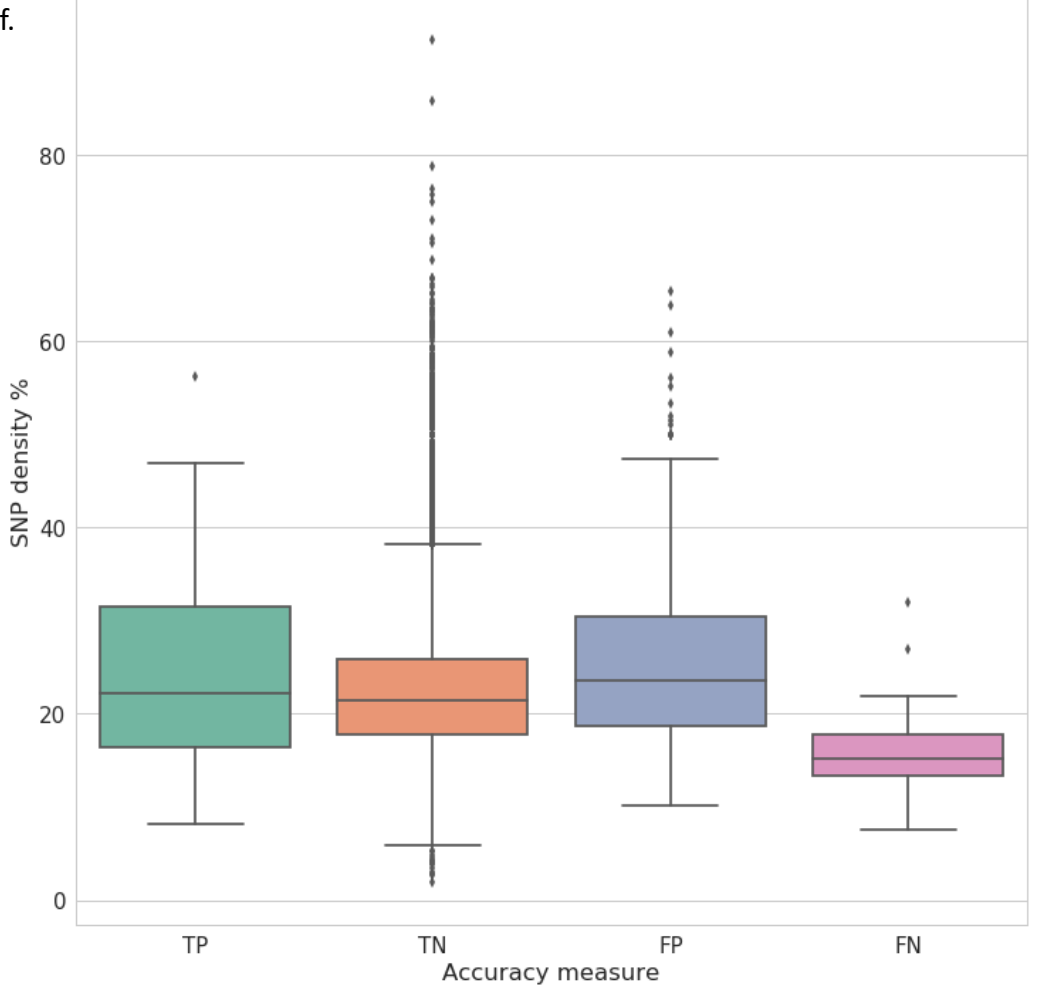
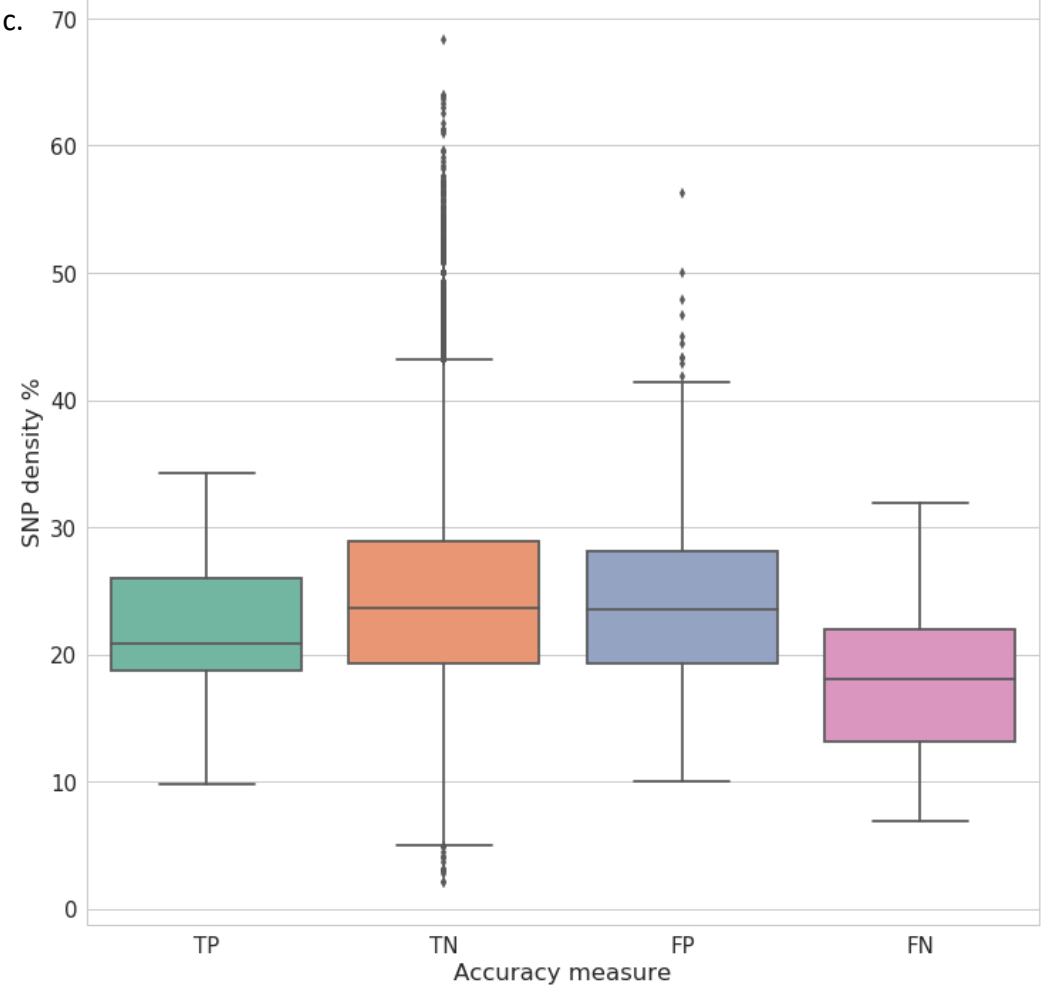
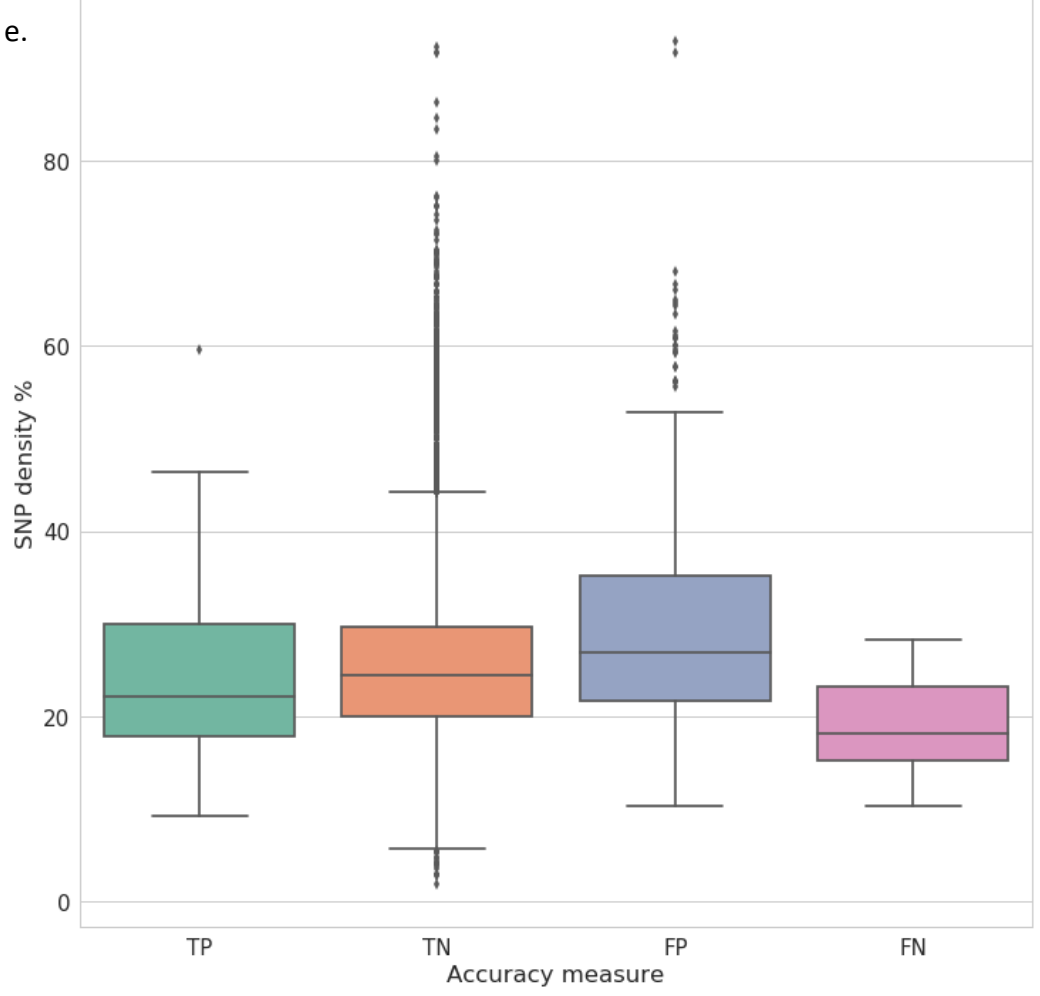
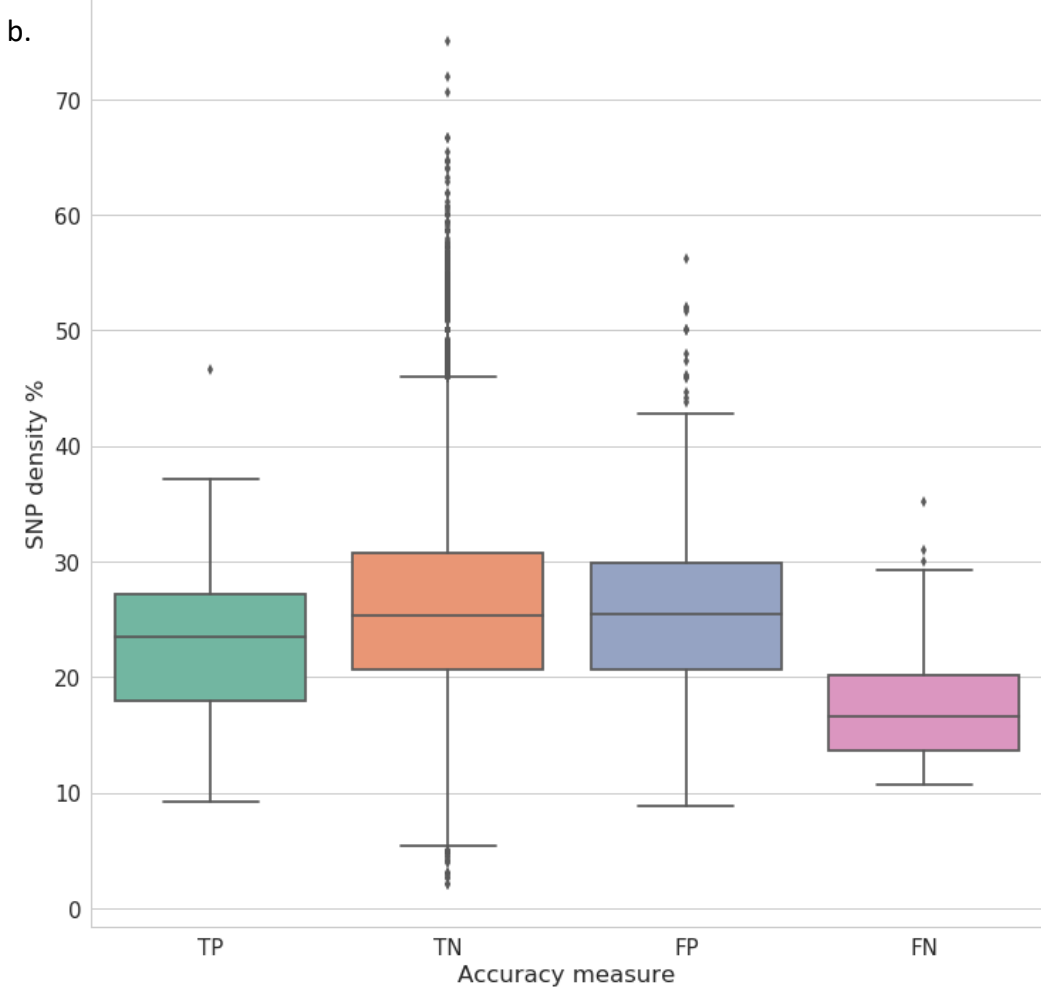
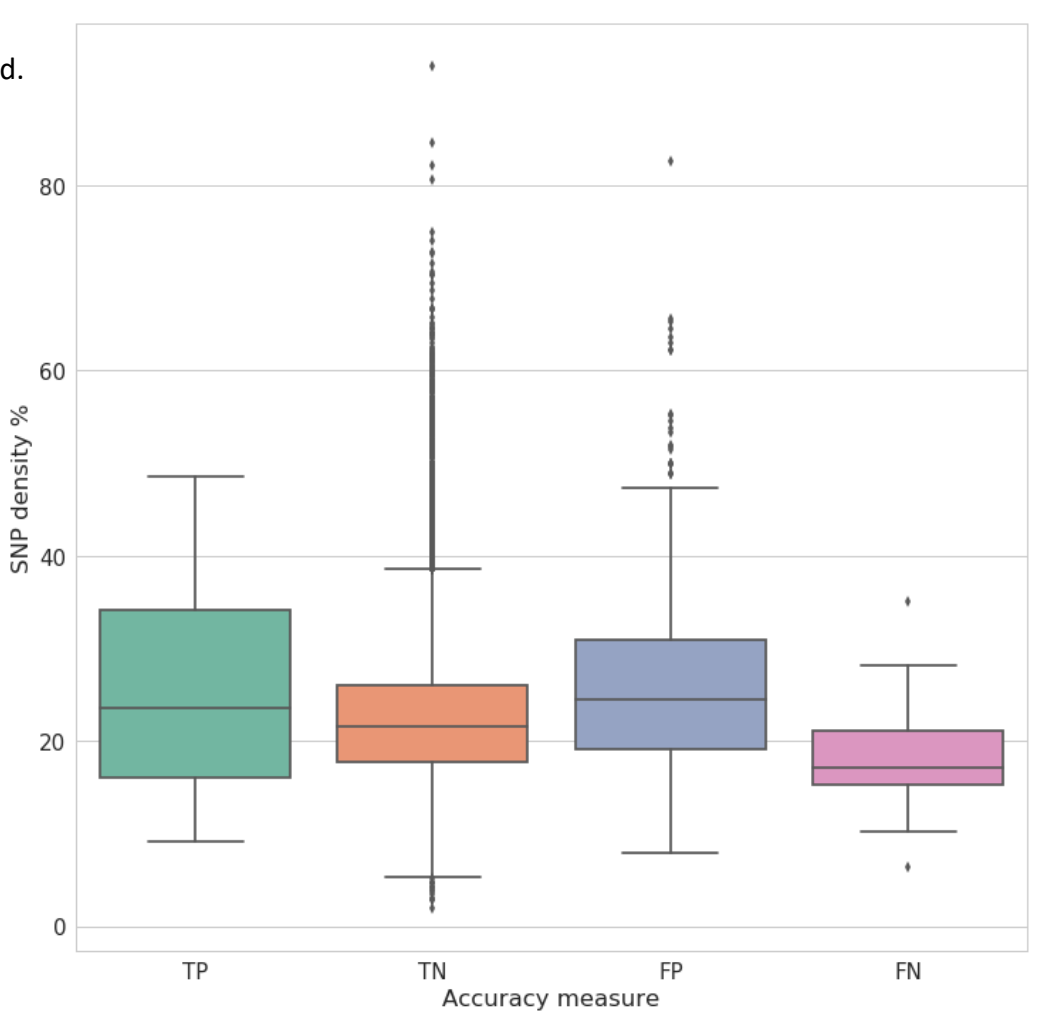
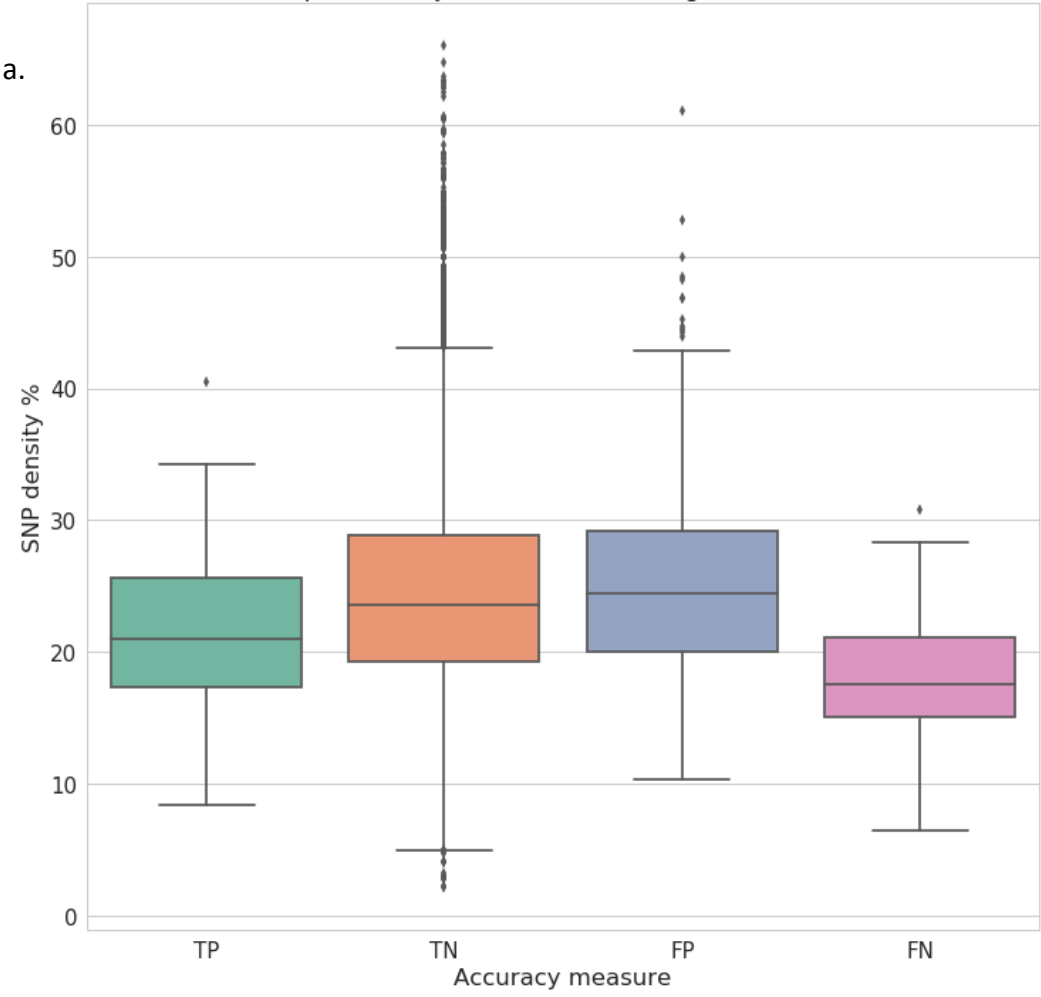
- a. Tajima's D; Baganda; Affy 6
- b. Tajima's D; Ethiopia; Affy 6
- c. Tajima's D; Zulu; Affy 6
- d. Tajima's D; Baganda; Omni 1
- e. Tajima's D; Ethiopia; Omni 1
- f. Tajima's D; Zulu; Omni 1

Appendix 8.4.2.



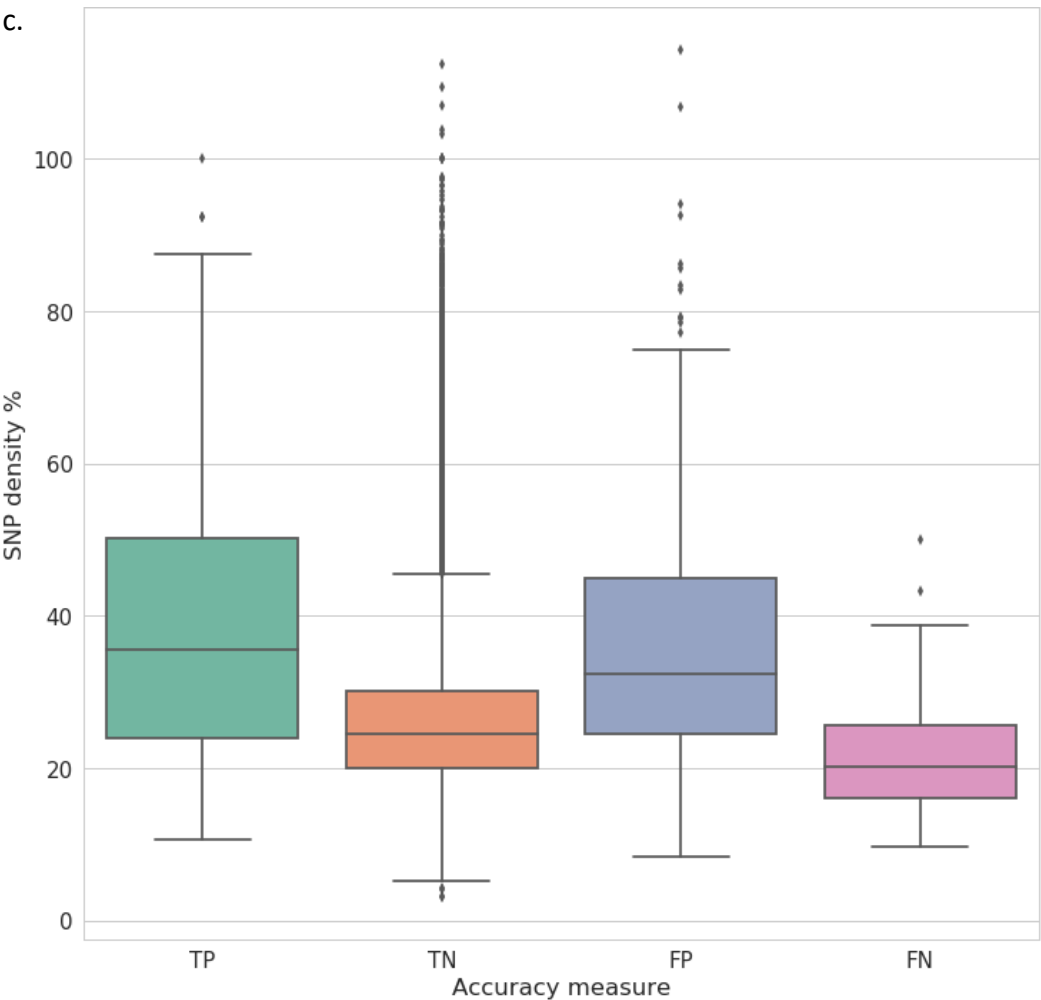
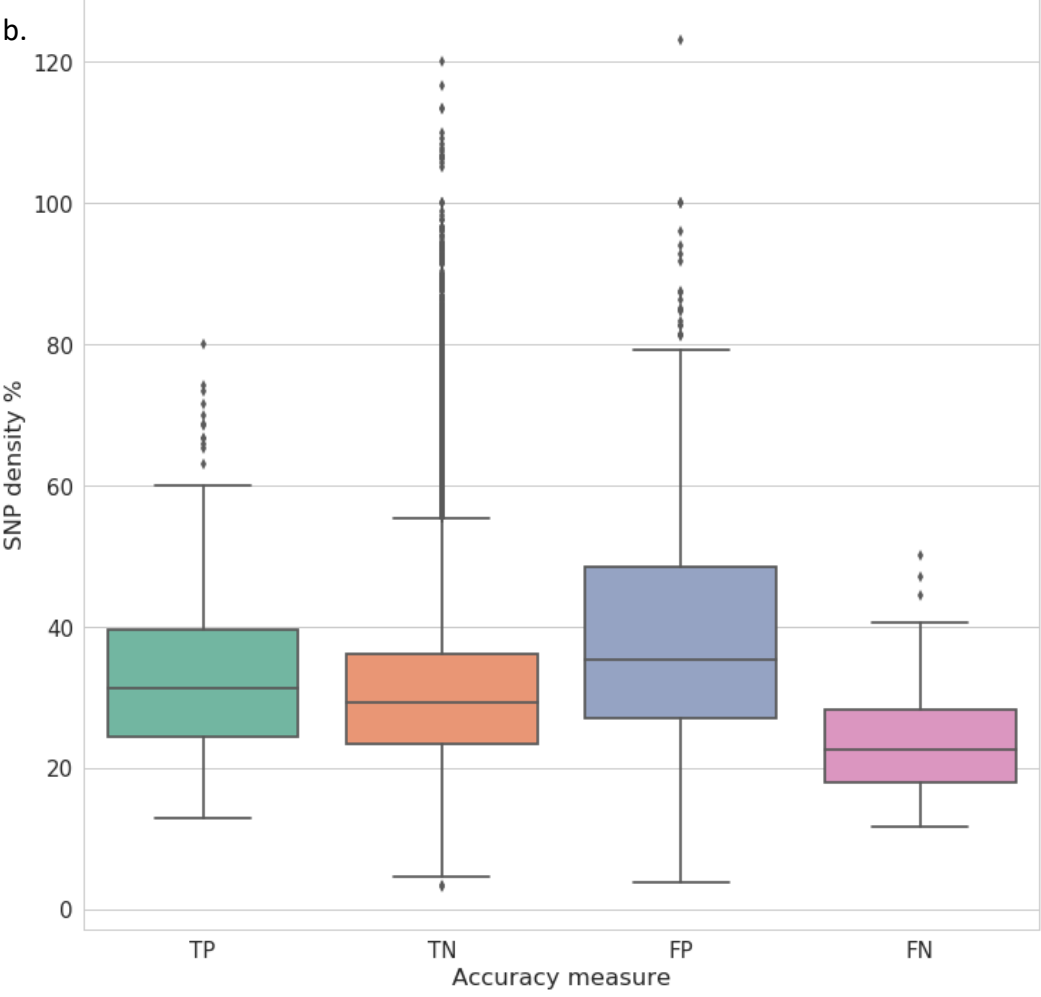
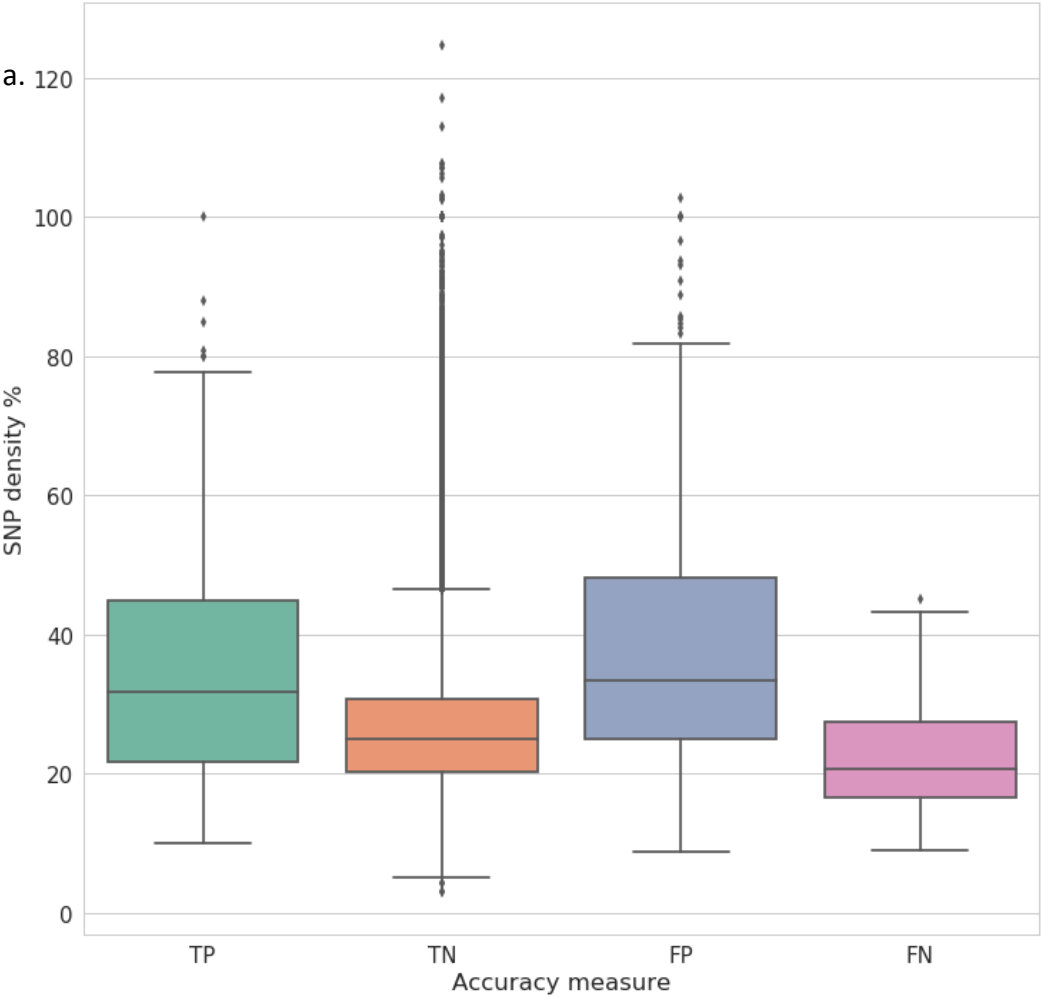
a. Tajima's D; Baganda; Mega 2.5
b. Tajima's D; Ethiopia; Mega 2.5
c. Tajima's D; Zulu; Mega 2.5
d. Tajima's D; Baganda; H3A
e. Tajima's D; Ethiopia; H3A
f. Tajima's D; Zulu; H3A

Appendix 8.4.3.



- a. Tajima's D; Baganda; PanAFR
- b. Tajima's D; Ethiopia; PanAFR
- c. Tajima's D; Zulu; PanAFR
- d. Tajima's D; Baganda; Omni 2.5
- e. Tajima's D; Ethiopia; Omni 2.5
- f. Tajima's D; Zulu; Omni 2.5

Appendix 8.4.4.



- a. Tajima’s D; Baganda; Omni5
- b. Tajima’s D; Ethiopia; Omni5
- c. Tajima’s D; Zulu; Omni 5

Appendix 9.1.

a.	Array	Acc	Mean	Median	SD
	Affy 6	TP	9.93	9.92	2.81
	Affy 6	TN	10.44	10.28	2.34
	Affy 6	FP	10.07	9.92	3.19
	Affy 6	FN	9.98	9.73	2.65
	Omni 1	TP	13.86	11.72	6.64
	Omni 1	TN	14.39	11.76	7.30
	Omni 1	FP	12.72	12.56	4.39
	Omni 1	FN	15.54	11.70	8.93
	Mega 2.5	TP	16.79	14.14	10.19
	Mega 2.5	TN	12.73	11.22	5.81
	Mega 2.5	FP	14.82	13.64	6.16
	Mega 2.5	FN	13.44	11.22	8.26
	H3A	TP	11.53	10.86	3.59
	H3A	TN	12.61	12.09	3.50
	H3A	FP	11.61	11.21	2.49
	H3A	FN	11.49	11.03	3.83
	PanAFR	TP	12.65	12.50	3.07
	PanAFR	TN	14.09	13.58	3.67
	PanAFR	FP	13.21	12.90	3.05
	PanAFR	FN	12.00	11.49	3.20
	Omni 2.5	TP	12.50	11.63	3.88
	Omni 2.5	TN	13.35	12.77	3.62
	Omni 2.5	FP	12.33	12.00	2.87
	Omni 2.5	FN	11.69	11.20	3.73
	Omni 5	TP	14.79	13.73	5.34
	Omni 5	TN	15.97	15.05	5.14
	Omni 5	FP	14.21	13.49	3.74
	Omni 5	FN	14.16	12.84	5.51

b.	Array	Acc	Mean	Median	SD
	Affy 6	TP	10.64	10.28	2.34
	Affy 6	TN	10.60	10.43	2.40
	Affy 6	FP	10.63	10.78	2.26
	Affy 6	FN	9.43	9.57	1.88
	Omni 1	TP	14.33	12.38	6.62
	Omni 1	TN	14.59	12.04	7.30
	Omni 1	FP	13.38	12.37	5.20
	Omni 1	FN	14.28	11.38	8.38
	Mega 2.5	TP	15.76	12.22	9.12
	Mega 2.5	TN	13.07	11.47	6.07
	Mega 2.5	FP	14.14	11.71	6.34
	Mega 2.5	FN	13.63	11.00	8.20
	H3A	TP	12.15	11.51	4.12
	H3A	TN	12.88	12.36	3.63
	H3A	FP	12.17	11.96	2.68
	H3A	FN	12.49	11.56	4.67
	PanAFR	TP	13.30	12.64	3.86
	PanAFR	TN	14.48	13.95	3.80
	PanAFR	FP	13.70	13.16	3.53
	PanAFR	FN	12.30	11.89	3.47
	Omni 2.5	TP	13.07	12.31	4.76
	Omni 2.5	TN	13.51	12.94	3.67
	Omni 2.5	FP	12.98	12.56	3.23
	Omni 2.5	FN	12.01	11.44	3.55
	Omni 5	TP	15.12	14.14	5.90
	Omni 5	TN	15.81	14.81	5.26
	Omni 5	FP	14.58	13.95	3.72
	Omni 5	FN	14.88	13.58	6.43

c.	Array	Acc	Mean	Median	SD
	Affy 6	TP	9.93	9.92	2.81
	Affy 6	TN	10.44	10.28	2.34
	Affy 6	FP	10.07	9.92	3.19
	Affy 6	FN	9.98	9.73	2.65
	Omni 1	TP	13.86	11.72	6.64
	Omni 1	TN	14.39	11.76	7.30
	Omni 1	FP	12.72	12.56	4.39
	Omni 1	FN	15.54	11.70	8.93
	Mega 2.5	TP	16.79	14.14	10.19
	Mega 2.5	TN	12.73	11.22	5.81
	Mega 2.5	FP	14.82	13.64	6.16
	Mega 2.5	FN	13.44	11.22	8.26
	H3A	TP	11.53	10.86	3.59
	H3A	TN	12.61	12.09	3.50
	H3A	FP	11.61	11.21	2.49
	H3A	FN	11.49	11.03	3.83
	PanAFR	TP	12.65	12.50	3.07
	PanAFR	TN	14.09	13.58	3.67
	PanAFR	FP	13.21	12.90	3.05
	PanAFR	FN	12.00	11.49	3.20
	Omni 2.5	TP	12.50	11.63	3.88
	Omni 2.5	TN	13.35	12.77	3.62
	Omni 2.5	FP	12.33	12.00	2.87
	Omni 2.5	FN	11.69	11.20	3.73
	Omni 5	TP	14.79	13.73	5.34
	Omni 5	TN	15.97	15.05	5.14
	Omni 5	FP	14.21	13.49	3.74
	Omni 5	FN	14.16	12.84	5.51

Appendix 10.2.

a.	Array	Acc	Mean	Median	SD
	Affy 6	TP	20.32	19.49	5.44
	Affy 6	TN	22.66	21.57	7.15
	Affy 6	FP	24.45	23.64	7.25
	Affy 6	FN	16.17	15.87	4.63
	Omni 1	TP	37.30	36.31	18.25
	Omni 1	TN	32.46	27.91	15.95
	Omni 1	FP	42.49	42.31	18.43
	Omni 1	FN	18.11	18.20	6.13
	Mega 2.5	TP	33.26	30.19	17.33
	Mega 2.5	TN	30.18	24.44	17.30
	Mega 2.5	FP	34.63	29.64	17.58
	Mega 2.5	FN	14.60	14.39	4.32
	H3A	TP	32.04	30.77	11.13
	H3A	TN	30.10	29.27	9.10
	H3A	FP	34.36	33.33	10.45
	H3A	FN	25.71	25.00	8.07
	PanAFR	TP	34.74	34.15	10.48
	PanAFR	TN	33.42	32.43	10.17
	PanAFR	FP	38.08	37.84	10.72
	PanAFR	FN	26.85	26.67	8.12
	Omni 2.5	TP	31.53	30.77	10.30
	Omni 2.5	TN	30.91	29.79	9.87
	Omni 2.5	FP	35.16	34.21	11.38
	Omni 2.5	FN	25.95	25.40	8.66
	Omni 5	TP	38.66	36.59	14.14
	Omni 5	TN	34.37	33.33	11.30
	Omni 5	FP	41.51	39.39	13.96
	Omni 5	FN	28.96	27.88	9.12

b.	Array	Acc	Mean	Median	SD
	Affy 6	TP	24.14	21.94	7.61
	Affy 6	TN	24.90	24.00	8.05
	Affy 6	FP	26.11	25.00	8.25
	Affy 6	FN	20.75	20.75	nan
	Omni 1	TP	39.13	38.41	19.77
	Omni 1	TN	36.42	31.71	17.77
	Omni 1	FP	40.84	37.93	18.43
	Omni 1	FN	16.72	15.69	4.54
	Mega 2.5	TP	37.43	35.09	20.81
	Mega 2.5	TN	32.78	27.50	17.58
	Mega 2.5	FP	34.73	30.30	17.33
	Mega 2.5	FN	13.32	13.32	6.30
	H3A	TP	31.65	30.56	10.67
	H3A	TN	32.84	31.82	10.17
	H3A	FP	34.99	34.09	10.54
	H3A	FN	23.85	24.14	8.95
	PanAFR	TP	33.55	33.33	10.09
	PanAFR	TN	33.36	32.43	10.26
	PanAFR	FP	36.53	36.03	10.24
	PanAFR	FN	23.67	24.00	10.44
	Omni 2.5	TP	31.99	31.43	10.19
	Omni 2.5	TN	34.28	33.33	11.12
	Omni 2.5	FP	37.50	36.11	11.57
	Omni 2.5	FN	26.67	27.06	9.68
	Omni 5	TP	37.48	35.48	13.39
	Omni 5	TN	38.21	36.67	12.49
	Omni 5	FP	42.71	41.03	13.57
	Omni 5	FN	30.34	29.08	10.44

c.	Array	Acc	Mean	Median	SD
	Affy 6	TP	21.13	20.00	6.38
	Affy 6	TN	21.82	20.75	6.74
	Affy 6	FP	23.74	23.44	7.03
	Affy 6	FN	17.38	17.19	3.75
	Omni 1	TP	36.31	35.23	17.26
	Omni 1	TN	31.08	26.67	15.30
	Omni 1	FP	42.01	41.38	17.91
	Omni 1	FN	15.13	16.75	6.28
	Mega 2.5	TP	32.46	28.72	17.11
	Mega 2.5	TN	27.10	22.92	14.26
	Mega 2.5	FP	33.96	28.57	17.83
	Mega 2.5	FN	12.40	11.65	4.36
	H3A	TP	30.20	29.55	10.27
	H3A	TN	29.26	28.30	8.80
	H3A	FP	34.00	33.33	10.21
	H3A	FN	24.15	23.40	7.18
	PanAFR	TP	33.12	32.73	9.55
	PanAFR	TN	32.52	31.67	9.84
	PanAFR	FP	37.87	37.14	10.39
	PanAFR	FN	26.43	26.53	8.07
	Omni 2.5	TP	30.80	29.79	10.47
	Omni 2.5	TN	30.04	28.95	9.61
	Omni 2.5	FP	34.77	33.33	10.79
	Omni 2.5	FN	23.58	22.92	7.35
	Omni 5	TP	35.50	34.09	11.76
	Omni 5	TN	33.49	32.20	11.11
	Omni 5	FP	41.10	38.89	13.52
	Omni 5	FN	27.03	26.09	8.53

Appendix 9.3.

a.	Array	Acc	Mean	Median	SD
	Affy 6	TP	14.50	13.40	3.23
	Affy 6	TN	15.65	15.28	4.33
	Affy 6	FP	15.97	15.66	4.29
	Affy 6	FN	nan	nan	nan
	Omni 1	TP	31.58	31.16	12.16
	Omni 1	TN	22.94	18.97	11.93
	Omni 1	FP	26.44	23.40	13.06
	Omni 1	FN	9.65	9.65	nan
	Mega 2.5	TP	18.81	16.67	8.34
	Mega 2.5	TN	19.14	16.84	9.16
	Mega 2.5	FP	22.63	18.75	12.68
	Mega 2.5	FN	12.81	14.12	4.65
	H3A	TP	17.68	17.11	4.47
	H3A	TN	19.61	18.92	5.76
	H3A	FP	19.54	18.90	5.34
	H3A	FN	15.57	15.24	4.93
	PanAFR	TP	22.69	22.00	6.65
	PanAFR	TN	22.30	21.57	6.36
	PanAFR	FP	23.64	23.08	6.59
	PanAFR	FN	19.86	19.19	5.83
	Omni 2.5	TP	19.42	18.33	6.90
	Omni 2.5	TN	20.69	19.79	6.25
	Omni 2.5	FP	21.22	20.34	6.65
	Omni 2.5	FN	16.09	15.69	3.82
	Omni 5	TP	22.74	21.15	8.24
	Omni 5	TN	23.99	22.64	8.15
	Omni 5	FP	26.19	24.49	9.59
	Omni 5	FN	18.99	18.31	5.69
b.	Array	Acc	Mean	Median	SD
	Affy 6	TP	13.81	13.12	4.35
	Affy 6	TN	15.54	15.18	4.14
	Affy 6	FP	16.25	15.94	4.57
	Affy 6	FN	12.28	13.40	4.30
	Omni 1	TP	27.76	28.39	10.97
	Omni 1	TN	23.68	19.64	12.42
	Omni 1	FP	25.24	21.54	12.56
	Omni 1	FN	10.07	11.23	3.09
	Mega 2.5	TP	26.44	18.01	17.95
	Mega 2.5	TN	19.64	16.92	9.97
	Mega 2.5	FP	21.02	18.39	10.37
	Mega 2.5	FN	14.64	13.40	5.50
	H3A	TP	19.28	18.64	5.33
	H3A	TN	19.60	18.92	5.73
	H3A	FP	20.15	19.31	6.03
	H3A	FN	17.73	17.57	5.48
	PanAFR	TP	22.16	21.26	6.21
	PanAFR	TN	22.35	21.62	6.36
	PanAFR	FP	23.47	22.67	6.72
c.	Array	Acc	Mean	Median	SD
	Affy 6	TP	14.77	14.01	3.57
	Affy 6	TN	15.51	15.19	4.29
	Affy 6	FP	16.06	15.71	4.33
	Affy 6	FN	12.22	12.22	nan
	Omni 1	TP	26.71	27.66	10.12
	Omni 1	TN	23.00	19.05	11.98
	Omni 1	FP	26.42	23.47	13.01
	Omni 1	FN	9.75	9.75	0.15
	Mega 2.5	TP	18.18	16.00	8.59
	Mega 2.5	TN	19.02	16.67	8.98
	Mega 2.5	FP	23.35	19.05	13.28
	Mega 2.5	FN	12.76	13.04	3.50
	H3A	TP	17.34	16.90	4.54
	H3A	TN	19.59	18.84	5.78
	H3A	FP	19.51	18.92	5.30
	H3A	FN	15.45	14.65	4.56
	PanAFR	TP	22.55	22.39	6.46
	PanAFR	TN	22.28	21.57	6.37
	PanAFR	FP	23.63	23.08	6.84

Appendix 10.4.

a.	Array	Acc	Mean	Median	SD
	Affy 6	TP	16.05	17.29	3.05
	Affy 6	TN	16.97	16.67	4.63
	Affy 6	FP	18.73	17.91	5.10
	Affy 6	FN	11.42	12.53	3.40
	Omni 1	TP	38.82	39.51	13.68
	Omni 1	TN	24.42	19.67	13.25
	Omni 1	FP	39.13	38.71	16.84
	Omni 1	FN	19.88	18.92	5.78
	Mega 2.5	TP	29.28	26.51	10.70
	Mega 2.5	TN	21.01	18.42	10.25
	Mega 2.5	FP	33.50	30.77	14.89
	Mega 2.5	FN	27.07	24.36	12.14
	H3A	TP	28.21	24.44	13.82
	H3A	TN	21.20	20.39	6.24
	H3A	FP	29.57	26.09	13.97
	H3A	FN	17.43	17.28	5.13
	PanAFR	TP	21.23	20.97	6.47
	PanAFR	TN	24.49	23.64	7.25
	PanAFR	FP	25.08	24.44	7.17
	PanAFR	FN	18.20	17.51	5.30
	Omni 2.5	TP	25.85	23.61	11.08
	Omni 2.5	TN	22.49	21.57	6.92
	Omni 2.5	FP	26.34	24.44	10.45
	Omni 2.5	FN	18.58	17.19	6.19
	Omni 5	TP	35.76	31.71	18.25
	Omni 5	TN	26.50	25.00	9.48
	Omni 5	FP	37.93	33.33	17.15
	Omni 5	FN	22.21	20.63	7.81
b.	Array	Acc	Mean	Median	SD
	Affy 6	TP	18.35	18.35	0.99
	Affy 6	TN	19.31	18.97	5.49
	Affy 6	FP	19.14	18.86	5.13
	Affy 6	FN	12.27	12.27	2.85
	Omni 1	TP	45.64	41.03	12.17
	Omni 1	TN	27.15	22.15	14.53
	Omni 1	FP	46.78	46.51	16.24
	Omni 1	FN	25.13	18.75	15.55
	Mega 2.5	TP	35.45	31.11	18.20
	Mega 2.5	TN	23.18	20.37	11.04
	Mega 2.5	FP	36.41	33.33	19.06
	Mega 2.5	FN	22.54	19.01	11.46
	H3A	TP	21.53	21.00	6.73
	H3A	TN	23.66	22.92	6.97
	H3A	FP	25.93	22.64	12.04
	H3A	FN	16.38	16.64	3.85
	PanAFR	TP	23.28	23.53	7.04
	PanAFR	TN	26.09	25.40	7.61
	PanAFR	FP	26.14	25.49	7.63
c.	Array	Acc	Mean	Median	SD
	Affy 6	TP	17.44	17.40	2.83
	Affy 6	TN	16.90	16.46	4.59
	Affy 6	FP	19.50	18.80	6.28
	Affy 6	FN	10.78	12.12	3.82
	Omni 1	TP	31.30	30.01	10.50
	Omni 1	TN	24.31	19.68	13.02
	Omni 1	FP	36.61	35.00	14.50
	Omni 1	FN	22.81	22.86	5.69
	Mega 2.5	TP	25.65	25.17	10.91
	Mega 2.5	TN	20.94	18.33	10.26
	Mega 2.5	FP	31.54	28.26	14.05
	Mega 2.5	FN	26.48	21.31	13.49
	H3A	TP	34.96	33.71	13.98
	H3A	TN	21.18	20.37	6.19
	H3A	FP	27.75	24.44	12.76
	H3A	FN	17.04	15.81	5.13
	PanAFR	TP	21.99	20.90	5.60
	PanAFR	TN	24.45	23.64	7.21
	PanAFR	FP	24.13	23.53	6.88

Appendix 10.1.

a.	Array	Categories	U-stat	p value	p < 5x10 ⁻²
	Affy 6	TP & TN	69922.50	3.15x10 ⁻¹	
	Affy 6	FP & TN	57066.00	1.88x10 ⁻¹	
	Affy 6	FP & FN	443.00	2.72x10 ⁻¹	
	Affy 6	TP & FN	564.00	4.95x10 ⁻¹	
	Affy 6	TP & FP	331.00	2.95x10 ⁻¹	
	Affy 6	TN & FN	92905.00	2.48x10 ⁻¹	
	Omni 1	TP & TN	95303.50	1.81x10 ⁻¹	
	Omni 1	FP & TN	79355.50	1.48x10 ⁻¹	
	Omni 1	FP & FN	363.00	6.12x10 ⁻³	*
	Omni 1	TP & FN	429.00	4.91x10 ⁻³	*
	Omni 1	TP & FP	491.00	4.92x10 ⁻¹	
	Omni 1	TN & FN	88288.50	2.10x10 ⁻³	*
	Mega 2.5	TP & TN	201578.50	6.42x10 ⁻³	*
	Mega 2.5	FP & TN	562679.50	1.99x10 ⁻¹	
	Mega 2.5	FP & FN	2324.00	8.25x10 ⁻²	
	Mega 2.5	TP & FN	807.00	4.08x10 ⁻³	*
	Mega 2.5	TP & FP	1707.50	7.70x10 ⁻²	
	Mega 2.5	TN & FN	313944.50	1.19x10 ⁻¹	
	H3A	TP & TN	2487567.50	8.35x10 ⁻⁶	
	H3A	FP & TN	5653471.00	1.71x10 ⁻⁴	*
	H3A	FP & FN	23470.00	1.72x10 ⁻¹	
	H3A	TP & FN	11847.00	3.77x10 ⁻¹	
	H3A	TP & FP	19141.00	4.63x10 ⁻²	*
	H3A	TN & FN	3102382.50	3.09x10 ⁻⁴	*
	PanAFR	TP & TN	4217763.00	6.27x10 ⁻⁴	*
	PanAFR	FP & TN	11684414.00	7.10x10 ⁻⁷	*
	PanAFR	FP & FN	41893.00	9.23x10 ⁻⁵	*
	PanAFR	TP & FN	15636.00	3.21x10 ⁻³	*
	PanAFR	TP & FP	36569.50	3.88x10 ⁻¹	
	PanAFR	TN & FN	4782506.50	1.50x10 ⁻¹⁴	*
	Omni2.5	TP & TN	3519077.00	1.37x10 ⁻³	*
	Omni2.5	FP & TN	7850708.50	2.07x10 ⁻⁷	*
	Omni2.5	FP & FN	32260.00	4.83x10 ⁻³	*
	Omni2.5	TP & FN	14073.50	1.27x10 ⁻²	*
	Omni2.5	TP & FP	27426.00	4.32x10 ⁻¹	
	Omni2.5	TN & FN	4016007.00	1.41x10 ⁻¹¹	*
	Omni 5	TP & TN	18186238.50	7.92x10 ⁻¹¹	*
	Omni 5	FP & TN	26531731.50	1.01x10 ⁻¹⁵	*
	Omni 5	FP & FN	126404.00	1.10x10 ⁻³	*
	Omni 5	TP & FN	87641.50	8.10x10 ⁻³	*
	Omni 5	TP & FP	131421.00	3.62x10 ⁻¹	
	Omni 5	TN & FN	17574368.50	2.23x10 ⁻²¹	*

b.	Array	Categories	U-stat	p value	p < 5x10 ⁻²
	Affy 6	TP & TN	66364.50	4.55x10 ⁻¹	
	Affy 6	FP & TN	52947.50	3.68x10 ⁻¹	
	Affy 6	FP & FN	242.50	1.65x10 ⁻²	*
	Affy 6	TP & FN	306.00	1.80x10 ⁻²	*
	Affy 6	TP & FP	307.00	3.92x10 ⁻¹	
	Affy 6	TN & FN	54358.50	2.16x10 ⁻³	*
	Omni 1	TP & TN	106287.00	4.96x10 ⁻¹	
	Omni 1	FP & TN	71062.00	3.71x10 ⁻¹	
	Omni 1	FP & FN	585.50	3.81x10 ⁻¹	
	Omni 1	TP & FN	814.50	2.76x10 ⁻¹	
	Omni 1	TP & FP	429.00	3.82x10 ⁻¹	
	Omni 1	TN & FN	131265.50	1.29x10 ⁻¹	
	Mega 2.5	TP & TN	222336.00	5.54x10 ⁻²	
	Mega 2.5	FP & TN	349263.50	8.60x10 ⁻²	
	Mega 2.5	FP & FN	1247.00	7.90x10 ⁻²	
	Mega 2.5	TP & FN	808.50	6.97x10 ⁻²	
	Mega 2.5	TP & FP	1502.00	3.15x10 ⁻¹	
	Mega 2.5	TN & FN	219174.50	1.57x10 ⁻¹	
	H3A	TP & TN	3141699.00	7.71x10 ⁻⁵	*
	H3A	FP & TN	5307241.00	1.31x10 ⁻³	*
	H3A	FP & FN	19975.50	1.80x10 ⁻¹	
	H3A	TP & FN	13209.00	4.13x10 ⁻¹	
	H3A	TP & FP	22062.50	9.19x10 ⁻²	
	H3A	TN & FN	2860640.50	1.16x10 ⁻³	*
	PanAFR	TP & TN	5354233.50	1.54x10 ⁻⁶	*
	PanAFR	FP & TN	10951996.50	1.87x10 ⁻⁵	*
	PanAFR	FP & FN	41724.00	2.02x10 ⁻⁷	*
	PanAFR	TP & FN	24415.00	2.66x10 ⁻³	*
	PanAFR	TP & FP	41219.00	5.93x10 ⁻²	
	PanAFR	TN & FN	5315418.50	3.85x10 ⁻²¹	*
	Omni2.5	TP & TN	4202664.00	3.03x10 ⁻⁴	*
	Omni2.5	FP & TN	6980147.50	1.02x10 ⁻²	
	Omni2.5	FP & FN	23303.50	1.97x10 ⁻⁴	*
	Omni2.5	TP & FN	16568.00	3.11x10 ⁻²	*
	Omni2.5	TP & FP	28177.00	9.25x10 ⁻²	
	Omni2.5	TN & FN	3439274.00	3.79x10 ⁻¹⁰	*
	Omni 5	TP & TN	17133024.00	1.18x10 ⁻⁵	*
	Omni 5	FP & TN	20045524.00	7.69x10 ⁻⁷	*
	Omni 5	FP & FN	87131.50	2.77x10 ⁻²	*
	Omni 5	TP & FN	75176.50	6.88x10 ⁻²	
	Omni 5	TP & FP	107028.50	4.20x10 ⁻¹	
	Omni 5	TN & FN	13962649.50	1.43x10 ⁻⁹	*

c.	Array	Categories	U-stat	p value	p < 5x10 ⁻²
	Affy 6	TP & TN	63760.50	6.26x10 ⁻²	
	Affy 6	FP & TN	52838.00	2.17x10 ⁻¹	
	Affy 6	FP & FN	505.00	4.38x10 ⁻¹	
	Affy 6	TP & FN	648.00	3.87x10 ⁻¹	
	Affy 6	TP & FP	324.00	3.56x10 ⁻¹	
	Affy 6	TN & FN	97645.50	4.73x10 ⁻²	*
	Omni 1	TP & TN	104559.00	3.99x10 ⁻¹	
	Omni 1	FP & TN	94719.50	3.70x10 ⁻¹	
	Omni 1	FP & FN	786.50	2.90x10 ⁻¹	
	Omni 1	TP & FN	871.00	3.17x10 ⁻¹	
	Omni 1	TP & FP	558.50	4.95x10 ⁻¹	
	Omni 1	TN & FN	155682.00	3.02x10 ⁻¹	
	Mega 2.5	TP & TN	246560.00	3.83x10 ⁻²	*
	Mega 2.5	FP & TN	397777.50	1.86x10 ⁻⁴	*
	Mega 2.5	FP & FN	2114.50	7.03x10 ⁻³	*
	Mega 2.5	TP & FN	1301.00	6.66x10 ⁻²	
	Mega 2.5	TP & FP	2035.00	4.92x10 ⁻¹	
	Mega 2.5	TN & FN	372994.00	2.52x10 ⁻¹	
	H3A	TP & TN	2545656.50	5.93x10 ⁻⁸	*
	H3A	FP & TN	4945165.00	1.68x10 ⁻⁷	*
	H3A	FP & FN	23301.00	4.35x10 ⁻²	*
	H3A	TP & FN	14196.00	3.98x10 ⁻¹	
	H3A	TP & FP	19728.00	5.94x10 ⁻²	
	H3A	TN & FN	3025943.00	5.21x10 ⁻⁹	*
	PanAFR	TP & TN	3357356.00	2.18x10 ⁻⁶	*
	PanAFR	FP & TN	11914234.50	4.00x10 ⁻⁷	*
	PanAFR	FP & FN	48263.50	4.67x10 ⁻⁸	*
	PanAFR	TP & FN	17198.00	1.38x10 ⁻²	*
	PanAFR	TP & FP	30603.50	3.35x10 ⁻²	*
	PanAFR	TN & FN	5289883.50	3.75x10 ⁻²²	*
	Omni2.5	TP & TN	3308079.00	2.78x10 ⁻⁵	*
	Omni2.5	FP & TN	7994719.50	2.05x10 ⁻⁸	*
	Omni2.5	FP & FN	35522.00	4.43x10 ⁻⁴	*
	Omni2.5	TP & FN	15700.00	1.73x10 ⁻²	*
	Omni2.5	TP & FP	27960.50	2.49x10 ⁻¹	
	Omni2.5	TN & FN	4197801.50	1.15x10 ⁻¹⁴	*
	Omni 5	TP & TN	19020858.50	5.89x10 ⁻¹¹	*
	Omni 5	FP & TN	24784298.00	5.13x10 ⁻²⁰	*
	Omni 5	FP & FN	122613.50	3.22x10 ⁻³	*
	Omni 5	TP & FN	89716.50	4.87x10 ⁻³	*
	Omni 5	TP & FP	135334.00	3.78x10 ⁻¹	
	Omni 5	TN & FN	16813851.50	1.16x10 ⁻²²	*

- a. F_{ST}; Baganda and Ethiopia
- b. F_{ST}; Baganda and Zulu
- c. F_{ST}; Ethiopia and Zulu

Appendix 10.2.

a.	Array	Categories	U-stat	p value	p < 5x10 ⁻²
	Affy 6	TP & TN	28865.00	2.42x10 ⁻³	*
	Affy 6	FP & TN	359609.50	2.92x10 ⁻⁸	*
	Affy 6	FP & FN	1813.00	1.17x10 ⁻⁴	*
	Affy 6	TP & FN	268.50	1.45x10 ⁻²	*
	Affy 6	TP & FP	34129.50	1.99x10 ⁻⁸	*
	Affy 6	TN & FN	1707.00	1.43x10 ⁻³	*
	Omni 1	TP & TN	185338.50	6.50x10 ⁻⁶	*
	Omni 1	FP & TN	781920.00	5.20x10 ⁻⁵³	*
	Omni 1	FP & FN	3854.50	1.45x10 ⁻¹¹	*
	Omni 1	TP & FN	1254.50	7.68x10 ⁻⁸	*
	Omni 1	TP & FP	190272.00	1.23x10 ⁻⁵	*
	Omni 1	TN & FN	7646.00	6.32x10 ⁻⁷	*
	Mega 2.5	TP & TN	133472.50	5.73x10 ⁻⁴	*
	Mega 2.5	FP & TN	491659.50	2.56x10 ⁻¹⁴	*
	Mega 2.5	FP & FN	1744.50	3.33x10 ⁻⁹	*
	Mega 2.5	TP & FN	805.00	8.10x10 ⁻⁷	*
	Mega 2.5	TP & FP	228896.50	1.10x10 ⁻¹	
	Mega 2.5	TN & FN	2086.50	7.23x10 ⁻⁷	*
	H3A	TP & TN	5192853.00	2.63x10 ⁻⁵	*
	H3A	FP & TN	11339772.00	2.78x10 ⁻⁵⁷	*
	H3A	FP & FN	127958.50	1.91x10 ⁻⁴⁵	*
	H3A	TP & FN	63238.00	9.74x10 ⁻¹⁹	*
	H3A	TP & FP	389370.00	1.89x10 ⁻⁶	*
	H3A	TN & FN	2340885.00	1.05x10 ⁻¹⁸	*
	PanAFR	TP & TN	7364986.50	1.05x10 ⁻⁴	*
	PanAFR	FP & TN	16994972.50	4.34x10 ⁻⁷²	*
	PanAFR	FP & FN	120267.50	8.05x10 ⁻⁶⁸	*
	PanAFR	TP & FN	57312.00	1.13x10 ⁻³¹	*
	PanAFR	TP & FP	452994.50	8.72x10 ⁻¹¹	*
	PanAFR	TN & FN	2723490.50	2.33x10 ⁻³³	*
	Omni2.5	TP & TN	4383630.50	3.68x10 ⁻²	*
	Omni2.5	FP & TN	11887463.50	3.00x10 ⁻⁵²	*
	Omni2.5	FP & FN	119125.50	6.75x10 ⁻³⁹	*
	Omni2.5	TP & FN	46392.50	1.45x10 ⁻¹⁴	*
	Omni2.5	TP & FP	324222.50	3.12x10 ⁻¹⁰	*
	Omni2.5	TN & FN	1912971.50	1.32x10 ⁻¹⁶	*
	Omni 5	TP & TN	9600493.50	9.15x10 ⁻¹⁵	*
	Omni 5	FP & TN	20686667.50	8.73x10 ⁻¹⁰⁴	*
	Omni 5	FP & FN	180958.50	5.25x10 ⁻⁷⁸	*
	Omni 5	TP & FN	90959.50	6.43x10 ⁻³⁵	*
	Omni 5	TP & FP	489992.50	1.97x10 ⁻⁶	*
	Omni 5	TN & FN	6106002.50	1.24x10 ⁻²⁶	*

b.	Array	Category	U-stat	p value	p < 5x10 ⁻²
	Affy 6	TP & TN	15479.00	2.64x10 ⁻¹	
	Affy 6	FP & TN	465598.50	4.97x10 ⁻⁴	*
	Affy 6	FP & FN	332.50	2.27x10 ⁻¹	
	Affy 6	TP & FN	14.00	3.45x10 ⁻¹	
	Affy 6	TP & FP	19057.50	6.31x10 ⁻²	
	Affy 6	TN & FN	283.50	2.75x10 ⁻¹	
	Omni 1	TP & TN	151613.50	2.54x10 ⁻²	*
	Omni 1	FP & TN	1072372.00	1.72x10 ⁻¹²	*
	Omni 1	FP & FN	632.50	1.42x10 ⁻⁴	*
	Omni 1	TP & FN	167.00	1.43x10 ⁻³	*
	Omni 1	TP & FP	138584.50	1.55x10 ⁻¹	
	Omni 1	TN & FN	1161.50	5.49x10 ⁻⁴	*
	Mega 2.5	TP & TN	95437.00	4.54x10 ⁻³	*
	Mega 2.5	FP & TN	471935.50	5.36x10 ⁻⁴	*
	Mega 2.5	FP & FN	191.00	1.73x10 ⁻²	*
	Mega 2.5	TP & FN	81.00	3.99x10 ⁻²	*
	Mega 2.5	TP & FP	194417.00	1.10x10 ⁻¹	
	Mega 2.5	TN & FN	141.00	2.42x10 ⁻²	*
	H3A	TP & TN	3337289.00	4.00x10 ⁻³	*
	H3A	FP & TN	9809988.50	2.26x10 ⁻¹³	*
	H3A	FP & FN	23244.00	3.66x10 ⁻¹⁹	*
	H3A	TP & FN	10619.50	1.64x10 ⁻⁹	*
	H3A	TP & FP	242191.50	1.14x10 ⁻⁹	*
	H3A	TN & FN	347425.50	2.14x10 ⁻¹⁴	*
	PanAFR	TP & TN	3909433.50	3.05x10 ⁻¹	
	PanAFR	FP & TN	8534496.00	1.90x10 ⁻²⁸	*
	PanAFR	FP & FN	19791.00	2.05x10 ⁻²⁰	*
	PanAFR	TP & FN	10175.50	2.18x10 ⁻¹²	*
	PanAFR	TP & FP	292290.00	1.02x10 ⁻⁸	*
	PanAFR	TN & FN	307788.50	2.05x10 ⁻¹³	*
	Omni2.5	TP & TN	3135799.00	1.56x10 ⁻⁴	*
	Omni2.5	FP & TN	11530196.00	2.59x10 ⁻²⁵	*
	Omni2.5	FP & FN	27580.50	2.90x10 ⁻¹⁶	*
	Omni2.5	TP & FN	10775.00	1.58x10 ⁻⁵	*
	Omni2.5	TP & FP	216410.00	4.48x10 ⁻¹⁶	*
	Omni2.5	TN & FN	430628.00	5.06x10 ⁻¹⁰	*
	Omni 5	TP & TN	11514516.50	1.51x10 ⁻²	*
	Omni 5	FP & TN	20137252.50	1.32x10 ⁻³⁴	*
	Omni 5	FP & FN	49968.00	7.54x10 ⁻²⁷	*
	Omni 5	TP & FN	35530.00	1.24x10 ⁻⁹	*
	Omni 5	TP & FP	372850.50	2.53x10 ⁻¹⁸	*
	Omni 5	TN & FN	1677865.00	5.74x10 ⁻¹⁵	*

c.	Array	Category	U-stat	p value	p < 5x10 ⁻²
	Affy 6	TP & TN	25262.50	2.29x10 ⁻¹	
	Affy 6	FP & TN	244002.50	3.52x10 ⁻⁹	*
	Affy 6	FP & FN	1312.50	7.74x10 ⁻³	*
	Affy 6	TP & FN	172.00	6.25x10 ⁻²	
	Affy 6	TP & FP	36354.50	1.42x10 ⁻⁴	*
	Affy 6	TN & FN	1041.00	4.65x10 ⁻²	*
	Omni 1	TP & TN	164547.00	1.69x10 ⁻⁷	*
	Omni 1	FP & TN	561403.50	5.41x10 ⁻⁵⁸	*
	Omni 1	FP & FN	1198.50	1.26x10 ⁻⁷	*
	Omni 1	TP & FN	551.00	9.70x10 ⁻⁶	*
	Omni 1	TP & FP	202221.50	3.46x10 ⁻⁷	*
	Omni 1	TN & FN	2299.50	2.42x10 ⁻⁵	*
	Mega 2.5	TP & TN	103275.50	1.35x10 ⁻⁶	*
	Mega 2.5	FP & TN	361542.00	1.50x10 ⁻²⁰	*
	Mega 2.5	FP & FN	366.50	3.07x10 ⁻⁴	*
	Mega 2.5	TP & FN	185.00	1.35x10 ⁻³	*
	Mega 2.5	TP & FP	209324.00	1.01x10 ⁻¹	
	Mega 2.5	TN & FN	373.50	1.04x10 ⁻³	*
	H3A	TP & TN	3824221.00	6.95x10 ⁻³	*
	H3A	FP & TN	8598792.50	5.50x10 ⁻⁶⁹	*
	H3A	FP & FN	87169.00	6.52x10 ⁻⁵³	*
	H3A	TP & FN	43807.00	1.72x10 ⁻¹⁸	*
	H3A	TP & FP	282345.50	9.54x10 ⁻¹²	*
	H3A	TN & FN	1557479.00	5.16x10 ⁻²³	*
	PanAFR	TP & TN	6115576.00	1.78x10 ⁻²	*
	PanAFR	FP & TN	12486878.00	8.81x10 ⁻⁸⁷	*
	PanAFR	FP & FN	88226.50	4.19x10 ⁻⁵⁹	*
	PanAFR	TP & FN	48514.00	6.12x10 ⁻²²	*
	PanAFR	TP & FP	340448.50	3.30x10 ⁻²⁰	*
	PanAFR	TN & FN	2046495.50	4.99x10 ⁻²⁴	*
	Omni2.5	TP & TN	3517917.50	1.45x10 ⁻²	*
	Omni2.5	FP & TN	8982332.00	6.29x10 ⁻⁶⁵	*
	Omni2.5	FP & FN	65295.00	3.46x10 ⁻⁴⁹	*
	Omni2.5	TP & FN	29013.00	1.11x10 ⁻²⁰	*
	Omni2.5	TP & FP	281888.00	1.41x10 ⁻¹¹	*
	Omni2.5	TN & FN	1074562.00	3.47x10 ⁻²⁴	*
	Omni 5	TP & TN	8351953.50	2.09x10 ⁻⁶	*
	Omni 5	FP & TN	15120727.00	1.84x10 ⁻¹¹²	*
	Omni 5	FP & FN	112350.00	4.04x10 ⁻⁸³	*
	Omni 5	TP & FN	69295.00	2.56x10 ⁻³²	*
	Omni 5	TP & FP	360600.00	1.34x10 ⁻¹⁸	*
	Omni 5	TN & FN	3877203.50	2.83x10 ⁻³³	*

- a. iHS; Baganda
- b. iHS; Ethiopia
- c. iHS; Zulu

Appendix 10.3.

a.	<table><tr><th>Array</th><th>Categories</th><th>U-stat</th><th>p value</th><th>p < 5x10⁻²</th></tr><tr><td>Affy 6</td><td>TP & TN</td><td>38800.00</td><td>4.64x10⁻²</td><td>*</td></tr><tr><td>Affy 6</td><td>FP & TN</td><td>1472782.00</td><td>1.05x10⁻²</td><td></td></tr><tr><td>Affy 6</td><td>FP & FN</td><td>0.00</td><td>0.00</td><td></td></tr><tr><td>Affy 6</td><td>TP & FN</td><td>0.00</td><td>0.00</td><td></td></tr><tr><td>Affy 6</td><td>TP & FP</td><td>18047.50</td><td>1.44x10⁻²</td><td>*</td></tr><tr><td>Affy 6</td><td>TN & FN</td><td>0.00</td><td>0.00</td><td></td></tr><tr><td>Omni 1</td><td>TP & TN</td><td>119830.00</td><td>3.30x10⁻¹⁴</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & TN</td><td>2472305.00</td><td>1.36x10⁻¹⁹</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & FN</td><td>50.00</td><td>5.24x10⁻²</td><td></td></tr><tr><td>Omni 1</td><td>TP & FN</td><td>1.00</td><td>4.74x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FP</td><td>67510.00</td><td>6.28x10⁻⁶</td><td>*</td></tr><tr><td>Omni 1</td><td>TN & FN</td><td>176.00</td><td>5.88x10⁻²</td><td></td></tr><tr><td>Mega 2.5</td><td>TP & TN</td><td>425127.00</td><td>3.61x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>FP & TN</td><td>4207340.50</td><td>1.33x10⁻²⁴</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & FN</td><td>1028.00</td><td>3.79x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FN</td><td>122.00</td><td>9.81x10⁻²</td><td></td></tr><tr><td>Mega 2.5</td><td>TP & FP</td><td>100458.00</td><td>2.04x10⁻⁴</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TN & FN</td><td>4859.00</td><td>8.52x10⁻²</td><td></td></tr><tr><td>H3A</td><td>TP & TN</td><td>7508487.00</td><td>4.96x10⁻¹⁵</td><td>*</td></tr><tr><td>H3A</td><td>FP & TN</td><td>23005247.00</td><td>4.71x10⁻¹</td><td></td></tr><tr><td>H3A</td><td>FP & FN</td><td>24414.50</td><td>5.48x10⁻¹¹</td><td>*</td></tr><tr><td>H3A</td><td>TP & FN</td><td>13086.00</td><td>6.00x10⁻⁵</td><td>*</td></tr><tr><td>H3A</td><td>TP & FP</td><td>258465.50</td><td>1.54x10⁻¹¹</td><td>*</td></tr><tr><td>H3A</td><td>TN & FN</td><td>710262.00</td><td>2.13x10⁻¹¹</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & TN</td><td>22352477.00</td><td>8.73x10⁻²</td><td></td></tr><tr><td>PanAFR</td><td>FP & TN</td><td>31626493.00</td><td>3.89x10⁻¹⁵</td><td>*</td></tr><tr><td>PanAFR</td><td>FP & FN</td><td>72948.50</td><td>7.28x10⁻¹³</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FN</td><td>52817.00</td><td>2.45x10⁻⁷</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FP</td><td>528382.00</td><td>8.54x10⁻⁵</td><td>*</td></tr><tr><td>PanAFR</td><td>TN & FN</td><td>3362520.00</td><td>3.06x10⁻⁷</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & TN</td><td>8302216.00</td><td>4.37x10⁻⁹</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & TN</td><td>28220070.00</td><td>4.04x10⁻³</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & FN</td><td>23520.00</td><td>2.73x10⁻¹²</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FN</td><td>10889.00</td><td>2.66x10⁻⁵</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FP</td><td>275627.50</td><td>2.77x10⁻¹⁰</td><td>*</td></tr><tr><td>Omni2.5</td><td>TN & FN</td><td>718002.00</td><td>1.64x10⁻¹¹</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & TN</td><td>29529599.50</td><td>2.18x10⁻⁹</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & TN</td><td>46168680.00</td><td>3.03x10⁻¹⁸</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & FN</td><td>67848.50</td><td>3.87x10⁻³¹</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FN</td><td>61958.00</td><td>5.06x10⁻¹⁰</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FP</td><td>444854.50</td><td>2.97x10⁻²²</td><td>*</td></tr><tr><td>Omni 5</td><td>TN & FN</td><td>4706588.00</td><td>1.50x10⁻²²</td><td>*</td></tr></table>	Array	Categories	U-stat	p value	p < 5x10 ⁻²	Affy 6	TP & TN	38800.00	4.64x10 ⁻²	*	Affy 6	FP & TN	1472782.00	1.05x10 ⁻²		Affy 6	FP & FN	0.00	0.00		Affy 6	TP & FN	0.00	0.00		Affy 6	TP & FP	18047.50	1.44x10 ⁻²	*	Affy 6	TN & FN	0.00	0.00		Omni 1	TP & TN	119830.00	3.30x10 ⁻¹⁴	*	Omni 1	FP & TN	2472305.00	1.36x10 ⁻¹⁹	*	Omni 1	FP & FN	50.00	5.24x10 ⁻²		Omni 1	TP & FN	1.00	4.74x10 ⁻²	*	Omni 1	TP & FP	67510.00	6.28x10 ⁻⁶	*	Omni 1	TN & FN	176.00	5.88x10 ⁻²		Mega 2.5	TP & TN	425127.00	3.61x10 ⁻¹		Mega 2.5	FP & TN	4207340.50	1.33x10 ⁻²⁴	*	Mega 2.5	FP & FN	1028.00	3.79x10 ⁻²	*	Mega 2.5	TP & FN	122.00	9.81x10 ⁻²		Mega 2.5	TP & FP	100458.00	2.04x10 ⁻⁴	*	Mega 2.5	TN & FN	4859.00	8.52x10 ⁻²		H3A	TP & TN	7508487.00	4.96x10 ⁻¹⁵	*	H3A	FP & TN	23005247.00	4.71x10 ⁻¹		H3A	FP & FN	24414.50	5.48x10 ⁻¹¹	*	H3A	TP & FN	13086.00	6.00x10 ⁻⁵	*	H3A	TP & FP	258465.50	1.54x10 ⁻¹¹	*	H3A	TN & FN	710262.00	2.13x10 ⁻¹¹	*	PanAFR	TP & TN	22352477.00	8.73x10 ⁻²		PanAFR	FP & TN	31626493.00	3.89x10 ⁻¹⁵	*	PanAFR	FP & FN	72948.50	7.28x10 ⁻¹³	*	PanAFR	TP & FN	52817.00	2.45x10 ⁻⁷	*	PanAFR	TP & FP	528382.00	8.54x10 ⁻⁵	*	PanAFR	TN & FN	3362520.00	3.06x10 ⁻⁷	*	Omni2.5	TP & TN	8302216.00	4.37x10 ⁻⁹	*	Omni2.5	FP & TN	28220070.00	4.04x10 ⁻³	*	Omni2.5	FP & FN	23520.00	2.73x10 ⁻¹²	*	Omni2.5	TP & FN	10889.00	2.66x10 ⁻⁵	*	Omni2.5	TP & FP	275627.50	2.77x10 ⁻¹⁰	*	Omni2.5	TN & FN	718002.00	1.64x10 ⁻¹¹	*	Omni 5	TP & TN	29529599.50	2.18x10 ⁻⁹	*	Omni 5	FP & TN	46168680.00	3.03x10 ⁻¹⁸	*	Omni 5	FP & FN	67848.50	3.87x10 ⁻³¹	*	Omni 5	TP & FN	61958.00	5.06x10 ⁻¹⁰	*	Omni 5	TP & FP	444854.50	2.97x10 ⁻²²	*	Omni 5	TN & FN	4706588.00	1.50x10 ⁻²²	*	b.	<table><tr><th>Array</th><th>Categories</th><th>U-stat</th><th>p value</th><th>p < 5x10⁻²</th></tr><tr><td>Affy 6</td><td>TP & TN</td><td>50939.50</td><td>2.13x10⁻³</td><td>*</td></tr><tr><td>Affy 6</td><td>FP & TN</td><td>1397633.00</td><td>6.36x10⁻⁶</td><td>*</td></tr><tr><td>Affy 6</td><td>FP & FN</td><td>1643.50</td><td>3.29x10⁻²</td><td>*</td></tr><tr><td>Affy 6</td><td>TP & FN</td><td>110.00</td><td>2.52x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>TP & FP</td><td>23804.00</td><td>1.05x10⁻⁴</td><td>*</td></tr><tr><td>Affy 6</td><td>TN & FN</td><td>3583.50</td><td>5.52x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & TN</td><td>179301.50</td><td>2.04x10⁻⁶</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & TN</td><td>2499971.00</td><td>4.21x10⁻⁷</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & FN</td><td>386.00</td><td>1.26x10⁻³</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FN</td><td>26.00</td><td>1.12x10⁻³</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FP</td><td>84336.00</td><td>1.43x10⁻³</td><td>*</td></tr><tr><td>Omni 1</td><td>TN & FN</td><td>1351.50</td><td>2.48x10⁻³</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & TN</td><td>305446.50</td><td>3.41x10⁻³</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & TN</td><td>4163076.50</td><td>1.77x10⁻¹⁰</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & FN</td><td>9940.00</td><td>2.55x10⁻⁴</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FN</td><td>768.50</td><td>7.32x10⁻⁴</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FP</td><td>90475.50</td><td>1.12x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TN & FN</td><td>42563.50</td><td>3.09x10⁻³</td><td>*</td></tr><tr><td>H3A</td><td>TP & TN</td><td>7596569.00</td><td>1.79x10⁻¹</td><td></td></tr><tr><td>H3A</td><td>FP & TN</td><td>23912266.50</td><td>2.86x10⁻⁴</td><td>*</td></tr><tr><td>H3A</td><td>FP & FN</td><td>57282.00</td><td>3.66x10⁻⁵</td><td>*</td></tr><tr><td>H3A</td><td>TP & FN</td><td>19243.50</td><td>4.69x10⁻³</td><td>*</td></tr><tr><td>H3A</td><td>TP & FP</td><td>286431.50</td><td>6.19x10⁻³</td><td>*</td></tr><tr><td>H3A</td><td>TN & FN</td><td>1522311.00</td><td>5.09x10⁻⁴</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & TN</td><td>13864985.00</td><td>2.42x10⁻¹</td><td></td></tr><tr><td>PanAFR</td><td>FP & TN</td><td>38996464.50</td><td>9.97x10⁻¹²</td><td>*</td></tr><tr><td>PanAFR</td><td>FP & FN</td><td>93700.00</td><td>1.30x10⁻¹²</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FN</td><td>35405.50</td><td>6.57x10⁻⁶</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FP</td><td>397425.50</td><td>2.65x10⁻⁵</td><td>*</td></tr><tr><td>PanAFR</td><td>TN & FN</td><td>3338488.00</td><td>5.61x10⁻⁸</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & TN</td><td>8485244.00</td><td>1.95x10⁻¹</td><td></td></tr><tr><td>Omni2.5</td><td>FP & TN</td><td>27901411.00</td><td>1.81x10⁻¹¹</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & FN</td><td>60137.00</td><td>1.27x10⁻¹¹</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FN</td><td>19988.00</td><td>1.76x10⁻⁵</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FP</td><td>294137.50</td><td>4.28x10⁻⁵</td><td>*</td></tr><tr><td>Omni2.5</td><td>TN & FN</td><td>1788613.50</td><td>1.52x10⁻⁷</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & TN</td><td>26288899.00</td><td>8.98x10⁻²</td><td></td></tr><tr><td>Omni 5</td><td>FP & TN</td><td>49429313.00</td><td>3.80x10⁻²⁰</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & FN</td><td>133207.50</td><td>2.54x10⁻²²</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FN</td><td>73096.00</td><td>7.82x10⁻¹¹</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FP</td><td>479536.00</td><td>2.92x10⁻⁵</td><td>*</td></tr><tr><td>Omni 5</td><td>TN & FN</td><td>8046782.50</td><td>2.84x10⁻¹²</td><td>*</td></tr></table>	Array	Categories	U-stat	p value	p < 5x10 ⁻²	Affy 6	TP & TN	50939.50	2.13x10 ⁻³	*	Affy 6	FP & TN	1397633.00	6.36x10 ⁻⁶	*	Affy 6	FP & FN	1643.50	3.29x10 ⁻²	*	Affy 6	TP & FN	110.00	2.52x10 ⁻¹		Affy 6	TP & FP	23804.00	1.05x10 ⁻⁴	*	Affy 6	TN & FN	3583.50	5.52x10 ⁻²	*	Omni 1	TP & TN	179301.50	2.04x10 ⁻⁶	*	Omni 1	FP & TN	2499971.00	4.21x10 ⁻⁷	*	Omni 1	FP & FN	386.00	1.26x10 ⁻³	*	Omni 1	TP & FN	26.00	1.12x10 ⁻³	*	Omni 1	TP & FP	84336.00	1.43x10 ⁻³	*	Omni 1	TN & FN	1351.50	2.48x10 ⁻³	*	Mega 2.5	TP & TN	305446.50	3.41x10 ⁻³	*	Mega 2.5	FP & TN	4163076.50	1.77x10 ⁻¹⁰	*	Mega 2.5	FP & FN	9940.00	2.55x10 ⁻⁴	*	Mega 2.5	TP & FN	768.50	7.32x10 ⁻⁴	*	Mega 2.5	TP & FP	90475.50	1.12x10 ⁻¹		Mega 2.5	TN & FN	42563.50	3.09x10 ⁻³	*	H3A	TP & TN	7596569.00	1.79x10 ⁻¹		H3A	FP & TN	23912266.50	2.86x10 ⁻⁴	*	H3A	FP & FN	57282.00	3.66x10 ⁻⁵	*	H3A	TP & FN	19243.50	4.69x10 ⁻³	*	H3A	TP & FP	286431.50	6.19x10 ⁻³	*	H3A	TN & FN	1522311.00	5.09x10 ⁻⁴	*	PanAFR	TP & TN	13864985.00	2.42x10 ⁻¹		PanAFR	FP & TN	38996464.50	9.97x10 ⁻¹²	*	PanAFR	FP & FN	93700.00	1.30x10 ⁻¹²	*	PanAFR	TP & FN	35405.50	6.57x10 ⁻⁶	*	PanAFR	TP & FP	397425.50	2.65x10 ⁻⁵	*	PanAFR	TN & FN	3338488.00	5.61x10 ⁻⁸	*	Omni2.5	TP & TN	8485244.00	1.95x10 ⁻¹		Omni2.5	FP & TN	27901411.00	1.81x10 ⁻¹¹	*	Omni2.5	FP & FN	60137.00	1.27x10 ⁻¹¹	*	Omni2.5	TP & FN	19988.00	1.76x10 ⁻⁵	*	Omni2.5	TP & FP	294137.50	4.28x10 ⁻⁵	*	Omni2.5	TN & FN	1788613.50	1.52x10 ⁻⁷	*	Omni 5	TP & TN	26288899.00	8.98x10 ⁻²		Omni 5	FP & TN	49429313.00	3.80x10 ⁻²⁰	*	Omni 5	FP & FN	133207.50	2.54x10 ⁻²²	*	Omni 5	TP & FN	73096.00	7.82x10 ⁻¹¹	*	Omni 5	TP & FP	479536.00	2.92x10 ⁻⁵	*	Omni 5	TN & FN	8046782.50	2.84x10 ⁻¹²	*	c.	<table><tr><th>Array</th><th>Categories</th><th>U-stat</th><th>p value</th><th>p < 5x10⁻²</th></tr><tr><td>Affy 6</td><td>TP & TN</td><td>31838.50</td><td>1.77x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>FP & TN</td><td>1288147.00</td><td>3.84x10⁻⁴</td><td>*</td></tr><tr><td>Affy 6</td><td>FP & FN</td><td>219.50</td><td>1.39x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>TP & FN</td><td>9.00</td><td>2.69x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>TP & FP</td><td>14685.00</td><td>5.84x10⁻²</td><td></td></tr><tr><td>Affy 6</td><td>TN & FN</td><td>545.00</td><td>1.76x10⁻¹</td><td></td></tr><tr><td>Omni 1</td><td>TP & TN</td><td>90263.00</td><td>4.20x10⁻⁴</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & TN</td><td>2346731.50</td><td>8.19x10⁻¹⁹</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & FN</td><td>98.00</td><td>1.09x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FN</td><td>2.00</td><td>1.05x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FP</td><td>49764.50</td><td>2.30x10⁻¹</td><td>*</td></tr><tr><td>Omni 1</td><td>TN & FN</td><td>370.50</td><td>1.42x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & TN</td><td>320339.00</td><td>6.24x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & TN</td><td>3831553.50</td><td>7.68x10⁻³²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & FN</td><td>2032.00</td><td>1.58x10⁻³</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FN</td><td>248.00</td><td>3.33x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FP</td><td>73697.00</td><td>1.18x10⁻⁶</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TN & FN</td><td>9765.00</td><td>9.07x10⁻³</td><td>*</td></tr><tr><td>H3A</td><td>TP & TN</td><td>5329330.00</td><td>1.51x10⁻¹⁷</td><td>*</td></tr><tr><td>H3A</td><td>FP & TN</td><td>21688620.50</td><td>4.18x10⁻¹</td><td></td></tr><tr><td>H3A</td><td>FP & FN</td><td>18551.00</td><td>9.82x10⁻¹⁰</td><td>*</td></tr><tr><td>H3A</td><td>TP & FN</td><td>8292.00</td><td>4.73x10⁻⁴</td><td>*</td></tr><tr><td>H3A</td><td>TP & FP</td><td>192126.00</td><td>1.78x10⁻¹⁴</td><td>*</td></tr><tr><td>H3A</td><td>TN & FN</td><td>518778.00</td><td>8.94x10⁻¹⁰</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & TN</td><td>18284557.00</td><td>8.56x10⁻²</td><td></td></tr><tr><td>PanAFR</td><td>FP & TN</td><td>29830679.00</td><td>5.13x10⁻¹³</td><td>*</td></tr><tr><td>PanAFR</td><td>FP & FN</td><td>58893.50</td><td>5.42x10⁻¹²</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FN</td><td>36855.50</td><td>1.43x10⁻⁷</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FP</td><td>459349.00</td><td>7.20x10⁻⁴</td><td>*</td></tr><tr><td>PanAFR</td><td>TN & FN</td><td>2552957.00</td><td>1.60x10⁻⁷</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & TN</td><td>6071219.50</td><td>1.08x10⁻⁶</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & TN</td><td>26595609.50</td><td>1.69x10⁻⁵</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & FN</td><td>18914.50</td><td>2.93x10⁻⁸</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FN</td><td>6200.00</td><td>5.38x10⁻⁴</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FP</td><td>211953.00</td><td>1.36x10⁻⁹</td><td>*</td></tr><tr><td>Omni2.5</td><td>TN & FN</td><td>543436.00</td><td>2.52x10⁻⁷</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & TN</td><td>23862402.00</td><td>4.05x10⁻⁷</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & TN</td><td>42853564.50</td><td>2.67x10⁻²³</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & FN</td><td>50569.00</td><td>3.97x10⁻²²</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FN</td><td>38107.50</td><td>2.45x10⁻⁷</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FP</td><td>376443.00</td><td>3.81x10⁻²¹</td><td>*</td></tr><tr><td>Omni 5</td><td>TN & FN</td><td>3310571.00</td><td>8.89x10⁻¹⁵</td><td>*</td></tr></table>	Array	Categories	U-stat	p value	p < 5x10 ⁻²	Affy 6	TP & TN	31838.50	1.77x10 ⁻¹		Affy 6	FP & TN	1288147.00	3.84x10 ⁻⁴	*	Affy 6	FP & FN	219.50	1.39x10 ⁻¹		Affy 6	TP & FN	9.00	2.69x10 ⁻¹		Affy 6	TP & FP	14685.00	5.84x10 ⁻²		Affy 6	TN & FN	545.00	1.76x10 ⁻¹		Omni 1	TP & TN	90263.00	4.20x10 ⁻⁴	*	Omni 1	FP & TN	2346731.50	8.19x10 ⁻¹⁹	*	Omni 1	FP & FN	98.00	1.09x10 ⁻²	*	Omni 1	TP & FN	2.00	1.05x10 ⁻²	*	Omni 1	TP & FP	49764.50	2.30x10 ⁻¹	*	Omni 1	TN & FN	370.50	1.42x10 ⁻²	*	Mega 2.5	TP & TN	320339.00	6.24x10 ⁻²	*	Mega 2.5	FP & TN	3831553.50	7.68x10 ⁻³²	*	Mega 2.5	FP & FN	2032.00	1.58x10 ⁻³	*	Mega 2.5	TP & FN	248.00	3.33x10 ⁻²	*	Mega 2.5	TP & FP	73697.00	1.18x10 ⁻⁶	*	Mega 2.5	TN & FN	9765.00	9.07x10 ⁻³	*	H3A	TP & TN	5329330.00	1.51x10 ⁻¹⁷	*	H3A	FP & TN	21688620.50	4.18x10 ⁻¹		H3A	FP & FN	18551.00	9.82x10 ⁻¹⁰	*	H3A	TP & FN	8292.00	4.73x10 ⁻⁴	*	H3A	TP & FP	192126.00	1.78x10 ⁻¹⁴	*	H3A	TN & FN	518778.00	8.94x10 ⁻¹⁰	*	PanAFR	TP & TN	18284557.00	8.56x10 ⁻²		PanAFR	FP & TN	29830679.00	5.13x10 ⁻¹³	*	PanAFR	FP & FN	58893.50	5.42x10 ⁻¹²	*	PanAFR	TP & FN	36855.50	1.43x10 ⁻⁷	*	PanAFR	TP & FP	459349.00	7.20x10 ⁻⁴	*	PanAFR	TN & FN	2552957.00	1.60x10 ⁻⁷	*	Omni2.5	TP & TN	6071219.50	1.08x10 ⁻⁶	*	Omni2.5	FP & TN	26595609.50	1.69x10 ⁻⁵	*	Omni2.5	FP & FN	18914.50	2.93x10 ⁻⁸	*	Omni2.5	TP & FN	6200.00	5.38x10 ⁻⁴	*	Omni2.5	TP & FP	211953.00	1.36x10 ⁻⁹	*	Omni2.5	TN & FN	543436.00	2.52x10 ⁻⁷	*	Omni 5	TP & TN	23862402.00	4.05x10 ⁻⁷	*	Omni 5	FP & TN	42853564.50	2.67x10 ⁻²³	*	Omni 5	FP & FN	50569.00	3.97x10 ⁻²²	*	Omni 5	TP & FN	38107.50	2.45x10 ⁻⁷	*	Omni 5	TP & FP	376443.00	3.81x10 ⁻²¹	*	Omni 5	TN & FN	3310571.00	8.89x10 ⁻¹⁵	*
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Omni 1	TP & TN	119830.00	3.30x10 ⁻¹⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 1	FP & TN	2472305.00	1.36x10 ⁻¹⁹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni 1	TP & FP	67510.00	6.28x10 ⁻⁶	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 1	TN & FN	176.00	5.88x10 ⁻²																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Mega 2.5	TP & TN	425127.00	3.61x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Mega 2.5	FP & TN	4207340.50	1.33x10 ⁻²⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	FP & FN	1028.00	3.79x10 ⁻²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TP & FN	122.00	9.81x10 ⁻²																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Mega 2.5	TP & FP	100458.00	2.04x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TN & FN	4859.00	8.52x10 ⁻²																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
H3A	TP & TN	7508487.00	4.96x10 ⁻¹⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	FP & TN	23005247.00	4.71x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
H3A	FP & FN	24414.50	5.48x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & FN	13086.00	6.00x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & FP	258465.50	1.54x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TN & FN	710262.00	2.13x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TP & TN	22352477.00	8.73x10 ⁻²																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
PanAFR	FP & TN	31626493.00	3.89x10 ⁻¹⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	FP & FN	72948.50	7.28x10 ⁻¹³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TP & FN	52817.00	2.45x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TP & FP	528382.00	8.54x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TN & FN	3362520.00	3.06x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TP & TN	8302216.00	4.37x10 ⁻⁹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni2.5	TP & FP	275627.50	2.77x10 ⁻¹⁰	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TN & FN	718002.00	1.64x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & TN	29529599.50	2.18x10 ⁻⁹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	FP & TN	46168680.00	3.03x10 ⁻¹⁸	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni 5	TP & FN	61958.00	5.06x10 ⁻¹⁰	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Affy 6	FP & TN	1397633.00	6.36x10 ⁻⁶	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni 1	FP & TN	2499971.00	4.21x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni 1	TP & FP	84336.00	1.43x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 1	TN & FN	1351.50	2.48x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TP & TN	305446.50	3.41x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	FP & TN	4163076.50	1.77x10 ⁻¹⁰	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	FP & FN	9940.00	2.55x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TP & FN	768.50	7.32x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TP & FP	90475.50	1.12x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Mega 2.5	TN & FN	42563.50	3.09x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & TN	7596569.00	1.79x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
H3A	FP & TN	23912266.50	2.86x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	FP & FN	57282.00	3.66x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & FN	19243.50	4.69x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & FP	286431.50	6.19x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TN & FN	1522311.00	5.09x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TP & TN	13864985.00	2.42x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
PanAFR	FP & TN	38996464.50	9.97x10 ⁻¹²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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PanAFR	TP & FN	35405.50	6.57x10 ⁻⁶	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TP & FP	397425.50	2.65x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TN & FN	3338488.00	5.61x10 ⁻⁸	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TP & TN	8485244.00	1.95x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Omni2.5	FP & TN	27901411.00	1.81x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	FP & FN	60137.00	1.27x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TP & FN	19988.00	1.76x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TP & FP	294137.50	4.28x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TN & FN	1788613.50	1.52x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & TN	26288899.00	8.98x10 ⁻²																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Omni 5	FP & TN	49429313.00	3.80x10 ⁻²⁰	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	FP & FN	133207.50	2.54x10 ⁻²²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & FN	73096.00	7.82x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & FP	479536.00	2.92x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TN & FN	8046782.50	2.84x10 ⁻¹²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Affy 6	TP & TN	31838.50	1.77x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Affy 6	FP & TN	1288147.00	3.84x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Affy 6	FP & FN	219.50	1.39x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Affy 6	TP & FP	14685.00	5.84x10 ⁻²																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Omni 1	TP & TN	90263.00	4.20x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 1	FP & TN	2346731.50	8.19x10 ⁻¹⁹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni 1	TP & FP	49764.50	2.30x10 ⁻¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 1	TN & FN	370.50	1.42x10 ⁻²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TP & TN	320339.00	6.24x10 ⁻²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	FP & TN	3831553.50	7.68x10 ⁻³²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	FP & FN	2032.00	1.58x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TP & FN	248.00	3.33x10 ⁻²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TP & FP	73697.00	1.18x10 ⁻⁶	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Mega 2.5	TN & FN	9765.00	9.07x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & TN	5329330.00	1.51x10 ⁻¹⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	FP & TN	21688620.50	4.18x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
H3A	FP & FN	18551.00	9.82x10 ⁻¹⁰	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & FN	8292.00	4.73x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TP & FP	192126.00	1.78x10 ⁻¹⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
H3A	TN & FN	518778.00	8.94x10 ⁻¹⁰	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TP & TN	18284557.00	8.56x10 ⁻²																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
PanAFR	FP & TN	29830679.00	5.13x10 ⁻¹³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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PanAFR	TP & FN	36855.50	1.43x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TP & FP	459349.00	7.20x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
PanAFR	TN & FN	2552957.00	1.60x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TP & TN	6071219.50	1.08x10 ⁻⁶	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	FP & TN	26595609.50	1.69x10 ⁻⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	FP & FN	18914.50	2.93x10 ⁻⁸	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TP & FN	6200.00	5.38x10 ⁻⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TP & FP	211953.00	1.36x10 ⁻⁹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni2.5	TN & FN	543436.00	2.52x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & TN	23862402.00	4.05x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	FP & TN	42853564.50	2.67x10 ⁻²³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	FP & FN	50569.00	3.97x10 ⁻²²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & FN	38107.50	2.45x10 ⁻⁷	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & FP	376443.00	3.81x10 ⁻²¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TN & FN	3310571.00	8.89x10 ⁻¹⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

- a. XP-EHH; Baganda and Ethiopia
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- c. XP-EHH; Ethiopia and Zulu

Appendix 10.4.

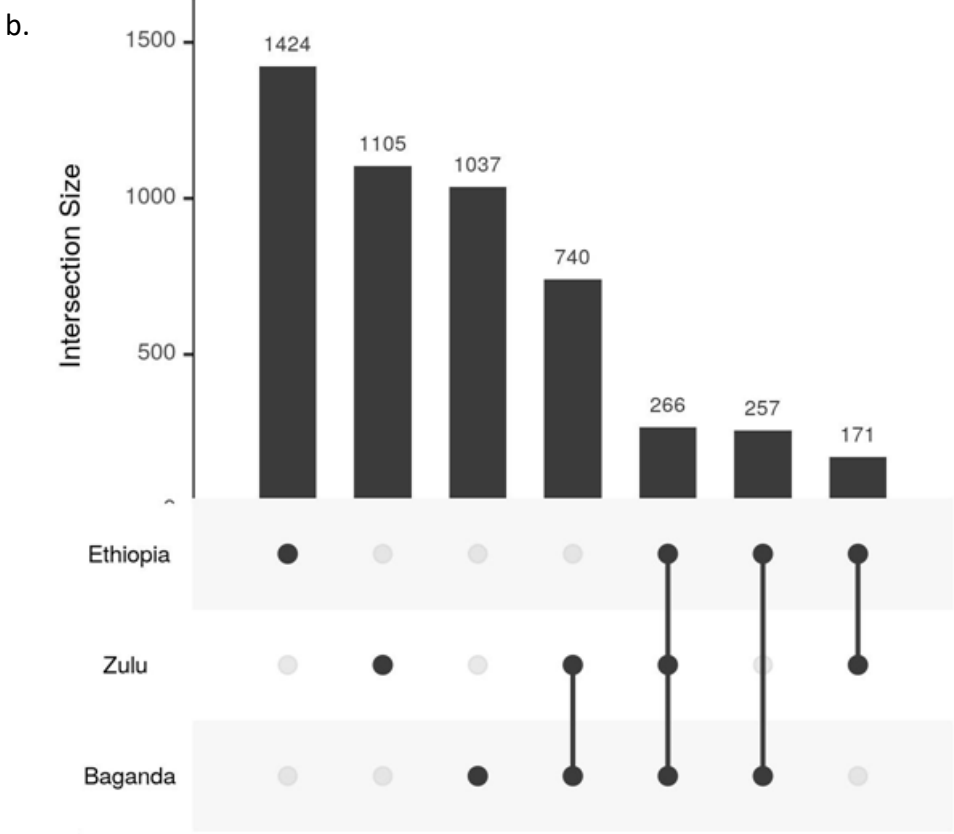
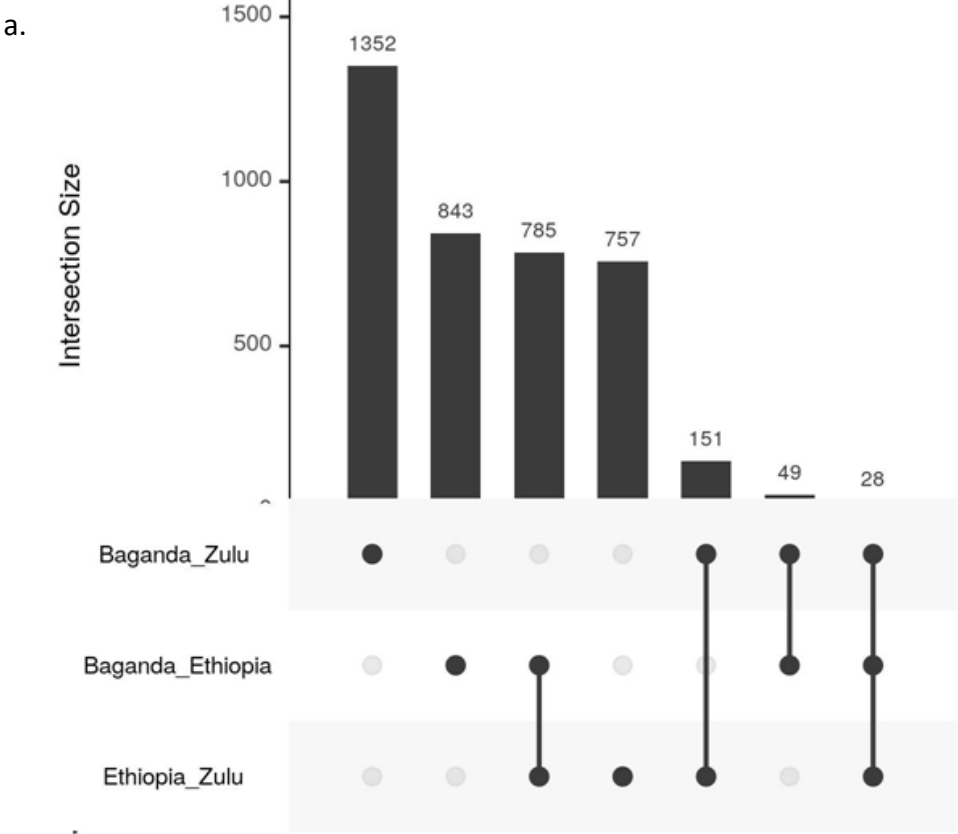
a.	<table><tr><th>Array</th><th>Categories</th><th>U-stat</th><th>p value</th><th>p < 5x10⁻²</th></tr><tr><td>Affy 6</td><td>TP & TN</td><td>16062.50</td><td>3.73x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>FP & TN</td><td>118661.50</td><td>4.07x10⁻³</td><td>*</td></tr><tr><td>Affy 6</td><td>FP & FN</td><td>18.50</td><td>3.42x10⁻³</td><td>*</td></tr><tr><td>Affy 6</td><td>TP & FN</td><td>4.00</td><td>5.49x10⁻²</td><td>*</td></tr><tr><td>Affy 6</td><td>TP & FP</td><td>108.00</td><td>1.13x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>TN & FN</td><td>3578.50</td><td>8.33x10⁻³</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & TN</td><td>24712.00</td><td>3.20x10⁻⁵</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & TN</td><td>94062.00</td><td>4.42x10⁻¹³</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & FN</td><td>24.50</td><td>4.75x10⁻³</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FN</td><td>5.00</td><td>6.12x10⁻³</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FP</td><td>451.50</td><td>4.79x10⁻¹</td><td></td></tr><tr><td>Omni 1</td><td>TN & FN</td><td>13251.50</td><td>3.72x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TP & TN</td><td>49950.50</td><td>1.03x10⁻⁴</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & TN</td><td>266141.00</td><td>5.61x10⁻²⁶</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & FN</td><td>567.50</td><td>3.71x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FN</td><td>104.50</td><td>1.98x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TP & FP</td><td>779.00</td><td>1.87x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TN & FN</td><td>61515.00</td><td>1.34x10⁻²</td><td>*</td></tr><tr><td>H3A</td><td>TP & TN</td><td>858461.50</td><td>2.18x10⁻⁴</td><td>*</td></tr><tr><td>H3A</td><td>FP & TN</td><td>7697508.00</td><td>2.34x10⁻⁴⁶</td><td>*</td></tr><tr><td>H3A</td><td>FP & FN</td><td>1882.50</td><td>6.40x10⁻⁷</td><td>*</td></tr><tr><td>H3A</td><td>TP & FN</td><td>229.00</td><td>2.29x10⁻⁴</td><td>*</td></tr><tr><td>H3A</td><td>TP & FP</td><td>10495.50</td><td>2.36x10⁻¹</td><td></td></tr><tr><td>H3A</td><td>TN & FN</td><td>329601.00</td><td>8.52x10⁻⁴</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & TN</td><td>1191482.00</td><td>2.08x10⁻³</td><td>*</td></tr><tr><td>PanAFR</td><td>FP & TN</td><td>23518272.00</td><td>1.45x10⁻²</td><td>*</td></tr><tr><td>PanAFR</td><td>FP & FN</td><td>7373.00</td><td>8.58x10⁻¹²</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FN</td><td>778.50</td><td>7.50x10⁻³</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FP</td><td>10501.50</td><td>3.71x10⁻⁴</td><td>*</td></tr><tr><td>PanAFR</td><td>TN & FN</td><td>870201.50</td><td>1.17x10⁻¹⁰</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & TN</td><td>1231780.00</td><td>6.02x10⁻²</td><td></td></tr><tr><td>Omni2.5</td><td>FP & TN</td><td>12137025.50</td><td>2.92x10⁻¹⁷</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & FN</td><td>3752.00</td><td>4.56x10⁻⁶</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FN</td><td>435.50</td><td>4.06x10⁻³</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FP</td><td>12455.00</td><td>2.96x10⁻¹</td><td></td></tr><tr><td>Omni2.5</td><td>TN & FN</td><td>522227.50</td><td>6.07x10⁻⁴</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & TN</td><td>5459326.50</td><td>5.77x10⁻¹⁰</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & TN</td><td>26351963.00</td><td>1.40x10⁻¹⁰⁶</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & FN</td><td>24006.50</td><td>1.55x10⁻³¹</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FN</td><td>5207.00</td><td>1.56x10⁻¹³</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FP</td><td>59541.50</td><td>2.20x10⁻²</td><td>*</td></tr><tr><td>Omni 5</td><td>TN & FN</td><td>5041047.50</td><td>8.35x10⁻¹⁰</td><td>*</td></tr></table>	Array	Categories	U-stat	p value	p < 5x10 ⁻²	Affy 6	TP & TN	16062.50	3.73x10 ⁻¹		Affy 6	FP & TN	118661.50	4.07x10 ⁻³	*	Affy 6	FP & FN	18.50	3.42x10 ⁻³	*	Affy 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TN	1231780.00	6.02x10 ⁻²		Omni2.5	FP & TN	12137025.50	2.92x10 ⁻¹⁷	*	Omni2.5	FP & FN	3752.00	4.56x10 ⁻⁶	*	Omni2.5	TP & FN	435.50	4.06x10 ⁻³	*	Omni2.5	TP & FP	12455.00	2.96x10 ⁻¹		Omni2.5	TN & FN	522227.50	6.07x10 ⁻⁴	*	Omni 5	TP & TN	5459326.50	5.77x10 ⁻¹⁰	*	Omni 5	FP & TN	26351963.00	1.40x10 ⁻¹⁰⁶	*	Omni 5	FP & FN	24006.50	1.55x10 ⁻³¹	*	Omni 5	TP & FN	5207.00	1.56x10 ⁻¹³	*	Omni 5	TP & FP	59541.50	2.20x10 ⁻²	*	Omni 5	TN & FN	5041047.50	8.35x10 ⁻¹⁰	*	b.	<table><tr><th>Array</th><th>Categories</th><th>U-stat</th><th>p value</th><th>p < 5x10⁻²</th></tr><tr><td>Affy 6</td><td>TP & TN</td><td>5316.00</td><td>4.22x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>FP & TN</td><td>159955.50</td><td>4.40x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>FP & FN</td><td>9.50</td><td>2.50x10⁻²</td><td>*</td></tr><tr><td>Affy 6</td><td>TP & FN</td><td>0.00</td><td>1.23x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>TP & FP</td><td>53.50</td><td>4.66x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>TN & FN</td><td>1219.50</td><td>2.67x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & TN</td><td>16963.50</td><td>2.30x10⁻⁶</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & TN</td><td>69980.00</td><td>5.95x10⁻¹⁸</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & FN</td><td>25.00</td><td>2.09x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FN</td><td>8.00</td><td>4.85x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FP</td><td>394.50</td><td>3.26x10⁻¹</td><td></td></tr><tr><td>Omni 1</td><td>TN & FN</td><td>9445.50</td><td>3.60x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TP & TN</td><td>79582.50</td><td>2.32x10⁻⁷</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & TN</td><td>184382.50</td><td>3.42x10⁻¹³</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & FN</td><td>105.50</td><td>2.10x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FN</td><td>47.00</td><td>2.61x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FP</td><td>1107.50</td><td>4.21x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TN & FN</td><td>29413.50</td><td>4.25x10⁻¹</td><td></td></tr><tr><td>H3A</td><td>TP & TN</td><td>763547.50</td><td>2.99x10⁻²</td><td>*</td></tr><tr><td>H3A</td><td>FP & TN</td><td>8462488.50</td><td>1.59x10⁻¹</td><td></td></tr><tr><td>H3A</td><td>FP & FN</td><td>993.00</td><td>2.76x10⁻⁴</td><td>*</td></tr><tr><td>H3A</td><td>TP & FN</td><td>128.00</td><td>5.09x10⁻³</td><td>*</td></tr><tr><td>H3A</td><td>TP & FP</td><td>6921.00</td><td>3.18x10⁻²</td><td>*</td></tr><tr><td>H3A</td><td>TN & FN</td><td>89391.00</td><td>3.85x10⁻⁵</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & TN</td><td>1077839.00</td><td>4.39x10⁻³</td><td>*</td></tr><tr><td>PanAFR</td><td>FP & TN</td><td>13132652.50</td><td>4.60x10⁻¹</td><td></td></tr><tr><td>PanAFR</td><td>FP & FN</td><td>3594.00</td><td>1.33x10⁻¹⁰</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FN</td><td>521.50</td><td>1.05x10⁻⁴</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FP</td><td>9870.50</td><td>6.40x10⁻³</td><td>*</td></tr><tr><td>PanAFR</td><td>TN & FN</td><td>400533.50</td><td>4.64x10⁻¹¹</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & TN</td><td>1240523.00</td><td>9.97x10⁻²</td><td></td></tr><tr><td>Omni2.5</td><td>FP & TN</td><td>9499951.50</td><td>2.35x10⁻¹³</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & FN</td><td>1298.00</td><td>5.08x10⁻⁶</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FN</td><td>265.50</td><td>1.01x10⁻²</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FP</td><td>9294.50</td><td>1.08x10⁻³</td><td>*</td></tr><tr><td>Omni2.5</td><td>TN & FN</td><td>188127.00</td><td>9.23x10⁻⁵</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & TN</td><td>8956119.00</td><td>2.29x10⁻³</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & TN</td><td>32133379.00</td><td>7.37x10⁻⁵⁶</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & FN</td><td>23260.00</td><td>4.66x10⁻³²</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FN</td><td>6839.00</td><td>1.86x10⁻¹⁴</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FP</td><td>68931.00</td><td>4.10x10⁻⁵</td><td>*</td></tr><tr><td>Omni 5</td><td>TN & FN</td><td>4299291.00</td><td>1.17x10⁻¹⁷</td><td>*</td></tr></table>	Array	Categories	U-stat	p value	p < 5x10 ⁻²	Affy 6	TP & TN	5316.00	4.22x10 ⁻¹		Affy 6	FP & TN	159955.50	4.40x10 ⁻¹		Affy 6	FP & FN	9.50	2.50x10 ⁻²	*	Affy 6	TP & FN	0.00	1.23x10 ⁻¹		Affy 6	TP & FP	53.50	4.66x10 ⁻¹		Affy 6	TN & FN	1219.50	2.67x10 ⁻²	*	Omni 1	TP & TN	16963.50	2.30x10 ⁻⁶	*	Omni 1	FP & TN	69980.00	5.95x10 ⁻¹⁸	*	Omni 1	FP & FN	25.00	2.09x10 ⁻²	*	Omni 1	TP & FN	8.00	4.85x10 ⁻²	*	Omni 1	TP & FP	394.50	3.26x10 ⁻¹		Omni 1	TN & FN	9445.50	3.60x10 ⁻¹		Mega 2.5	TP & TN	79582.50	2.32x10 ⁻⁷	*	Mega 2.5	FP & TN	184382.50	3.42x10 ⁻¹³	*	Mega 2.5	FP & FN	105.50	2.10x10 ⁻²	*	Mega 2.5	TP & FN	47.00	2.61x10 ⁻²	*	Mega 2.5	TP & FP	1107.50	4.21x10 ⁻¹		Mega 2.5	TN & FN	29413.50	4.25x10 ⁻¹		H3A	TP & TN	763547.50	2.99x10 ⁻²	*	H3A	FP & TN	8462488.50	1.59x10 ⁻¹		H3A	FP & FN	993.00	2.76x10 ⁻⁴	*	H3A	TP & FN	128.00	5.09x10 ⁻³	*	H3A	TP & FP	6921.00	3.18x10 ⁻²	*	H3A	TN & FN	89391.00	3.85x10 ⁻⁵	*	PanAFR	TP & TN	1077839.00	4.39x10 ⁻³	*	PanAFR	FP & TN	13132652.50	4.60x10 ⁻¹		PanAFR	FP & FN	3594.00	1.33x10 ⁻¹⁰	*	PanAFR	TP & FN	521.50	1.05x10 ⁻⁴	*	PanAFR	TP & FP	9870.50	6.40x10 ⁻³	*	PanAFR	TN & FN	400533.50	4.64x10 ⁻¹¹	*	Omni2.5	TP & TN	1240523.00	9.97x10 ⁻²		Omni2.5	FP & TN	9499951.50	2.35x10 ⁻¹³	*	Omni2.5	FP & FN	1298.00	5.08x10 ⁻⁶	*	Omni2.5	TP & FN	265.50	1.01x10 ⁻²	*	Omni2.5	TP & FP	9294.50	1.08x10 ⁻³	*	Omni2.5	TN & FN	188127.00	9.23x10 ⁻⁵	*	Omni 5	TP & TN	8956119.00	2.29x10 ⁻³	*	Omni 5	FP & TN	32133379.00	7.37x10 ⁻⁵⁶	*	Omni 5	FP & FN	23260.00	4.66x10 ⁻³²	*	Omni 5	TP & FN	6839.00	1.86x10 ⁻¹⁴	*	Omni 5	TP & FP	68931.00	4.10x10 ⁻⁵	*	Omni 5	TN & FN	4299291.00	1.17x10 ⁻¹⁷	*	c.	<table><tr><th>Array</th><th>Categories</th><th>U-stat</th><th>p value</th><th>p < 5x10⁻²</th></tr><tr><td>Affy 6</td><td>TP & TN</td><td>14524.50</td><td>2.95x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>FP & TN</td><td>104321.50</td><td>1.26x10⁻³</td><td>*</td></tr><tr><td>Affy 6</td><td>FP & FN</td><td>10.50</td><td>6.88x10⁻³</td><td>*</td></tr><tr><td>Affy 6</td><td>TP & FN</td><td>1.00</td><td>2.64x10⁻²</td><td>*</td></tr><tr><td>Affy 6</td><td>TP & FP</td><td>122.50</td><td>2.37x10⁻¹</td><td></td></tr><tr><td>Affy 6</td><td>TN & FN</td><td>2219.50</td><td>1.39x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & TN</td><td>46929.00</td><td>6.68x10⁻⁴</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & TN</td><td>88080.50</td><td>1.54x10⁻⁹</td><td>*</td></tr><tr><td>Omni 1</td><td>FP & FN</td><td>49.00</td><td>1.47x10⁻²</td><td>*</td></tr><tr><td>Omni 1</td><td>TP & FN</td><td>29.00</td><td>5.57x10⁻²</td><td></td></tr><tr><td>Omni 1</td><td>TP & FP</td><td>414.00</td><td>6.08x10⁻²</td><td></td></tr><tr><td>Omni 1</td><td>TN & FN</td><td>15451.00</td><td>3.15x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TP & TN</td><td>68700.50</td><td>9.70x10⁻³</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & TN</td><td>263254.00</td><td>1.02x10⁻¹⁷</td><td>*</td></tr><tr><td>Mega 2.5</td><td>FP & FN</td><td>798.00</td><td>2.29x10⁻²</td><td>*</td></tr><tr><td>Mega 2.5</td><td>TP & FN</td><td>195.50</td><td>3.86x10⁻¹</td><td></td></tr><tr><td>Mega 2.5</td><td>TP & FP</td><td>663.00</td><td>6.65x10⁻²</td><td></td></tr><tr><td>Mega 2.5</td><td>TN & FN</td><td>93430.00</td><td>1.14x10⁻²</td><td>*</td></tr><tr><td>H3A</td><td>TP & TN</td><td>648420.00</td><td>4.63x10⁻¹⁸</td><td>*</td></tr><tr><td>H3A</td><td>FP & TN</td><td>7762979.00</td><td>3.87x10⁻³⁰</td><td>*</td></tr><tr><td>H3A</td><td>FP & FN</td><td>2291.50</td><td>1.03x10⁻⁷</td><td>*</td></tr><tr><td>H3A</td><td>TP & FN</td><td>190.00</td><td>3.55x10⁻⁹</td><td>*</td></tr><tr><td>H3A</td><td>TP & FP</td><td>9935.00</td><td>9.19x10⁻⁶</td><td>*</td></tr><tr><td>H3A</td><td>TN & FN</td><td>374419.00</td><td>7.64x10⁻⁵</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & TN</td><td>889455.00</td><td>3.87x10⁻²</td><td>*</td></tr><tr><td>PanAFR</td><td>FP & TN</td><td>23345949.00</td><td>1.71x10⁻¹</td><td></td></tr><tr><td>PanAFR</td><td>FP & FN</td><td>10200.00</td><td>1.94x10⁻¹⁰</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FN</td><td>578.00</td><td>2.16x10⁻³</td><td>*</td></tr><tr><td>PanAFR</td><td>TP & FP</td><td>8754.50</td><td>5.65x10⁻²</td><td>*</td></tr><tr><td>PanAFR</td><td>TN & FN</td><td>1039499.50</td><td>1.70x10⁻¹¹</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & TN</td><td>1393789.00</td><td>1.20x10⁻¹</td><td></td></tr><tr><td>Omni2.5</td><td>FP & TN</td><td>11311854.50</td><td>4.84x10⁻¹¹</td><td>*</td></tr><tr><td>Omni2.5</td><td>FP & FN</td><td>2522.50</td><td>1.33x10⁻¹¹</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FN</td><td>404.00</td><td>5.10x10⁻⁶</td><td>*</td></tr><tr><td>Omni2.5</td><td>TP & FP</td><td>13125.50</td><td>2.43x10⁻¹</td><td></td></tr><tr><td>Omni2.5</td><td>TN & FN</td><td>342330.00</td><td>3.27x10⁻¹⁰</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & TN</td><td>5278623.50</td><td>9.23x10⁻²⁹</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & TN</td><td>22639088.00</td><td>1.42x10⁻⁸⁴</td><td>*</td></tr><tr><td>Omni 5</td><td>FP & FN</td><td>19380.00</td><td>7.42x10⁻³³</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FN</td><td>4592.00</td><td>3.30x10⁻²⁵</td><td>*</td></tr><tr><td>Omni 5</td><td>TP & FP</td><td>71070.00</td><td>1.81x10⁻²</td><td>*</td></tr><tr><td>Omni 5</td><td>TN & FN</td><td>4294430.00</td><td>1.75x10⁻¹²</td><td>*</td></tr></table>	Array	Categories	U-stat	p value	p < 5x10 ⁻²	Affy 6	TP & TN	14524.50	2.95x10 ⁻¹		Affy 6	FP & TN	104321.50	1.26x10 ⁻³	*	Affy 6	FP & FN	10.50	6.88x10 ⁻³	*	Affy 6	TP & FN	1.00	2.64x10 ⁻²	*	Affy 6	TP & FP	122.50	2.37x10 ⁻¹		Affy 6	TN & FN	2219.50	1.39x10 ⁻²	*	Omni 1	TP & TN	46929.00	6.68x10 ⁻⁴	*	Omni 1	FP & TN	88080.50	1.54x10 ⁻⁹	*	Omni 1	FP & FN	49.00	1.47x10 ⁻²	*	Omni 1	TP & FN	29.00	5.57x10 ⁻²		Omni 1	TP & FP	414.00	6.08x10 ⁻²		Omni 1	TN & FN	15451.00	3.15x10 ⁻¹		Mega 2.5	TP & TN	68700.50	9.70x10 ⁻³	*	Mega 2.5	FP & TN	263254.00	1.02x10 ⁻¹⁷	*	Mega 2.5	FP & FN	798.00	2.29x10 ⁻²	*	Mega 2.5	TP & FN	195.50	3.86x10 ⁻¹		Mega 2.5	TP & FP	663.00	6.65x10 ⁻²		Mega 2.5	TN & FN	93430.00	1.14x10 ⁻²	*	H3A	TP & TN	648420.00	4.63x10 ⁻¹⁸	*	H3A	FP & TN	7762979.00	3.87x10 ⁻³⁰	*	H3A	FP & FN	2291.50	1.03x10 ⁻⁷	*	H3A	TP & FN	190.00	3.55x10 ⁻⁹	*	H3A	TP & FP	9935.00	9.19x10 ⁻⁶	*	H3A	TN & FN	374419.00	7.64x10 ⁻⁵	*	PanAFR	TP & TN	889455.00	3.87x10 ⁻²	*	PanAFR	FP & TN	23345949.00	1.71x10 ⁻¹		PanAFR	FP & FN	10200.00	1.94x10 ⁻¹⁰	*	PanAFR	TP & FN	578.00	2.16x10 ⁻³	*	PanAFR	TP & FP	8754.50	5.65x10 ⁻²	*	PanAFR	TN & FN	1039499.50	1.70x10 ⁻¹¹	*	Omni2.5	TP & TN	1393789.00	1.20x10 ⁻¹		Omni2.5	FP & TN	11311854.50	4.84x10 ⁻¹¹	*	Omni2.5	FP & FN	2522.50	1.33x10 ⁻¹¹	*	Omni2.5	TP & FN	404.00	5.10x10 ⁻⁶	*	Omni2.5	TP & FP	13125.50	2.43x10 ⁻¹		Omni2.5	TN & FN	342330.00	3.27x10 ⁻¹⁰	*	Omni 5	TP & TN	5278623.50	9.23x10 ⁻²⁹	*	Omni 5	FP & TN	22639088.00	1.42x10 ⁻⁸⁴	*	Omni 5	FP & FN	19380.00	7.42x10 ⁻³³	*	Omni 5	TP & FN	4592.00	3.30x10 ⁻²⁵	*	Omni 5	TP & FP	71070.00	1.81x10 ⁻²	*	Omni 5	TN & FN	4294430.00	1.75x10 ⁻¹²	*
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Omni 1	FP & TN	94062.00	4.42x10 ⁻¹³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni 1	TN & FN	13251.50	3.72x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Mega 2.5	FP & TN	266141.00	5.61x10 ⁻²⁶	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Mega 2.5	TN & FN	61515.00	1.34x10 ⁻²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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H3A	FP & TN	7697508.00	2.34x10 ⁻⁴⁶	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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H3A	TP & FP	10495.50	2.36x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Omni 5	TP & TN	8956119.00	2.29x10 ⁻³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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PanAFR	FP & TN	23345949.00	1.71x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Omni2.5	FP & FN	2522.50	1.33x10 ⁻¹¹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Omni2.5	TP & FP	13125.50	2.43x10 ⁻¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Omni2.5	TN & FN	342330.00	3.27x10 ⁻¹⁰	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & TN	5278623.50	9.23x10 ⁻²⁹	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	FP & TN	22639088.00	1.42x10 ⁻⁸⁴	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	FP & FN	19380.00	7.42x10 ⁻³³	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & FN	4592.00	3.30x10 ⁻²⁵	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TP & FP	71070.00	1.81x10 ⁻²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Omni 5	TN & FN	4294430.00	1.75x10 ⁻¹²	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

- a. Tajima’s D; Baganda
- b. Tajima’s D; Ethiopia
- c. Tajima’s D; Zulu

Appendix 11.

a.	Population	Array	>10 SNPs	<10 SNPs	FN total	% FN <10 SNPs
	Baganda & Ethiopia	Omni 1	33	1451	1484	97.78
	Baganda & Ethiopia	Omni 2.5	196	1174	1370	85.69
	Baganda & Ethiopia	Omni 5	420	744	1164	63.92
	Baganda & Ethiopia	H3A	158	1226	1384	88.58
	Baganda & Ethiopia	Affy 6	38	1448	1486	97.44
	Baganda & Ethiopia	PanAFR	214	1153	1367	84.35
	Baganda & Ethiopia	Mega 2.5	52	1426	1478	96.48
	Baganda & Zulu	Omni 1	44	1421	1465	97.00
	Baganda & Zulu	Omni 2.5	184	1143	1327	86.13
	Baganda & Zulu	Omni 5	353	786	1139	69.01
	Baganda & Zulu	H3A	149	1199	1348	88.95
	Baganda & Zulu	Affy 6	31	1437	1468	97.89
	Baganda & Zulu	PanAFR	253	1065	1318	80.80
	Baganda & Zulu	Mega 2.5	40	1420	1460	97.26
b.	Population	Array	>10 SNPs	<10 SNPs	FN total	% FN <10 SNPs
	Baganda	Omni 1	23	1908	1931	98.81
	Baganda	Omni 2.5	276	1365	1641	83.18
	Baganda	Omni 5	452	1112	1564	71.10
	Baganda	H3A	314	1297	1611	80.51
	Baganda	Affy 6	9	1928	1937	99.54
	Baganda	PanAFR	320	1242	1562	79.51
	Baganda	Mega 2.5	15	1874	1889	99.21
	Ethiopia	Omni 1	5	1789	1794	99.72
	Ethiopia	Omni 2.5	75	1383	1458	94.86
	Ethiopia	Omni 5	145	1127	1272	88.60
	Ethiopia	H3A	79	1330	1409	94.39
	Ethiopia	Affy 6	0	1810	1810	100.00
	Ethiopia	PanAFR	73	1311	1384	94.73
	Ethiopia	Mega 2.5	1	1757	1758	99.94
c.	Population	Array	>10 SNPs	<10 SNPs	FN total	% FN <10 SNPs
	Baganda & Ethiopia	Omni 1	0	1244	1244	100.00
	Baganda & Ethiopia	Omni 2.5	64	819	883	92.75
	Baganda & Ethiopia	Omni 5	178	585	763	76.67
	Baganda & Ethiopia	H3A	65	794	859	92.43
	Baganda & Ethiopia	Affy 6	0	1229	1229	100.00
	Baganda & Ethiopia	PanAFR	146	620	766	80.94
	Baganda & Ethiopia	Mega 2.5	2	1159	1161	99.83
	Baganda & Zulu	Omni 1	3	1412	1415	99.79
	Baganda & Zulu	Omni 2.5	119	994	1113	89.31
	Baganda & Zulu	Omni 5	257	754	1011	74.58
	Baganda & Zulu	H3A	103	1000	1103	90.66
	Baganda & Zulu	Affy 6	4	1406	1410	99.72
	Baganda & Zulu	PanAFR	160	897	1057	84.86
	Baganda & Zulu	Mega 2.5	21	1355	1376	98.47
d.	Population	Array	>10 SNPs	<10 SNPs	FN total	% FN <10 SNPs
	Baganda	Omni 1	3	2054	2051	99.85
	Baganda	Omni 2.5	27	2019	1992	98.66
	Baganda	Omni 5	137	1938	1801	92.93
	Baganda	H3A	20	2031	2011	99.02
	Baganda	Affy 6	3	2057	2054	99.85
	Baganda	PanAFR	48	2021	1973	97.62
	Baganda	Mega 2.5	11	2047	2036	99.46
	Ethiopia	Omni 1	2	1925	1923	99.90
	Ethiopia	Omni 2.5	15	1884	1869	99.20
	Ethiopia	Omni 5	135	1755	1620	92.31
	Ethiopia	H3A	11	1894	1883	99.42
	Ethiopia	Affy 6	1	1931	1930	99.95
	Ethiopia	PanAFR	36	1883	1847	98.09
	Ethiopia	Mega 2.5	5	1917	1912	99.74

Appendix 12.



a. F_{ST}
b. Tajima's D

Appendix 13.1

Gene name	Gene description	Phenotype description
PER3	Period circadian regulator 3	Familial Advanced Sleep-phase syndrome
CAMTA1	Calmodulin binding transcription activator 1	Epithelioid hemangioendothelioma
		Non-progressive cerebellar ataxia with intellectual disability
RGR	Retinal G protein coupled receptor	Retinitis pigmentosa
CDHR1	Cadherin related family member 1	Cone rod dystrophy
		Retinitis pigmentosa
SYT1	Synaptotagmin 1	Intellectual disability
NRXN3	Neurexin 3	Autism
KYNU	Kynureninase	Encephalopathy due to hydroxykynureninuria
		Hydroxykynureninuria
		Vertebral cardiac renal and limb defects syndrome 2
DYRK1A	Dual specificity tyrosine phosphorylation regulated kinase 1A	Mental retardation autosomal dominant type 7
		DYRK1A-related intellectual disability syndrome
		Intellectual disability syndrome due to a DYRK1A point mutation
CYP2U1	Cytochrome P450 family 2 subfamily U member 1	Autosomal recessive spastic paraplegia type 56
HADH	Hydroxyacyl-CoA dehydrogenase	Hyperinsulinism due to short chain 3-hydroxylacyl-CoA dehydrogenase deficiency
		Hydroacyl-CoA dehydrogenase deficiency
		Familial Hyperinsulemic Hypoglycemia 4
CNTNAP2	Contactin associated protein like 2	Cortical dysplasia-focal epilepsy syndrome
		Pitt-Hopkins-like syndrome
		Susceptibility to Autism

Appendix 14.1

Gene name	Gene description	Phenotype description
DGAT2	Diacylglycerol O-acyltransferase 2	Autosomal dominant Charcot-Marie-Tooth disease type 2
SERPINH1	Serpín family H member 1	Osteogenesis imperfecta type 3/ X
		Preterm premature rupture of cell membranes
NRXN3	Neurexin 3	Autism
CACNA1H	Calcium voltage-gated channel subunit alpha1 H	Childhood absence epilepsy
		Hyperaldosteronism familial type IV
CFAP52	Cilia and flagella associated protein 52	Situs inversus totalis
PDE6B	Phosphodiesterase 6B	Congenital stationary night blindness
		Retinitis pigmentosa
GRID2	Glutamate ionotropic receptor delta type subunit 2	Autosomal recessive congenital cerebellar ataxia
DNAJB6	DnaJ heat shock protein family (Hsp40) member B6	Autosomal dominant limb-girdle muscular dystrophy type 1D

Appendix 13.3

Gene name	Gene description	Phenotype description
PER3	Period circadian regulator 3	Familial advanced sleep-phase syndrome
CAMTA1	Calmodulin binding transcription activator 1	Epithelioid hemangioendothelioma
		Non-progressive cerebellar ataxia with intellectual disability
STOX1	Storkhead box 1	Preeclampsia
HK1	Hexokinase 1	Charcot-Marie-Tooth disease type 4G
		Nonspherocytic hemolytic anemia due to hexokinase deficiency
		Neuropathy hereditary, motor and sensory, russe type
		Retinitis pigmentosa 79
KIF1BP	KIF1 binding protein	Goldberg-Shprintzen megacolon syndrome
MYPN	Myopalladin	Childhood-Onset Slowly Progressive Nemaline Myopathy
		Cap myopathy
		Childhood-onset nemaline myopathy
		Familial isolated dilated & restrictive cardiomyopathy
DGAT2	Diacylglycerol O-acyltransferase 2	Autosomal dominant Charcot-Marie-Tooth disease type 2 due to DGAT2 mutation
SERPINH1	Serpín family H member 1	Osteogenesis imperfecta type 3/ X
		Preterm premature rupture of the membranes
GPC6	Glypican 6	Omodysplasia type 1 (OMOD1)
		Autosomal recessive omodysplasia
TSHR	Thyroid stimulating hormone receptor	Hypothyroidism congenital nongoitrous 1
		Athyreosis
		Familial gestational hyperthyroidism
		Familial hyperthyroidism due to mutations in TSH receptor
		Hypothyroidism due to TSH receptor mutations
		Thyroid hypoplasia
		Hyperthyroidism nonautoimmune
MAP2K1	Mitogen-activated protein kinase kinase 1	Cardiofaciocutaneous syndrome 3
		Noonan syndrome 1
GFM1	G elongation factor mitochondrial 1	Hepatoencephalopathy due to combined oxidative phosphorylation defect type 1
KIT	KIT proto-oncogene receptor tyrosine kinase	human piebaldism
		Acute myeloblastic leukemia with maturation
		Acute myeloid leukemia with abnormal bone marrow eosinophils
		Acute myeloid leukemia with t(8;21)(q22;q22) translocation
		Aleukemic mast cell leukemia
		Bullous diffuse cutaneous mastocytosis
		Classic mast cell leukemia
		Cutaneous mastocytoma
		Gastrointestinal stromal tumor
		Isolated bone marrow mastocytosis
CYP2U1	Cytochrome P450 family 2 subfamily U memb	Hereditary Spastic Paraplegia
		Autosomal recessive spastic paraplegia type 56
HADH	Hydroxyacyl-CoA dehydrogenase	3-Hydroxyacyl-Coenzyme A Dehydrogenase Deficiency
		Hyperinsulinism due to short chain 3-hydroxylacyl-CoA dehydrogenase deficiency
		Hyperinsulemic hypoglycemia familial 4
PDGFRA	Platelet derived growth factor receptor alpha	Chronic eosinophilic leukemia
		Gastrointestinal stromal tumor
		Myeloid/lymphoid neoplasm associated with PDGFRA rearrangement
		Precursor B-cell acute lymphoblastic leukemia
		Primary hypereosinophilic syndrome
		Hypereosinophilic syndrome idiopathic
CA2	Carbonic anhydrase 2	Osteoporosis autosomal recessive type 3
		Osteopetrosis with renal tubular acidosis

Appendix 13.4

Gene name	Gene description	Phenotype description
PER3	Period circadian regulator 3	Familial advanced sleep-phase syndrome
CAMTA1	Calmodulin binding transcription activator 1	Epithelioid hemangioendothelioma
		Non-progressive cerebellar ataxia with intellectual disability
RGR	Retinal G protein coupled receptor	Retinitis pigmentosa
CDHR1	Cadherin related family member 1	Cone rod dystrophy
		Retinitis pigmentosa
SYT1	Synaptotagmin 1	Intellectual disability
NRXN3	Neurexin 3	Autism
KYNU	Kynureninase	Encephalopathy due to hydroxykynureninuria
		Hydroxykynureninuria
		Vertebral cardiac renal and limb defects syndrome 2
DYRK1A	Dual specificity tyrosine phosphorylation regulated kinase 1A	mental retardation autosomal dominant type 7
		DYRK1A-related intellectual disability syndrome
		Intellectual disability syndrome due to a DYRK1A point mutation
CYP2U1	Cytochrome P450 family 2 subfamily U member 1	Hereditary Spastic Paraplegia
		Autosomal recessive spastic paraplegia type 56
HADH	Hydroxyacyl-CoA dehydrogenase	3-Hydroxyacyl-Coenzyme A Dehydrogenase Deficiency
		Hyperinsulinism due to short chain 3-hydroxylacyl-CoA dehydrogenase deficiency
		Hyperinsulemic hypoglycemia familial 4
CNTNAP2	Contactin associated protein like 2	Cortical dysplasia-focal epilepsy syndrome
		Pitt-Hopkins-like syndrome
		Autism

Appendix 14.5

Gene name	Gene description	Phenotype description
PTPRC	Protein tyrosine phosphatase, receptor type C	T-B+ severe combined immunodeficiency due to CD45 deficiency
		Hepatitis C virus susceptibility
		Severe combined immunodeficiencyT cell-negative B cell-positive NK cell-positive
KRT86	Keratin 86	Monilethrix
EML1	Echinoderm microtubule associated protein like 1	Subcortical band heterotopia
		Band heterotopia
GPHN	Gephyrin	Hereditary hyperekplexia
		Sulfite oxidase deficiency due to molybdenum cofactor deficiency type C
		Molybdenum cofactor deficiency complementation group C
WWOX	WW domain containing oxidoreductase	Spinocerebellar ataxia autosomal recessive 12
		46XY partial gonadal dysgenesis
		Autosomal recessive cerebellar ataxia-epilepsy-intellectual disability syndrome
		Squamous cell carcinoma of esophagus
		Undetermined early-onset epileptic encephalopathy
CARD14	Caspase recruitment domain family member 14	Pityriasis rubra pilaris
		Psoriasis 2
LPIN1	Lipin 1	Myoglobinuria acute recurrent autosomal recessive
TFG	TRK-fused gene	Autosomal dominant Charcot-Marie-Tooth disease type 2 due to TFG mutation
		Autosomal recessive spastic paraplegia type 57
		Differentiated thyroid carcinoma
		Extraskeletal myxoid chondrosarcoma
		Hereditary motor and sensory neuropathy Okinawa type
		Neuropathy hereditary motor and sensory Okinawa type
		Spastic paraplegia 57 autosomal recessive
BANK1	B cell scaffold protein with ankyrin repeats 1	Systemic lupus erythematosus
RBPJ	Recombination signal binding protein for immunoglobulin kappa J region	Adams Oliver syndrome
POLR1C	RNA polymerase I and III subunit C	Hypomyelination-hypogonadotropic-hypogonadism-hypodontia syndrome
		Treacher-Collins syndrome
		Leukodystrophy hypomyelinating 11
GNAI1	G protein subunit alpha i1	GNAI1 syndrome
SUGCT	Succinyl-CoA:glutarate-CoA transferase	Glutaric acidemia type 3
BMPER	BMP binding endothelial regulator	Diaphanospondylodysostosis
		Ischio-vertebral syndrome
ERLIN2	ER lipid raft associated 2	Autosomal Recessive Mental Retardation
		Autosomal recessive spastic paraplegia type 18
		Juvenile primary lateral sclerosis
		Recessive intellectual disability-motor dysfunction
POMT1	Protein O-mannosyltransferase 1	Muscular dystrophy-dystroglycanopathy
		Muscle-eye-brain disease
		Walker-Warburg syndrome

Appendix 13.6

Gene name	Gene description	Phenotype description
PER3	Period circadian regulator 3	Familial advanced sleep-phase syndrome
CAMTA1	Calmodulin binding transcription activator 1	Epithelioid hemangioendothelioma
		Non-progressive cerebellar ataxia with intellectual disability
STOX1	Storkhead box 1	Preeclampsia
HK1	hexokinase 1	Charcot-Marie-Tooth disease type 4G
		Nonspherocytic hemolytic anemia due to hexokinase deficiency
		Neuropathy hereditary motor and sensory russe type
		Retinitis pigmentosa
KIF1BP	KIF1 binding protein	Goldberg-shprintzen megacolon syndrome
MYPN	Myopalladin	Childhood-Onset Slowly Progressive Nemaline Myopathy
		Cap myopathy
		Childhood-onset nemaline myopathy
DGAT2	Diacylglycerol O-acyltransferase 2	Autosomal dominant Charcot-Marie-Tooth disease type 2 due to DGAT2 mutation
TEAD1	TEA domain transcription factor 1	Helicoid peripapillary chorioretinal degeneration
		Sveinsson chorioretinal atrophy
SERPINH1	Serpin family H member 1	Osteogenesis imperfecta type 3/ X
		Premature preterm rupture of the membranes
LRTOMT	Leucine rich transmembrane and O-methyltransferase domain containing	Autosomal recessive non-syndromic sensorineural deafness type DFNB
PTPRO	Protein tyrosine phosphatase, receptor type O	Familial idiopathic steroid-resistant nephrotic syndrome
NRXN3	Neurexin 3	Autism
ALDH1A3	Aldehyde dehydrogenase 1 family member A3	Anophthalmia/Microphthalmia
CIITA	Class II major histocompatibility complex transactivator	Immunodeficiency by defective expression of HLA class 2
		Bare lymphocyte syndrome type II
		Rheumatoid arthritis
CARD14	Caspase recruitment domain family member 14	Pityriasis rubra pilaris
		Psoriasis 2
TLK2	Tousled like kinase 2	TLK2 syndrome
SEPT9	Septin 9	Neuralgic amyotrophy
MIB1	Mindbomb E3 ubiquitin protein ligase 1	Left ventricular noncompaction
MCOLN1	Mucolipin 1	Mucopolipidosis type IV
PNPLA6	Patatin like phospholipase domain containing 6	Ataxia-hypogonadism-choroidal dystrophy syndrome
		Autosomal recessive spastic paraplegia type 39
		Cerebellar ataxia-hypogonadism syndrome
		Laurence-Moon syndrome
		Trichomegaly-retina pigmentary degeneration-dwarfism syndrome
		Boucher Neuhauser syndrome
		Oliver-mcfarlane syndrome
ARHGEF18	Rho/Rac guanine nucleotide exchange factor 18	Retinitis pigmentosa
EPCAM	Epithelial cell adhesion molecule	Congenital tufting enteropathy
		Lynch syndrome
		Colorectal cancer hereditary nonpolyposis type 8
		Diarrhea 5 with tufting enteropathy congenital
		Autosomal recessive non-syndromic intellectual disability
		Asthma susceptibility
		Mental retardation autosomal recessive 51
MSH2	MutS homolog 2	Constitutional mismatch repair deficiency syndrome
		Lynch syndrome
		Muir-torre syndrome
		Mismatch repair cancer syndrome
ITPR1	Inositol 1,4,5-trisphosphate receptor type 1	Gillespie Syndrome
		Aniridia-cerebellar ataxia-intellectual disability syndrome
		Spinocerebellar ataxia type 15/16/29
GRID2	Glutamate ionotropic receptor delta type subunit 2	Autosomal recessive congenital cerebellar ataxia due to GRID2 deficiency
MTO1	Mitochondrial tRNA translation optimization 1	Infantile hypertrophic cardiomyopathy and lactic acidosis
		Mitochondrial hypertrophic cardiomyopathy with lactic acidosis
		Combined oxidative phosphorylation deficiency 10
GRIK2	Glutamate ionotropic receptor kainate type subunit 2	Autosomal recessive non-syndromic intellectual disability
KHDC3L	KH domain containing 3 like, subcortical maternal complex member	Complete hydatidiform mole
CD109	CD109 molecule	Fetal and neonatal alloimmune thrombocytopenia
POLH	DNA polymerase eta	Xeroderma pigmentosum variant
KANK1	KN motif and ankyrin repeat domains 1	Inherited congenital spastic tetraplegia
		Cerebral palsy spastic quadriplegic 2
NUP214	Nucleoporin 214	Acute myeloid leukemia with t(6;9)(p23;q34)
		Leukemia acute lymphoblastic
LAMC3	Laminin subunit gamma 3	Occipital cortical malformations
		Occipital pachygyria and polymicrogyria
		Cortical malformations occipital
POMT1	Protein O-mannosyltransferase 1	Muscular dystrophy-dystroglycanopathy
		Autosomal recessive limb-girdle muscular dystrophy type 2K
		Congenital muscular dystrophy with cerebellar involvement
		Muscle-eye-brain disease
		Walker-Warburg syndrome
DMRT3	Doublesex and mab-3 related transcription factor 3	46XY partial gonadal dysgenesis

Appendix 14.1

ABCA12	C15orf41	CSH2	FOXP1	KITLG	NELL2	PRR4	SLC24A4	TNRC6B
AC009060.1	C15orf48	CSMD2	FRAS1	KLC3	NIFK	PRSS45	SLC28A2	TP53BP1
AC012493.2	C16orf78	CSTF3	FRMD5	KLHDC1	NKAIN2	PRSS50	SLC2A5	TP63
AC016757.3	C19orf57	CTD-2207O23.3	FRRS1	KLRB1	NMI	PSD4	SLC33A1	TPPP
AC023469.1	C1orf116	CTNNA2	FTO	KLRC1	NMNAT3	PSMA7	SLC35F3	TPTE
AC055736.1	C1QTNF7	CTNNA3	FUK	KLRC2	NOL10	PSMD13	SLC36A2	TRABD2A
AC092850.1	C20orf112	CUX2	FUT2	KLRD1	NOP58	PTPRO	SLC39A8	TRAF3
AC104667.3	C2CD3	CYLD	FYCO1	KLRG1	NPFFR2	PTPRQ	SLC6A7	TRDN
ACER3	C5orf66	CYP4F31P	GAA	KREMEN1	NPNT	PTPRT	SLC9C2	TRIM7
ACPL2	C6orf201	D2HGDH	GABBR1	KRT71	NRG3	R3HDM1	SLCO1B3	TRPC1
ACSM5	CABP4	DAB1	GALNT10	KRT78	NRXN2	RAB11FIP5	SLCO1B7	TSHR
ACSS3	CABP5	DACH1	GALNT13	KRTAP3-1	NTM	RAB17	SLCO1C1	TSPAN8
ACTR3	CACNA1A	DAZAP2	GALNT18	L3MBTL3	NTRK3	RAB3GAP1	SLCO2B1	TSPAN9
ADAL	CACNB4	DCLK1	GALNT9	L47234.1	NUDT8	RAD18	SLFN11	TTC21A
ADAM29	CADM2	DDX11	GCH1	LARP1B	NUP210	RAPGEF4	SLFN12	TTC24
ADAP2	CAMK2A	DDX5	GDPD5	LCMT2	NUTM2B	RASGEF1B	SMAGP	TTC38
ADI1	CAPN12	DHRS4	GGT1	LDB2	OFCC1	RB1	SMARCD2	TTC7B
ADK	CASQ2	DHRS4-AS1	GIPC3	LGALS9B	OPCML	RBM43	SMC6	TUBA3D
AEBP2	CAV3	DHRS4L2	GLIS1	LIFR	OR2T1	RC3H1	SMTN	TVP23A
AGBL1	CBLN2	DHX37	GLP2R	LIMCH1	OR2T27	RCN1	SMYD3	TXNRD2
AGBL4	CC2D1A	DIP2C	GLYATL2	LINC01098	OR2T29	RFX2	SNAI1	UBD
AGL	CCDC102B	DLEU1	GMDS	LINC01100	OR2T34	RGPD2	SNRNP27	UBE2Q1
AIP	CCDC144NL	DLGAP1	GNAL	LMLN	OR4K15	RGPD4	SNRPC	UBR3
AK9	CCDC172	DNM3	GOLIM4	LPAR6	OR6J1	RHBDD1	SOAT2	UCP3
AKAP13	CCDC39	DOCK2	GORASP1	LPHN3	OTOA	RHOJ	SORCS3	UGT2B17
AKR1C3	CCDC40	DPP10	GPR152	LPP	OTUD7A	RHOT2	SORD	UHRF1BP1
AL391152.1	CCDC85A	DSCAM	GPR155	LRBA	OVCH1	RIN3	SP100	ULK4
AL592284.1	CCDC85C	DSG1	GPR158	LRRC16A	OVCH1-AS1	RLN3	SPAG16	UTP20
ALDH1L2	CCL23	DTNA	GRB2	LRRC31	P2RX3	RNF135	SPATA5L1	UVRAG
ALMS1	CCNG2	DUOX2	GRIA4	LRRC37A3	PACS2	RNF157	SPOCK3	VANGL1
AMN	CCRL2	DUSP12	GRIK1	LRRC4C	PAM	RNF212	SPSB3	VCL
ANKFN1	CCSER1	DYNC2H1	GRIK2	LRRK1	PAPD4	RNF41	SPSB4	VDR
ANKH	CD226	DYTN	GSG2	LRRTM4	PARD3B	RNGTT	SPTLC3	VPS16
ANKRD30BL	CD320	ECT2	GSTO1	LSAMP	PARP1	ROBO2	SS18L1	WDR66
ANKRD45	CD81	EDARADD	GSTO2	LSM14B	PARP2	ROR1	SSBP2	WDR70
ANO2	CDA	EFTUD1	GTSE1	LST3	PARP4	RP11-125O5.2	ST6GALNAC3	WDR90
ANO5	CDAN1	EIF3D	HAGH	LUZP2	PCDH15	RP11-192H23.4	STARD9	WDSUB1
ANTXR1	CDC14A	ELMOD1	HECW2	LYST	PCDH9	RP11-410N8.4	STAT3	YY1AP1
ANXA8L1	CDC25B	ELOVL2	HES6	MAEL	PCED1B	RP11-51L5.7	STPG2	ZBTB7C
AP3B1	CDCA4	EMR1	HHIPL2	MALRD1	PCGF5	RP11-723G8.2	SUMF1	ZMYM1
APBA2	CDH12	EMR2	HIVEP3	MAP2	PDE4C	RP11-849H4.2	SVOP	ZNF124
APIP	CDH19	ENPP4	HLA-DPA1	MAP2K2	PDE4D	RPS19	SYN3	ZNF223
APOLD1	CDH4	ENPP5	HLA-DQA2	MAP3K19	PDGFD	RRN3	SYT2	ZNF280A
ARAP2	CDH9	EPHA5	HMGB1	MAP9	PDHX	RSPO4	SYT9	ZNF280B
ARFGEF2	CEACAM3	EPHB2	HPN	MAPRE2	PDXDC1	RTTN	TACC2	ZNF366
ARHGEF1	CELF6	ERBB4	HYDIN	MCOLN2	PIAS4	RXFP1	TACR3	ZNF423
ARHGEF18	CELSR1	ERCC2	ID2	MDH1B	PID1	RYR2	TAS2R13	ZNF44
ARHGEF4	CEP112	ERN1	IFI16	MEF2A	PIEZO2	RYR3	TAS2R14	ZNF441
ARIH1	CEP170B	EXD1	IFIH1	MEIS3	PIGC	SAMD3	TAS2R20	ZNF670
ART1	CEP290	EXOC2	IGFALS	METTL16	PITPNM1	SAMM50	TAS2R42	ZNF695
ASAH2B	CHRNA4	EXOC5	IKZF2	MICU1	PITX1	SCAMP3	TBC1D32	ZNF710
ATAD3A	CLASP1	EXOC6B	IL18R1	MINOS1	PKDREJ	SCN4A	TBX10	ZNF93
ATP1B2	CLCF1	EYS	IL27RA	MINOS1-NBL1	PKHD1	SCP2	TCP11L1	ZPLD1
ATP2B4	CLDN14	F5	ILDR2	MMP26	PLA2G4A	SCRN3	TEC	ZSCAN18
AVEN	CLEC17A	FAM153C	IMPA2	MOXD1	PLCH1	SDHA	TENM3	ZSWIM4
BACH1	CLEC18A	FAM184B	INADL	MPP7	PLD1	Sep-11	TET1	ZSWIM5
BATF2	CLEC18C	FAM189A1	INCENP	MPPE1	PLEKHB2	Sep-08	TET3	ZYG11B
BAZ2B	CLSTN2	FAM189B	IQGAP2	MSRB3	POLG2	SERPINB5	TEX2	
BCAS3	CNTN6	FAM19A2	IQGAP3	MSTO1	POTEE	SERPINI1	TGM2	
BCAS4	CNTNAP4	FAM207A	IRS2	MXD1	PPARA	SERPINI2	THOC3	
BCR	COBLL1	FAM217A	ITGA8	MYH14	PPEF2	SF3B3	THSD4	
BICD1	COG4	FAM49A	ITGAE	MYO3A	PPP2R5E	SFTA3	THSD7B	
BMP2K	COL11A1	FBN2	KCNAB1	MYOZ3	PPP3CA	SGCG	TMEM117	
BMPR1B	COL21A1	FBXO27	KCNH7	MYSM1	PRELID2	SGMS2	TMEM120B	
BPTF	COL4A2	FGF14	KCNIP4	MZT2A	PRH1	SH3RF3	TMEM38A	
BTNL8	CORO1B	FHAD1	KCNMB2	NANOS3	PRICKLE1	SH3TC2	TMPRSS11D	
C10orf107	CPNE4	FKSG63	KCNQ5	NCKAP5	PRKCI	SI	TMPRSS9	
C11orf49	CPNE8	FLVCR2	KIAA0141	NCMAP	PRKG1	SIPA1L3	TMTC2	
C12orf45	CR1	FMN2	KIAA1239	NDST3	PRKG2	SIRT3	TMTC3	
C14orf79	CSF2RB	FMNL3	KIAA1683	NEK10	PRPF8	SLC22A12	TNIP1	

Appendix 14.2

AAAS	C15orf38-AP3S2	CYP4F3	FLVCR2	ITGBL1	METTL22	PCDH15	RIPK4	SPOCK1	ZBTB1
ABCD4	C1orf63	CYTIP	FMO1	ITSN1	MFSD8	PCDH7	RNF6	SPTB	ZBTB8A
ABI3BP	C4orf29	DACH1	FNDC3B	KANK4	MICA	PCDHA1	RNLS	SRRM5	ZFAND3
ABR	C6orf195	DAZL	FNDC9	KCNAB1	MIER3	PCDHA10	ROBO1	SS18L1	ZFP64
ABTB2	C6orf226	DCC	FOXP1	KCNC4	MIPOL1	PCDHA11	RORA	ST6GAL1	ZMYM4
AC008948.1	CA12	DCXR	FRAS1	KCNE4	MIR3654	PCDHA12	ROS1	ST6GAL2	ZNF236
AC092964.1	CACNA1A	DDX60	FRMD4A	KCNIP4	MMP2	PCDHA13	RP11-180C1.1	ST6GALNAC1	ZNF257
ACOXL	CACNA1D	DEDD	FRMD4B	KCNJ15	MOV10L1	PCDHA2	RP11-192H23.4	STAG1	ZNF268
ACSBG2	CACNA2D3	DEK	FRMD6	KCNMB2	MPHOSPH6	PCDHA3	RP11-204N11.1	STK10	ZNF385B
ACSM2B	CACNG2	DERL3	FSIP1	KHDRBS1	MROH7-TTC4	PCDHA4	RP11-295P9.3	STK24	ZNF428
ACSS3	CACNG3	DIRC3	FSTL4	KHDRBS2	MRPL22	PCDHA5	RP11-302M6.4	STK32B	ZNF485
ACTR1A	CADM4	DISP1	FUOM	KIAA0586	MRPS22	PCDHA6	RP11-315O6.2	STRA6	ZNF511
ADAMTS7	CADPS	DLG2	GABBR1	KIAA0753	MSI2	PCDHA7	RP11-399J13.3	STXBP6	ZNF543
ADCY10	CAMK1D	DLGAP1	GALC	KIAA1467	MSMO1	PCDHA8	RP11-444E17.6	SYN3	ZNF576
AGRN	CAND2	DMRTC2	GALNT13	KIAA1598	MTHFD1	PCDHA9	RP11-51L5.7	TACR1	ZNF74
AHCY	CARD16	DNAH5	GALNT7	KIF26B	MTHFS	PCDHAC1	RP11-872D17.8	TAP2	ZNF821
AHRR	CARD17	DNAH8	GALNTL6	KIF6	MTRNR2L7	PCDHAC2	RP1-27O5.3	TBCCD1	ZNF843
AHSP	CASP1	DNAH9	GC	KLHDC9	MUC16	PDCD6	RPL7L1	TCF4	ZNRF3
AKAP13	CASP12	DNAJB11	GGPS1	KLHL20	MYCBP2	PDCD6IP	RPS19	TDP1	
AKR1E2	CASR	DPH3	GGT1	KLHL24	MYH10	PDE11A	RPS6KL1	TDRD5	
AL359195.1	CCDC102B	DPPA2	GKN2	KPNA6	MYH14	PDE4D	RPTOR	TEX26	
AL445989.1	CCDC169	DPPA4	GLIPR1L2	KREMEN1	MYH2	PDZRN4	RSPH9	THEMIS	
AL603965.1	CCDC169-SOHLH2	DPYD	GMPR	KRT31	MYLIP	PFDN2	RSRC1	THRB	
ALPK1	CCDC39	DROSHA	GMPS	KRT33A	MYLK4	PFDN5	RUNX1	THSD7B	
ALPL	CCDC50	DSCAM	GOLGA8A	KRT33B	MYO1E	PFKL	RYBP	TIFA	
ALS2CR11	CCDC57	DSG1	GOPC	KRT34	MYOM1	PGAP1	RYR1	TMEM117	
AMOTL2	CCDC62	DSP	GPC5	KRTAP17-1	NAA40	PHRF1	RYR2	TMEM123	
ANKRD33B	CCDC7	DTNA	GPHN	KRTAP4-3	NAAA	PID1	SAC3D1	TMEM132D	
ANKRD35	CCDC91	EARS2	GPLD1	KRTAP4-4	NAALADL2	PIEZO2	SAMD3	TMEM156	
ANKRD36	CD1B	EEF1G	GPM6A	KRTAP4-5	NADSYN1	PIP5K1A	SCGB2A1	TMEM33	
ANO1	CD1E	EIF3I	GPR158	KRTAP5-5	NCEH1	PLA2G6	SCRG1	TMPRSS11E	
ANP32A	CD209	ELMOD1	GREB1	KRTAP5-7	NCK1	PLCB1	SDHA	TMPRSS15	
ANTXR2	CD3EAP	EMC3	GRID1	KRTAP5-8	NCK2	PLD5	SEMA4A	TMTC2	
ANXA8L2	CDH12	EMCN	GRID2	KRTAP9-4	NDNF	PLEKHH2	SERPINI1	TNFSF10	
AP000304.12	CDH18	ENO4	GRM4	KRTAP9-8	NEB	POLR3B	SETD9	TNRC6B	
AP000889.3	CDH4	ENOSF1	GRTP1	L34079.2	NELL2	POU3F1	SGTB	TOX3	
AP1AR	CDKAL1	ENPP3	GSTA2	L3MBTL3	NEURL1	PPIL2	SH3BGR	TP53I11	
AP3S2	CDKN2AIP	EPHA3	GSTO1	L3MBTL4	NHP2	PPM1L	SH3RF3	TP63	
APOL3	CDS1	EPHA6	GSTO2	LAMTOR5	NIT1	PPME1	SH3TC2	TPD52L1	
ARFGAP3	CEA	ERCC1	HDCC2	LDB3	NIT2	PPP1R36	SHANK2	TPPP	
ARHGAP19-SLIT1	CEACAM3	ERO1L	HECW2	LHFP	NKAIN2	PPP1R3G	SI	TRAPPC13	
ARHGEF1	CEACAM6	EVC	HERC1	LHFPL2	NLGN1	PPP2R1A	SIGLEC6	TRIM22	
ARID4B	CENPL	EVC2	HIST1H2AM	LIN7A	NLRP1	PPP2R5D	SIX4	TRIM5	
ASAH2B	CHODL	FABP2	HIST1H2BO	LINC01098	NPAS2	PPP2R5E	SLC10A7	TRIM51	
ASAH2C	CHRNB4	FABP6	HIST1H3I	LIPH	NPFFR2	PPP6R2	SLC12A6	TRPC4	
ASB18	CIB3	FAM163A	HIST1H3J	LMNA	NPIPB11	PPWD1	SLC1A7	TRPC6	
ASIC1	CLIC6	FAM184B	HIST1H4L	LRAT	NR2C2	PRAP1	SLC22A23	TSPAN18	
ASIC2	CLSTN2	FAM19A5	HK1	LRP1B	NRG4	PRL	SLC25A2	TTC23	
ASIP	CNPY3	FAM227B	HLA-DQA1	LRP8	NRP1	PRR5L	SLC25A21	TTC4	
ASPM	CNTN4	FAM32A	HLA-DQB1	LRPPRC	NRXN1	PRRT3	SLC27A6	TTC6	
ATG2A	CNTN5	FAM50B	HLA-DRA	LRRC10B	NSL1	PSMB8	SLC2A10	TUT1	
ATP10B	CNTN6	FAM65B	HM13	LRRC16A	NTSR1	PSMD4	SLC30A9	TXLNA	
ATP11B	CNTNAP5	FAM71D	HMGCLL1	LRRC37A3	NUTM2A	PSMG4	SLC35G2	TXNDC17	
ATP2B2	COL23A1	FAM83B	HOMER2	LRRC38	NUTM2E	PTCRA	SLC38A9	TXNRD1	
ATP2C1	COL24A1	FAT3	HSP90AB1	LRRC4C	OCA2	PTDSS2	SLC43A3	UBE3D	
ATXN1L	COL5A3	FBXL17	HSPA2	LRRC8C	OLAH	PTPN14	SLC47A1	UBFD1	
B3GALT5	CPE	FBXL7	HYDIN	LST3	OR3A1	PTPRC	SLCO1B3	UBR2	
BANK1	CPLX1	FBXO22	IFI16	LYST	OR4C6	PTPRG	SLCO1B7	UGT2B4	
BCAR3	CPNE4	FBXO27	IFLTD1	LYZL1	OR5B2	PTPRK	SLCO4C1	ULK4	
BCAS3	CRADD	FCGR2A	IGFL4	MAP2	OR5B3	PTPRT	SLIT1	USP4	
BCL7C	CRHR1	FCGR2B	IL18R1	MAP2K5	OR5D18	RAC3	SMG1	UTS2B	
BRK1	CSDC2	FCGR3A	IL1RL1	MAP4K3	OR5H15	RAD51B	SNX15	VPS53	
BTBD9	CSMD2	FGD4	IL34	MAP9	OR5L1	RCSL1	SOHLH2	VRTN	
BTNL2	CSNK1G3	FGF10	INPP4B	MBD5	OR5L2	RD3	SORCS2	VSTM2L	
C10orf107	CTAGE9	FGF23	IQCH	MCTP2	OR5T2	RFX2	SP7	WDFY2	
C10ORF68	CTC-490E21.12	FHIT	IRF6	MDGA2	OR5W2	RGS12	SPATA16	WDFY4	
C12orf10	CTD-2140B24.4	FILIP1	IRGQ	ME1	OR7G3	RGS6	SPATA5	WDR7	
C12orf5	CTNNA2	FIP1L1	IST1	MEA1	OSBPL6	RGS7	SPATS1	WWOX	
C12orf66	CTNNBL1	FKSG52	ITGA10	MED31	OXNAD1	RHD	SPESP1	XPO5	
C15orf26	CYFIP2	FLVCR1	ITGA5	MEF2A	PCCB	RILPL1	SPIRE2	YES1	

Appendix 14.3

AAAS	BTBD9	CORO1B	EXOC2	IL27RA	MGAT5B	PCDH15	RBM19	SMARCC2	TSPAN9
ABCA12	BTNL8	COX5A	EXOC5	ILDR2	MIA3	PCGF5	RC3H1	SMCHD1	TTBK1
AC008948.1	C10orf107	CPNE4	EXOC6B	IQCJ-SCHIP1	MICU1	PCTP	RCN1	SMCO2	TTC21A
AC009060.1	C12orf10	CPNE8	EYS	IQGAP2	MINOS1	PDCD6	RFX2	SMYD3	TTC23
AC016757.3	C12orf45	CPS1	F5	IRS2	MINOS1-NBL1	PDCD6IP	RFX8	SNAI1	TTC38
AC055736.1	C14orf79	CSH2	FAM184B	ITGA8	MKL2	PDE4C	RGPD2	SNRPC	TTC7B
AC092850.1	C15orf41	CSK	FAM186B	KAZN	MMADHC	PDE4D	RHBDD1	SNTG2	TUBA3D
AC104667.3	C16orf45	CSNK1G2	FAM189B	KCNAB1	MMP2	PDGFD	RHOJ	SNX29	TUBGCP4
AC104809.3	C16orf54	CSTF3	FAM217A	KCNG1	MOBP	PDHX	RILPL1	SOAT2	TXNDC17
ACAD8	C19orf57	CTB-133G6.1	FBN2	KCNH3	MPPE1	PDXDC1	RIN2	SORCS1	UBE2K
ACER3	C20orf112	CTC-512J12.6	FBXO27	KCNH7	MPZL2	PELI2	RIN3	SORD	UBE2U
ACSM2B	C20orf194	CTD-2203A3.1	FHAD1	KCNH8	MPZL3	PFDN5	RIPK1	SOX6	UBE2Z
ACSS3	C2orf50	CTD-2207O23.3	FHIT	KCNIP4	MRAP2	PGA3	RLN3	SP100	UGT1A10
ADAL	C5orf17	CTNNA2	FKSG63	KCNK7	MRPL17	PHLDB2	RNF10	SP7	UGT1A7
ADAM29	C5orf66	CTNNA3	FLVCR2	KCNQ5	MSI2	PIAS4	RNF135	SPAG16	UGT1A8
ADAMTS17	C6orf201	CUBN	FMNL3	KIAA0141	MSMO1	PID1	RNF182	SPATA13	UGT1A9
ADAP2	C7	CUX2	FMO1	KIAA0753	MSRB3	PIGC	RNF41	SPATS2	UGT2B17
ADARB2	CABP4	CYLD	FOXP1	KIAA1683	MSTO1	PIGN	RNGTT	SPSB3	UHRF1BP1
ADCY10	CABP5	CYP4F2	FRMD5	KITLG	MTHFD1	PITPNM1	ROBO2	SPTLC3	UVRAG
ADD3	CACNA1A	CYP4F31P	FRRS1	KLHL1	MXD1	PITX1	RP11-1084J3.4	SS18L1	VRK2
AEBP2	CACNG4	D2HGDH	FSTL4	KLRC1	MYH14	PKDREJ	RP11-125O5.2	ST6GAL1	VRK3
AFF3	CADM2	DAB1	FTO	KLRC2	MYO3A	PKHD1	RP11-180C1.1	ST6GALNAC3	VTCN1
AGAP5	CAMK2A	DACH1	FUK	KLRD1	MYO5A	PKN1	RP11-210M15.2	STARD9	WDR25
AGBL1	CAMTA1	DAW1	FUT2	KPNA2	MYO5B	PLA2G4A	RP11-215A19.2	STAT3	WDR65
AGBL4	CARD8	DCXR	FYCO1	KRT38	MYT1L	PLA2G4C	RP11-244H3.4	STK10	WDR66
AGPAT9	CARNS1	DDX11	GALNT10	KRT71	MZT2A	PLCH1	RP11-307N16.6	STK32B	WDR70
AHNAK	CASQ2	DDX5	GALNT5	KRT78	NAALADL2	PLCXD2	RP11-51L5.7	SULT1A1	WDR96
AHRR	CASR	DDX60L	GALNT9	KRTAP2-2	NANOS3	PLD5	RRN3	SUMF1	WDSUB1
AIP	CATSPER3	DERL3	GALNTL6	KRTAP2-3	NAV2	PLEKHA4	RSPH9	SV2C	WWC1
AK9	CAV3	DHRS4	GCH1	KRTAP4-3	NBL1	PLEKHB2	RSPO4	SVOP	YY1AP1
AKAP6	CC2D1A	DHRS4-AS1	GDE1	KRTAP4-4	NBPF3	PNLIPRP3	RTTN	SYN3	ZMYM1
AL391152.1	CCDC102B	DHRS4L2	GDPD5	KYNU	NCAM2	POLA2	RYR3	SYT16	ZMYM6
ALDH1A3	CCDC127	DHTKD1	GGT1	LAMA3	NCKAP5	POLG2	S100A7A	TACC2	ZNF112
ALDH1L2	CCDC39	DHX37	GIPC1	LAMC2	NCMAP	POLR3B	SAMD3	TAS2R13	ZNF114
ALMS1	CCDC40	DLEU1	GIPC3	LARP1B	NEDD4L	POP5	SATB2	TAS2R14	ZNF22
ALS2CR11	CCDC62	DLGAP1	GLI2	LGALS9B	NEDD9	POPODC3	SCAMP3	TAS2R20	ZNF223
AMPD3	CCDC85C	DMRTC2	GLIS1	LIMCH1	NEK10	POTEE	SCGB3A2	TAS2R42	ZNF280A
ANKEF1	CCNI2	DNAH9	GLRA3	LIN7A	NELL2	PPARA	SCN4A	TCP11L1	ZNF280B
ANKRD30A	CCSER1	DNM3	GMD5	LINC01098	NFIC	PPEF2	SCP2	TDRD10	ZNF320
ANKRD30BL	CD209	DNTT	GNAL	LINC01100	NIFK	PPHLN1	SDHA	TEKT5	ZNF44
ANKRD45	CD226	DOCK2	GOLIM4	LINGO1	NKAIN2	PPP1CA	Sep-08	TENM4	ZNF441
ANO5	CD81	DOK6	GORASP1	LMLN	NLRP1	PPP1R15A		TEX2	ZNF473
ANTXR1	CDA	DPPA4	GPATCH4	LMNA	NME4	PPP2R5E	SF3B3	TFDP1	ZNF506
ANTXR2	CDAN1	DROSHA	GPC5	LPHN3	NMNAT3	PPP3CA	SFR1	TGM2	ZNF563
ANXA8L1	CDCA4	DSCAM	GPR152	LPIN1	NOL10	PRELID2	SFTA3	THRB	ZNF66
AP001816.1	CDH12	DSCR4	GPR158	LPP	NPAS2	PRH1	SGCG	THSD7B	ZNF670
AP2A2	CDH18	DSG4	GPR39	LRBA	NPFFR2	PRICKLE1	SH3RF2	TIGIT	ZNF695
APBA2	CDH4	DST	GRAMD4	LRRC16A	NPL	PRKG1	SH3RF3	TIMP4	ZNF879
APIP	CDH9	DTNA	GRB2	LRRC37A3	NPS	PRKG2	SH3TC2	TMBIM6	ZPLD1
APOA1BP	CDKAL1	DUSP12	GRIA1	LRRC4C	NTM	PRPF40B	SI	TMC5	ZRANB3
ARFGEF2	CDKN2AIP	DYNC2H1	GRIA4	LRRTM4	NTSR1	PRPF8	SIK2	TMEM120B	ZSWIM2
ARHGAP12	CEACAM3	DYTN	GRIK1	LSM14B	NUP210	PRR4	SIPA1L3	TMEM132D	ZSWIM4
ARHGEF1	CELF2	EBNA1BP2	GRIK2	LST3	OAS1	PRRT3	SLC1A2	TMEM232	ZYG11B
ARHGEF18	CELF5	EFTUD1	GRM4	LYPD1	OFCC1	PSMA7	SLC22A12	TMEM38A	
ARHGEF28	CELF6	EHBP1L1	GSTO1	LYPD4	OLFM2	PSMC1	SLC22A23	TMPRSS11D	
ARIH1	CELSR1	EIF3D	GSTO2	LYST	OPCML	PSMG4	SLC24A4	TMPRSS11E	
ASAH2B	CENPU	ELF1	HAGH	MAP2	OR2T1	PTGER1	SLC27A6	TMPRSS9	
ASH1L	CEP112	ELMOD1	HCAR1	MAP3K11	OR2T27	PTPRK	SLC33A1	TMTC2	
ASIC2	CEP128	EMC3	HCAR2	MAP3K19	OR2T29	PTPRO	SLC36A2	TMTC3	
ATAD3A	CEP290	EMR2	HEATR1	MAP4K3	OR2T34	PTPRT	SLC39A8	TMTC4	
ATP1B2	CHRM5	ENPP4	HES6	MAPRE2	OR2T35	R3HDM1	SLC6A7	TMX3	
ATXN1	CLASP1	ENPP5	HHIPL2	MCF2L2	OR4D6	RAB11FIP5	SLC9A9	TNIP1	
AVEN	CLCF1	EPHA7	HLA-DPA1	MCRS1	OR4K15	RAB17	SLC9C2	TP53BP1	
BACH1	CLEC18A	EPRS	HLA-DQA2	MCTP1	OR51D1	RAC3	SLCO1B3	TP63	
BCAR3	CNTNAP4	ERBB2IP	HLA-DRA	MDGA2	OR51E1	RAD18	SLCO1B7	TPO	
BCAS3	COG4	ERBB4	HPN	MED31	OTOA	RAP1GAP2	SLCO1C1	TRAF3	
BCR	COL11A1	ERN1	HYDIN	MEF2A	PACS2	RASGEF1B	SLCO4C1	TRDN	
BEND7	COL24A1	ESRRB	IFI16	MEIS3	PAM	RASSF3	SLFN11	TRHDE	
BMP2K	COL4A2	EVC2	IFIH1	METTL16	PAPD4	RBFOX1	SLFN12	TSHR	
BPTF	COLGALT2	EXD1	IGFALS	MFAP3L	PCBD2	RBFOX3	SLIT3	TSPAN8	

Appendix 14.4

AADACL4	ARRB1	CDYL2	DLEU1	GAREM	ITGB8	LRRC7	NFIB	PPP2R2C	SAMD3	STAB2	TYROBP
AATK	ARRDC4	CEACAM18	DLG2	GCGR	ITGBL1	LRRK1	NFKBID	PPP2R3A	SAMSN1	STARD13	TYW1
ABCA3	ART3	CEACAM3	DLGAP1	GF1B	ITPR1	LRRN1	NINJ2	PPP2R5C	SBNO2	STK32C	U2SURP
ABCC12	AS3MT	CELF5	DMBT1	GJA1	ITPR3	LRRTM4	NKD2	PPP2R5E	SCAF4	STPG2	UCP3
ABCC6	ASAH2B	CENPO	DMRT1	GLDN	JADE2	LRTM2	NLGN1	PPP5D1	SCFD2	SUCLG2	ULK4
ABI3BP	ATOH8	CEP128	DNA2	GLI1	JAK2	LSAMP	NLRC5	PRAMEF2	SCGB3A2	SUGCT	UMODL1
ABR	ATP11A	CES1	DNAH11	GLIS3	JAKMIP3	LTBP1	NOTCH4	PRDM1	SCN2B	SUMF1	UNC5C
AC018630.1	ATP2B2	CFHR2	DNAH8	GLP1R	JPH3	LYZL6	NR5A2	PREP	SCUBE1	SUZ12	UNC79
AC092675.3	AXDND1	CHADL	DNAH9	GNA12	KCNB2	MACROD2	NRG1	PRICKLE1	SDCBP2	SYCP2L	USP14
ACE	B4GALNT1	CHAT	DPF3	GNAO1	KCNC2	MAP3K7CL	NRG3	PRKAG2	SDCCAG8	SYN3	USP41
ACOT12	B4GALNT3	CHDH	DPP10	GOLGA6L4	KCNE4	MAP4K1	NRROS	PRKAR1B	SDS	SYNGR1	UTRN
ACTG2	BAALC	CHMP4A	DPT	GOLGA8A	KCNG2	Mar-10 Mar-03	NRXN1	PRKCH	SDSL	SYT1	UTS2R
ACTR3C	BACH1	CHRD12	DPYS	GOLGA8B	KCNK12		NRXN2	PRKG1	SEC14L3	SYT2	VIT
ACTR5	BAI3	CHRNA6	DRD3	GPATCH2	KCNK16	MARS	NRXN3	PRKG2	SEMA3C	SYT3	VPS11
ADAMTS18	BANK1	CHST11	DSCAM	GPC5	KCNMA1	MB	NSG1	PRKRA	SEMA4D	SYT9	VRK2
ADAMTS9	BARD1	CHST3	DUSP16	GPR123	KCNMB2	MCC	NTM	PRM2	SEMA5A	TAS2R14	WDFY4
ADAMTSL1	BEGAIN	CIITA	DUSP18	GPR128	KCNN3	MCF2L	OLFM1	PRM3	SERINC5	TAS2R31	WDR3
ADAMTSL3	BOLA3	CLCN7	ECT2L	GPR148	KCNS3	MDF1	OPRD1	PRPSAP1	SERPINA1	TAS2R46	WDR49
ADCY1	BRINP3	CLDN11	EEPD1	GPR75-ASB3	KCTD15	MDGA2	OR1C1	PRR4	SFTPA2	TAX1BP3	WDR70
ADCY3	C10orf128	CLEC16A	EFCAB8	GPR98	KCTD18	MED27	OR1L3	PRR5L	SGCZ	TBC1D12	WLS
ADD2	C10orf32-ASMT	CLPSL1	EGFR	GPX4	KDELR2	MED30	OR1S1	PSAT1	SGSM1	TBC1D22A	WWOX
ADD3	C10ORF68	CLPSL2	EIF3B	GRAMD3	KDM4C	MED4	OR2W3	PSMB2	SH2D3C	TBC1D32	WWP2
ADGB	C11orf40	CLSTN2	EIF3D	GRHL3	KIF1C	MEGF6	OR5P2	PSTPIP1	SH3BP5	TCEA3	XKR4
ADH7	C11orf96	CLVS1	EIF5AL1	GRID1	KIF26B	METTL21C	OR5P3	PTGER3	SHANK1	TEF	XKR7
ADRA2A	C14orf37	CLYBL	EMC6	GRIK2	KIF6	METTL24	OR6J1	PTPN2	SHPK	TEKT5	XKR9
AE000662.92	C14orf80	CMAS	EMCN	GS62	KIR2DL1	MGAT5B	OSBP	PTPRD	SIDT1	TENM4	XRCC4
AFAP1L2	C1orf177	CMIP	EPAS1	GYPE	KIR2DL3	MGC10955	OSBP2	PTPRG	SIGLEC12	TEX19	XXYLT1
AGBL4	C1orf180	CMTM7	EPHA4	HAGH	KIR2DL4	MKI67	OSBPL3	PTPRN2	SLC11A1	TFDP1	XYLT1
AGL	C21orf128	CNBD1	EPHA5	HCN4	KIR3DL1	MLF2	OVOL2	PTPRQ	SLC12A7	THADA	ZBTB49
AHNAK2	C2CD4D	CNGA3	ERBB4	HCST	KLHL23	MMP14	P2RX5	PTPRT	SLC1A3	THEM5	ZC3H7B
AIF1L	C2orf61	CNTN4	ERC2	HECW1	KRT13	MMP2	P2RX5-TAX1BP3	PXMP2	SLC1A7	TIGIT	ZDHHC14
AK5	C2orf62	CNTN6	ERG	HEY2	KRT15	MMP25	PACRG	RAB6B	SLC22A16	TINAG	ZFH3
AKT3	C2orf88	CNTNAP2	ERVMER34-1	HIF1AN	KRT32	MMP26	PAK4	RAD51B	SLC25A16	TLR5	ZFYVE21
AL049747.1	C4orf27	CNTNAP3	ETV3L	HIVEP3	KRTAP10-10	MOB3B	PANK2	RAPGEF5	SLC35E4	TM9SF1	ZFYVE9
AL050302.1	C5orf17	CNTNAP4	FADS2	HK2	KRTAP4-4	MPP4	PAPLN	RASAL1	SLC37A4	TMEM117	ZNF253
AL133481.1	C5orf45	COL13A1	FADS3	HLA-A	L1TD1	MRAP2	PARD3B	RASGEF1C	SLC38A8	TMEM132B	ZNF341
AL592284.1	C5orf66	COL19A1	FAM109A	HLA-C	L3MBTL2	MRC2	PARK2	RASGRF2	SLC39A11	TMEM179	ZNF423
ALDH7A1	C7orf71	COL6A5	FAM115A	HLA-DQA1	L3MBTL4	MRGPRX1	PARVA	RASGRP3	SLC44A2	TMEM232	ZNF536
ALX4	C8orf46	COP57A	FAM120B	HLA-DQB1	LACTB2	MROH2B	PARVB	RBM20	SLC47A1	TMEM244	ZNF705G
AMBP	C9orf141	CPOX	FAM129B	HLA-DRB1	LAMC1	MROH7	PCLO	RBPJ	SLC4A4	TMEM40	ZNF766
AMPD3	C9orf171	CR1	FAM155A	HLA-DRB5	LARGE	MROH7-TTC4	PCSK2	RELN	SLC52A1	TMEM45A	ZNF787
AMPH	C9orf85	CREB3L1	FAM163A	HMCN2	LBH	MRPL52	PCTP	RGL1	SLC6A12	TMPRSS11A	ZSCAN9
AMZ1	C9orf91	CREB5	FAM230A	HSD17B11	LEMD2	MSH2	PDCD1LG2	RG56	SLC7A1	TMPRSS11D	
ANAPC5	CACNA1D	CRHR2	FAMS3A	HUS1	LGALS4	MSR1	PDE11A	RHBDF2	SLC7A14	TMPRSS15	
ANH1	CACNA1I	CRYAA	FAM90A26	ICA1	LGALS7	MT1E	PDE1C	RHBDL3	SLC7A7	TMPRSS9	
ANK3	CACNA2D4	CSMD1	FANCL	IFLTD1	LGALS7B	MT4	PDPR	RHOBTB3	SLC8B1	TNC	
ANKDD1B	CACNB4	CTBP2	FARP1	IFT46	LG12	MTA3	PHF20	RIN2	SLFN12	TNFAIP8	
ANKRD18B	CADM2	CTD-2215E18.1	FARS2	IGFALS	LHX4	MTSS1	PID1	RIOK2	SLFN13	TN1K	
ANKRD30BL	CALD1	CTD-2287O16.3	FBRSL1	IKBKE	LHX5	MTUS2	PIGG	RMDN2	SLFN5	TNP2	
ANKRD33B	CAMK2D	CTD-3088G3.8	FDFT1	IKZF2	LILRA5	MUC2	PIGX	RMI2	SLMO1	TOLLIP	
ANKRD36	CAMKK1	CTD-3203P2.2	FER1L6	IL17B	LIMD1	MUC22	PIK3R6	ROBO2	SMAD3	TP73	
ANKRD42	CAMTA1	CTDSP1	FGD3	IL17RB	LINC00923	MUC8	PITPNC1	RORB	SMPD3	TRAPPC4	
ANKS1B	CAND2	CTDSPL	FGF10	IL18R1	LINC00999	MYBL2	PKNOX2	RORC	SMYD3	TREML2	
ANTXR2	CAPN12	CTNNA3	FGF14	IL1RL1	LINC01119	MYH14	PLA2G3	RP11-147C23.1	SNTG1	TRNT1	
ANXA4	CAPN13	CTNS	FHIT	IL32	LINGO2	MYO7A	PLBD2	RP11-169F17.1	SOCS1	TRPM4	
ANXA5	CAPN9	CYBRD1	FIP1L1	IL34	LINGO3	MYPN	PLCH1	RP11-297N6.4	SOGA2	TRPV1	
AP001631.10	CCDC141	CYP2C19	FLG	IL5RA	LLGL2	MYRF	PLCL1	RP11-382J12.1	SPACA3	TRPV3	
AP3B1	CCDC170	CYP4F12	FMNL2	IL6R	LMNB1	NAALADL2	PLD5	RP11-47I22.4	SPAG16	TSPAN2	
AP4S1	CCDC39	DAAM2	FOX1	INIP	LMO7	NAV2	PLEKHH2	RP11-505K9.4	SPAG17	TSPAN5	
APLP1	CCDC63	DAGLB	FRAS1	INMT	LN1	NBPF4	PLK5	RP11-637O19.3	SPHK1	TSPAN8	
APOBEC4	CCDC83	DAPK2	FRMD1	INPP5J	LOXHD1	NCEH1	PLXNC1	RP11-761B3.1	SPINT2	TSPAN9	
APOL3	CCDC85C	DCLK1	FRMD3	INSC	LPAR3	NCKAP5	PNP	RP11-796G6.2	SPOCK1	TSPEAR	
APOL6	CCL22	DCLK2	FRY	IP6K3	LRBA	NDST3	POU2AF1	RP13-672B3.2	SPSB3	TSSK4	
ARHGAP22	CCL24	DERA	FUT10	IQCF5	LRFN3	NEBL	POU6F2	RPA3-AS1	SPTLC2	TTC22	
ARHGAP26	CCNK	DEXI	FUT3	IQGAP2	LRFN5	NEDD4	PPARD	RPL13	SQSTM1	TTC26	
ARHGAP40	CCRL2	DFNA5	GABRB1	IQSEC3	LRIG1	NEGR1	PPM1A	RPS6KA2	SRGAP3	TTC27	
ARHGAP9	CD36	DGKH	GALC	ISM2	LRP1B	NEK10	PPM1H	RRM1	SSBP2	TTC39B	
ARHGEF4	CD53	DIP2C	GALNT13	ITGA11	LRRC18	NEK11	PPP1CC	RUNX1	ST18	TULP1	
ARID1B	CDH1	DIRC3	GALNT15	ITGA6	LRRC4C	NELL2	PPP1R14A	RXFP1	ST8SIA1	TUSC3	
ARMC2	CDKAL1	DKK2	GALNT9	ITGAE	LRRC55	NFASC	PPP1R3B	RYR1	ST8SIA5	TXNDC16	

Appendix 14.5

A3GALT2	ATP6V0A4	CDYL	DOK5	GIPC3	KIAA1199	MRC2	PERP	RASGRP4	SFPQ	THRB	ZFYVE27
AAK1	ATP6V1F	CELF2	DPP10	GLIS1	KIAA1217	MSH6	PEX26	RBFOX1	SGCD	THSD4	ZNF175
ABCA3	AVEN	CELF5	DPP6	GLIS3	KIAA1644	MSMB	PGPEP1L	RBFOX3	SGCZ	TIAM1	ZNF195
ABCA4	AVPR1B	CELSR1	DPY19L4	GLRB	KIAA1875	MSR1	PHACTR1	RBMS3	SGK3	TINAG	ZNF28
ABCC11	BACH1	CENPN	DSCAM	GLYAT	KIF13B	MTG1	PHYHIPL	RCN1	SH3BP4	TLN2	ZNF492
ABCC12	BACH2	CERCAM	DST	GLYATL2	KIF26B	MTUS1	PIEZO2	RDM1	SH3RF2	TMEM117	ZNF510
AC006538.4	BAI1	CFHR1	DTX1	GOLGA8M	KIF6	MUC2	PIGG	REPIN1	SHISA6	TMEM132C	ZNF536
AC009065.1	BATF3	CFHR2	DUSP4	GOLIM4	KIRREL2	MUM1	PIGQ	RERG	SIAH2	TMEM179	ZNF568
AC017081.1	BCAS3	CFHR3	DYNC1H1	GPC5	KLHL1	MXD1	PIK3R6	RFX3	SIRPB1	TMEM192	ZNF600
AC018755.1	BCAS4	CHL1	ECI1	GPX4	KLHL31	MYLK	PKD1L1	RGL1	SLC12A1	TMEM229A	ZNF611
AC019171.1	BCL3	CIITA	ECI2	GRIK2	KRT78	MYO10	PLA2G4F	RHOBTB1	SLC14A2	TMEM232	ZNF638
AC022210.1	BCL6B	CIT	EFNA2	GRIK3	KRTAP10-4	MYO5C	PLBD2	RHOJ	SLC16A13	TMEM25	ZNF670
AC112721.1	BDH1	CLDN11	EGFLAM	GRIK4	KRTAP10-5	MYOM1	PLCE1	RILPL2	SLC1A7	TMEM44	ZNF695
ACAP3	BEGAIN	CLEC7A	EHHADH	GRIN2A	KRTAP10-6	MYRF	PLCG2	RIMS1	SLC25A21	TMEM64	ZNF705G
ACKR3	BNC2	CLMN	EIF2B1	GRM7	KRTAP10-7	MYT1L	PLCL2	RIPK1	SLC25A24	TMEM88B	ZNF775
ACTL7A	BRD1	CLSTN2	EMP2	GSE1	L3MBTL4	MZT2A	PLCZ1	RNASE3	SLC26A5	TMOD1	ZNRF2
ACTR3C	BRMS1L	CNTFR	ENGASE	GTF2H3	LAMA2	NAALADL2	PLEKHG1	RNPS1	SLC26A7	TMPRSS9	
ACTRT2	BTBD11	CNTN3	ENPP1	GTSE1	LAMC1	NARFL	PLEKHG4B	RP11-108K14.8	SLC35C1	TMTC2	
ADAM28	BTBD2	CNTN4	EPB41L3	H2AFY2	LAMC2	NAV2	PLEKHG5	RP11-15E18.4	SLC39A10	TNFAIP6	
ADAMTS17	C12orf4	CNTN6	EPB41L4A	HAGH	LAMP5	NBEA	PLEKHS1	RP11-169F17.1	SLC44A1	TNKS	
ADAMTS3	C12orf45	CNTNAP2	EPHA6	HAGHL	LAPTM4A	NBPFF6	PNLIIPRP3	RP11-215A19.2	SLC47A1	TRABD2A	
ADH7	C15orf43	COL22A1	ERBB4	HBB	LARGE	NCAM2	PNP	RP11-286N22.8	SLC4A4	TRERF1	
AGBL4	C16orf11	COL6A6	ERC1	HBD	LCN1	NCAPD2	POTEI	RP11-295P9.3	SLC6A7	TRH	
AGMO	C16orf13	CORO2B	ERC2	HBG1	LCORL	NCSTN	POU2F3	RP11-351M8.1	SLC7A5	TRIM2	
AHNAK2	C16orf46	CPAMD8	ESR1	HHIPL2	LDB2	NDST4	PPARA	RP11-385D13.1	SLC8B1	TRIM31	
AHRR	C1orf101	CPED1	ETV3L	HIVEP3	LEPROTL1	NECAB2	PPFIBP1	RP11-47I22.3	SLIT1	TRIM4	
AICDA	C1orf186	CPNE4	EXOC2	HLA-A	LGALS3BP	NEK7	PPM1H	RP11-47I22.4	SLIT3	TRIM62	
AKAP6	C1QL4	CPNE7	EXT1	HLA-B	LGR5	NFIB	PPP1R12B	RP11-505K9.4	SMC2	TRMU	
AKNAD1	C20orf96	CRELD2	EYS	HLA-C	LHX5	NFIC	PPP1R32	RP11-514O12.4	SMOC1	TROAP	
AKR1C4	C22orf42	CRHR1	FABP12	HLA-DPB1	LIMCH1	NFKBID	PPP2R2B	RP11-51L5.7	SMYD3	TRPS1	
AL033381.1	C2CD3	CRHR2	FABP2	HLA-DQA1	LINC00908	NHLH1	PPP2R5C	RP11-625H11.1	SOBP	TRPV5	
ALDH1A3	C2orf61	CRMP1	FADS2	HLA-DQB1	LINC01101	NHLRC4	PPP2R5E	RP11-761B3.1	SORCS1	TSPAN12	
ALDH1L2	C2orf91	CRTAC1	FAM107B	HLA-DRB1	LINGO1	NHSL1	PPT1	RP1L1	SORD	TSPAN5	
ALDH8A1	C3orf70	CRYL1	FAM173A	HLA-DRB5	LINGO2	NOD1	PRDM10	RP4-576H24.4	SOS1	TSPEAR	
ALG12	C3orf72	CSNK1G2	FAM189A1	HLCS	LIP1	NOTCH1	PRELID2	RP5-1052I5.2	SOX12	TSSC1	
ALG1L	C6orf201	CTB-133G6.1	FAM20B	HTR1E	LPIN3	NPHS1	PREP	RPA3-AS1	SOX6	TTC36	
AMER3	C8orf44-SGK3	CTD-2207O23.3	FAM217A	HTT	LRCH1	NREP	PRICKLE2	RPF2	SOX9	TTC38	
AMOTL1	C8orf74	CTNNA2	FAM90A26	HUS1	LRFN2	NRSN2	PRKAR1B	RPH3AL	SPAG6	TTC39C	
AMPD3	CA4	CTNNA3	FAM98C	ICA1	LRP1B	NRXN3	PRKCH	RPL13	SPAM1	TUB	
ANK2	CA5A	CTNND2	FANCD2	ICT1	LRRC4C	NSG1	PRKG1	RPS6KA2	SPATA16	TUBA3D	
ANKFN1	CACNA1H	CUEDC1	FARP1	IFFO1	LRRFIP1	NTNG1	PRPF4B	RSPO4	SPRED3	TUBA8	
ANKH	CACNA1S	CYP26B1	FARS2	IFT46	LRRTM4	NTRK2	PRPH	RSU1	SPSB3	TXLNB	
ANKRD27	CADPS	CYP2C18	FBXL17	IGF1R	LSAMP	NTRK3	PRR4	RUFY3	SS18L1	TYW1	
ANO3	CALM2	CYP2C19	FCRLA	IGFALS	LYZL6	NXN	PRR5L	RUNX2	ST18	UBE2U	
ANO6	CAMK1D	DAB1	FER1L6	IKBKAP	MACF1	NXPH1	PRRX2	RXRA	STARD9	UBE4B	
ANXA3	CAMK2A	DAGLB	FGF1	IL4R	MACROD2	OBP2A	PRUNE2	RYR1	STK10	UBN1	
AP3B1	CAMKMT	DAPK2	FGF12	INPP5D	MAD1L1	OLFM1	PTDSS1	RYR2	STX12	UCP3	
AP4S1	CAMTA1	DCTD	FGFR3	IQCA1	MAG1	OPCML	PTGFR	S100A2	STX18	UGT8	
AP5Z1	CANT1	DDX11	FJX1	IQCJ	MAGI2	OR12D2	PTPN18	S100A3	SUCLG2	UHRF1BP1	
APBA2	CAPN3	DDX60	FOXI2	IQCJ-SCHIP1	MAN2B2	OR1F1	PTPN2	S100A4	SULT2B1	ULK4	
APLP1	CAPZA3	DEF8	FO XK1	IRS1	MAP2K3	OR1L1	PTPRD	S100A5	SUMF1	UNC5B	
APOBEC4	CARD11	DEFB127	FOX L2	ITGA11	MAP3K13	OR1L3	PTPRG	S100A7A	SUN1	UPP2	
APOL3	CARKD	DEFB131	FRMD4A	ITGA6	MAPK10	OR1L6	PTPRK	SAMD3	SVOPL	USP10	
ARCN1	CARS2	DENND1A	FSHR	ITGA8	MAPK4	OR2AE1	PTPRN2	SBF2	SWI5	USP43	
ARHGAP19-SLIT1	CATSPERG	DGKI	FUT2	ITGB5	MAPK6	OR5V1	PTPRO	SBNO2	SYN3	UVRAG	
ARHGAP26	CCDC102B	DHRS7C	GABRG3	ITIH5		Mar-10	OTOG	PTPRT	SCD5	SYNDIG1L	VAMP4
ARHGEF18	CCDC136	DIP2C	GALNT14	IWS1	MATN3		PAMR1	PWWP2B	SCML4	SYNPO	VAV1
ARHGEF28	CCDC146	DIRAS1	GALNT16	JUP	MBOAT4		PAPLN	PYY	SCNN1D	SYT9	VAV2
ARHGEF33	CCDC148	DIRC3	GALNT5	KALRN	MBP		PAQR5	RAB17	SCOC	SYTL2	VGLL4
ARHGEF4	CCDC7	DISC1	GALNT9	KANK1	MCPH1		PARD3B	RAB27A	SDCCAG8	TACR3	VIT
ARL17B	CCDC78	DKK2	GALNTL6	KAZN	MEGF6		PASK	RAB40C	SDF4	TANC1	VVA8
ARL5A	CCKAR	DLGAP1	GAN	KCND2	MEP1B		PCGF3	RAD18	SDHA	TAS2R14	WFIKKN1
ART1	CCNG2	DMRT1	GAPDH	KCNH4	METTL25		PCOLCE2	RADIL	SDHC	TBC1D22A	WNT7B
ART5	CCSER1	DMRT3	GAREM	KCNH5	MFAP5		PCSK9	RALYL	SDK1	TBC1D7	WT1
ASIC2	CD96	DMTN	GC	KCNT1	MGAM		PCTP	RAN	SDK2	TEAD4	WVOX
ATAD3C	CDAN1	DNAH10	GCC2	KCTD2	MGAT5B		PDCD6	RANBP17	SDS	TEKT5	XCL1
ATF7IP2	CDH13	DNAH17	GCGR	KDEL R2	MGRN1		PDE1A	RAP1GAP2	SDSL	TENM4	XKR4
ATMIN	CDH18	DOCK4	GCH1	KEL	MLPH		PDE6B	RARB	SEC11C	TET1	XRCC4
ATP10B	CDPF1	DOCK5	GCNT3	KIAA0125	MLYCD		PDGFD	RASAL1	SEC14L3	TET3	XXYL T1
ATP2C1	CDRT1	DOCK8	GCSH	KIAA0226	MOGAT2		PDGFRL	RASGEF1B	SEMA3C	TEX36	ZC3HAV1

Appendix 14.6

ABAT	BLNK	CNTNAP3	EYS	HERC1	LINGO2	OLFM4	RALGAPA2	SLC9A9	VCAN
ABCA1	BNIP3L	COG4	FABP12	HIPK2	LMNB2	OLFML2B	RALYL	SLMO1	WDR49
ABCA3	BPIFB2	COL11A1	FADS2	HIVEP3	LNX1	OMA1	RBFOX1	SMARCA4	WDR65
ABCC12	BTBD16	COL17A1	FAM115A	HLA-A	LOXHD1	OPA3	RBM20	SMIM8	WLS
ABCC6	C10orf111	COL19A1	FAM129B	HLA-B	LRBA	OPRD1	RBM39	SNX29	WWOX
ABLM1	C10orf128	COL20A1	FAM163A	HLA-C	LRFN2	OR1C1	RCAN1	SORBS1	XKR4
ABTB2	C10orf53	COLQ	FAM170A	HLA-DMB	LRRC31	OR1I1	RELN	SOX7	XXYL1
AC011294.3	C11orf44	CPNE2	FAM174A	HLA-DQA1	LRRC3B	OR1L3	RFTN1	SPAG17	XYLB
ACBD7	C14orf37	CR1	FAM184A	HLA-DQB1	LRRC7	OR2W3	RHOA	SPINK5	ZBTB49
ACE	C15orf27	CSMD1	FAM19A1	HLA-DRB1	LRRC72	OR4D10	RHOBTB1	SPOCK1	ZDHHC14
ACOT11	C19orf69	CTC-435M10.3	FAM21C	HLA-DRB5	LRRIQ4	OR51B6	RHOJ	SPSB3	ZDHHC19
ACTL7A	C1orf112	CTIF	FAM83A	HP55	LSAMP	OSBPL3	RIMS2	SQSTM1	ZFPM1
ACTL7B	C20orf26	CTNNA3	FAM83B	HSD17B11	LURAP1L	P4HA1	RNF166	SRCIN1	ZNF276
ACTR3C	C20orf78	CTTNBP2	FAM83C	HSD17B4	LYN	PALLD	RNF220	SRGAP3	ZNF286B
ADAM29	C22orf42	CXCL12	FAM90A26	HTR2A	LYZL1	PALM2	ROBO1	SSR1	ZNF385D
ADAMTS9	C2CD4D	CYP2C19	FANCA	HTR4	MAN2A2	PALM2-AKAP2	ROBO2	SSUH2	ZNF536
ADCY1	C3orf22	CYP4F12	FARS2	HTRA1	MAPK4	PARP6	ROR2	ST3GAL3	ZNF705G
ADGB	C4orf17	DAB1	FBN2	IGF2BP3	MB	PCLO	RORC	ST5	
ADORA2B	C4orf33	DAGLB	FBXL17	IGFALS	MBOAT1	PCSK9	RP1-102H19.8	STK10	
AGBL1	C5orf45	DAPK2	FCRLA	IGFBP7	MCC	PDCD1LG2	RP11-169F17.1	STK32A	
AHNAK	C5orf46	DAZL	FGGY	IKBKAP	MCF2L	PDE7B	RP11-210M15.2	STK32B	
AKAP2	C5orf66	DCC	FGL1	IL34	MCTP1	PDGFRL	RP11-352D3.2	SUMF1	
AKR1C4	C6	DCLK1	FHDC1	INIP	MECOM	PDPR	RP11-408E5.4	SUZ12	
AKT3	C9orf152	DCLK2	FIP1L1	INMT	MEGF11	PEX5L	RP11-463C8.4	SVEP1	
AL049747.1	C9orf91	DCPS	FLG	INMT-FAM188B	MEGF6	PGM1	RPP38	SVOPL	
AL050302.1	C9orf92	DDX25	FLNB	INPP4B	METTL6	PHACTR2	RTN1	SYT2	
AL121761.2	CA8	DDX60L	FMN1	INSC	MITF	PIEZO2	RYR1	TACC2	
AL160286.1	CACNA1S	Dec-01	FMN2	IQCJ	MLIP	PIF1	SAMD3	TBATA	
AL592284.1	CALB2		FOCAD	IQCJ-SCHIP1	MMP14	PIGG	SBF2	TBC1D22A	
ALDH1A1	CAMTA1	DGAT2	FRMD4A	IRAK2	MNS1	PINX1	SCAPER	TBX15	
ALPK1	CAND2	DGKH	FRMD6	ISPD	MOBP	PIWIL4	SCARA5	TECTB	
AMPD3	CAPN12	DIP2C	FSIP1	ITGB8	MOGAT2	PKM	SCFD2	TEX14	
AMPH	CAPN9	DKK2	FSTL5	ITIH3	MPPED1	PKNOX2	SCGB3A2	TEX9	
ANKDD1A	CCDC113	DLEU1	FUK	ITPR1	MRAP2	PLCE1	SCN5A	THEM5	
ANKMY2	CCDC33	DMBT1	FUT3	ITPR3	MRGPRX1	PLCG2	SCP2D1	THSD4	
ANKRD55	CCDC39	DMRT1	FUT8	JADE2	MSMO1	PLEKHA4	SCUBE1	THSD7A	
AP003774.4	CCDC85C	DNAH11	FYB	JAKMIP2	MTPAP	PLK5	SDCCAG8	TIMM13	
AP1B1	CCNJL	DNAH9	GALC	KALRN	MTRNR2L12	PON2	SDK1	TLR5	
AP1G1	CCR3	DNAJC12	GALNT15	KCNE1	MTUS1	POR	SEMA5A	TMC6	
AP4S1	CD226	DPEP1	GALNT16	KCNMB2	MUC13	POU2AF1	SERINC5	TMCO4	
APOL3	CD276	DPP6	GAREM	KCNMB3	MUC2	POU6F2	SERPINA6	TMEM114	
APOL6	CD96	DPT	GCHFR	KCNN3	MUC22	PPAPDC3	SFRP4	TMEM156	
ARAP2	CDC42SE2	DPYS	GCNT3	KCNQ5	MYO16	PPM1E	SFTPA2	TMEM196	
ARHGAP24	CDON	DPYSL3	GGTLC1	KDEL2	MYO5A	PPP1R15A	SGCD	TMEM2	
ARHGAP44	CDYL2	DTNA	GIN3	KDM1B	MYO5C	PPP2R3A	SGCZ	TMEM63C	
ARHGEF38	CEACAM18	DYNC1H1	GJB7	KDM4C	MYPN	PPP2R5C	SH2D3C	TMOD1	
ARID5B	CEACAM21	EAF1	GLDN	KIAA1614	N4BP2L1	PRAMEF2	SH3BGR12	TMPRSS15	
ARMS2	CEACAM7	EBNA1BP2	GLIS3	KIF25	NALCN	PRDM10	SH3BP5	TMPRSS9	
ARNT2	CELA3B	ECM2	GNA12	KIR2DL1	NDST3	PRDM6	SH3RF2	TNFAIP8	
ARPP19	CELF4	EDEM2	GNB5	KIR2DL3	NEBL	PREP	SHISA3	TNFRSF1B	
ART1	CELF5	EFCAB6	GOLGA8M	KIR2DL4	NEK10	PRKAR1B	SHISA9	TNIK	
ASIC2	CELF6	EFCAB9	GPC5	KIR3DL1	NEK11	PRSS23	SHPK	TNKS	
ASPG	CENPP	EFNB2	GPC6	KLF12	NIPAL3	PRSS54	SHROOM3	TRAPP39	
ASXL3	CEP128	EGFR	GPR98	KLHL8	NIT2	PSD3	SIGLEC12	TRIM9	
ATF7IP2	CERK	EIF2AK4	GRHL3	KRT32	NLRP1	PSG11	SKP2	TRPM3	
ATP10B	CFHR2	ELFN2	GRID2	KRT36	NME8	PSG2	SLC12A7	TRPM4	
ATP11A	CFHR3	ELMO1	GRK4	L3HYPDH	NMNAT3	PSG4	SLC1A3	TRPM7	
ATP13A4	CHAT	ELMOD1	GRM7	L3MBTL4	NNT	PSG5	SLC22A23	TRPV1	
ATP1B1	CHL1	ENPP6	GRXCR2	LAMA1	NOTCH4	PSG9	SLC24A3	TSPAN5	
ATP2B2	CIITA	EPB41L4A	GSE1	LAPTM4B	NPRL3	PSMG4	SLC2A9	TTC39B	
ATP2C1	CLCA1	EPC1	GSR	LARGE	NREP	PSTPIP1	SLC30A10	TXN	
ATP5SL	CLCN7	EPDR1	GSTO1	LDHD	NRG1	PTGER3	SLC35F1	TXNDC8	
ATP8A1	CLDN11	EPHA5	HAGH	LEMD2	NRP1	PTPRD	SLC37A1	TYW1	
ATXN1	CLPS	EPHX2	HBE1	LGALS2	NTM	PTPRK	SLC39A8	UBE2E2	
AXDND1	CLPSL1	ERCC1	HBG2	LGALS4	NTN1	PTPRN2	SLC47A1	UMODL1	
AXL	CLYBL	ERGIC3	HBS1L	LGI1	NTNG1	PTPRT	SLC4A4	USP13	
BAI3	CMIP	ERVMER34-1	HCK	LHFPL2	NUBPL	PUS7	SLC6A3	USP14	
BANK1	CMTM7	ESYT3	HCN4	LHFPL3	OBSCN	PVRL1	SLC6A4	UST	
BCKDHA	CNTN5	EVPLL	HDAC9	LHX4	OCA2	RAB3IL1	SLC7A13	UVRAG	
BEGAIN	CNTNAP2	EXOC2	HECW1	LIMD1	OFCC1	RABGAP1L	SLC7A9	VAT1L	

Appendix 14.7

AAED1	C19orf25	CRYL1	FGF12	KIAA1467	NAV2	PPFIA1	SEC62	TMEM132D
AAK1	C1orf185	CSGALNACT1	FGL1	KIAA1549	NCAPD3	PIIP5K2	SEMA5A	TMEM14C
ABCA3	C1orf186	CSMD1	FJX1	KIAA1875	NCKAP5	PPM1D	SERPIN1	TMEM179
ABCC12	C22orf34	CSNK1D	FLG	KLHDC1	NCOA2	PPP1CA	SEZ6L2	TMEM213
AC104472.1	C2CD5	CTB-133G6.1	FMN2	KLHL31	NDUFB10	PPP2R5C	SFRP5	TMEM232
ACER1	C2orf61	CTC-429P9.4	FOLR3	KRTAP10-5	NEB	PPP2R5E	SGCD	TMEM64
ACKR3	C3orf33	CTC-432M15.3	FOXP1	KRTAP10-6	NEBL	PRELID2	SGPP1	TNIK
ACMSD	C3orf70	CTD-2207O23.3	FRMD8	KRTAP10-7	NEDD4L	PRKCH	SH3BP4	TP53TG5
ACVR1	C4orf27	CTD-2349B8.1	FUT2	LAMA1	NEK1	PRKCI	SH3RF2	TPRG1
ACVR1C	C6orf201	CTD-3088G3.8	FYB	LAMA2	NEK11	PRPH	SHARPIN	TRIM16
ADAMTS17	C6orf52	CTIF	FYTTD1	LAMP1	NFIB	PRPSAP1	SHCBP1L	TRIM72
ADIG	C7orf34	CTNNA3	GALNT13	LDB2	NFIC	PRR25	SHISA6	TRMU
ADRBK1	C9orf3	CTTN	GALNT5	LEPROTL1	NHSL1	PRRX2	SLC12A1	TROAP
AFAP1L2	CA5A	CYB5A	GAREM	LGALS4	NKAIN2	PRSS33	SLC16A3	TRPS1
AGBL4	CABP4	CYLD	GAS7	LHFPL3	NKD1	PRUNE2	SLC24A2	TRPV5
AGMO	CABYR	CYP46A1	GCG	LIMCH1	NLRP4	PSMC2	SLC24A3	TRPV6
AL033381.1	CACNA1C	CYTIP	GCH1	LINGO2	NOX3	PTGIS	SLC25A20	TRUB2
AL359091.2	CACNB4	DACH1	GCNT6	LPHN3	NOXO1	PTPN2	SLC25A26	TSNARE1
ALDH1A3	CALM2	DBX2	GDAP2	LRFN5	NPAS3	PTPRC	SLC26A3	TSPAN9
ALDH1L2	CAMK1D	DCTN6	GGT1	LRIG2	NR1H4	PTPRK	SLC26A5	TSPEAR
ALDH3A1	CAMK2A	DEFB127	GLYATL2	LRIG3	NR6A1	PTPRN2	SLC26A7	TTC38
ALG1L	CAMSAP1	DEPDC1	GNA13	LRP1B	NREP	PTPRO	SLC33A1	TTC39C
AMOTL1	CAMTA1	DEPDC4	GNAL	LRRCS5	NRG1	R3HDM1	SLC4A4	TTLL11
ANAPC15	CAPN15	DGKI	GNAT3	LRRFIP1	NRSN2	RAB3GAP1	SLC7A1	TUBA1B
ANKFN1	CARNS1	DHH	GNG13	LRRIQ4	NRXN1	RAB40C	SLCO6A1	TUBB8
ANKH	CASP4	DIRC3	GNG7	LRRTM4	NRXN3	RACGAP1	SMIM7	TVP23A
ANKRD13D	CASP5	DISC1	GNPTG	LRTOMT	NTNG1	RAD18	SMURF2	TWIST1
ANKRD30B	CBLC	DMRT1	GOLGA6L2	LSAMP	NTRK3	RAD9A	SMYD3	TXLNB
ANKRD30BL	CCDC102B	DMRT3	GOLIM4	LSM14B	NUBP2	RALGAPA1	SNX15	UBN2
ANO6	CCDC172	DNAH6	GPR152	MAF1	NUDT16	RAP1GAP	SNX20	UFM1
ANP32A	CCDC78	DNAJC2	GPR39	MAGI2	NUTM2G	RAPGEF4	SORD	UGT8
ANTXR1	CCSER1	DOCK4	GPR98	MAP2	OBP2A	RAPGEF6	SOX12	UNC13C
ANXA3	CD36	DOCK5	GRB7	MAP3K19	OLFM1	RARB	SPATA16	UNC5C
ANXA4	CDH12	DOCK8	GRIK2	MAP3K3	OPCML	RBFOX3	SPATA6L	UNKL
AP001885.1	CDH13	DPP10	GRM1	MAP3K5	OR1L6	RCBTB2	SPINK13	UPP2
APC2	CDH9	DPP6	GSE1	MBOAT4	OR4K15	RCN1	SPSB3	URM1
ARHGAP10	CDIPT	DSG4	GSF2	MCOLN2	ORAOV1	RCSL1	SRGAP1	USP24
ARHGAP40	CDPF1	EGFLAM	GTSE1	MECOM	OSBPL1A	RELN	SS18L1	UVRAG
ARHGEF18	CDYL	EGR4	H2AFY	MEGF6	P2RY1	RFX2	SSH3	VIPR2
ARHGEF26	CELSR1	EHHADH	HAGHL	MEGF9	PABPN1L	RFX3	STAM2	VPS37B
ARHGEF28	CENPN	EIF2B3	HBE1	MEIOB	PACS1	RGL4	STAT5A	VTCL1
ARHGEF33	CERCAM	EIF4EBP1	HBG1	METRNL	PACS2	RGS20	STK10	WDHD1
ARHGEF4	CHN1	ELAVL4	HBG2	MFSD11	PAH	RHEBL1	STUB1	WDR24
ARID1B	CHRNA6	EMC8	HEATR3	MFSD7	PAM	RIMBP2	SUCLG2	WDR72
ARL5A	CHTF18	EME2	HHIPL2	MICALL2	PAMR1	RNASE3	SWI5	WDR89
ARNT2	CIITA	EML1	HIATL2	MKL2	PAPD4	RND3	SYNDIG1	WFIKKN1
ART1	CINP	EMP2	HIPK2	MKX	PAQR3	RNF121	SYS1-DBNDD2	WWOX
ASPHD1	CLASP1	EPB41L3	HMCN1	MLIP	PAX1	RP11-15E18.4	SYT17	XRCC4
ATAD3C	CLCF1	EPHA6	HSD17B2	MLPH	PCDH9	RP11-169F17.1	SYT9	XRCC6BP1
ATF2	CLEC2L	EPHB6	HUS1	MMP28	PCSK9	RP11-244H3.4	TACR3	ZDHHC14
ATMIN	CLPB	EPS15L1	HUS1B	MRAP2	PDE7B	RP11-399J13.3	TBC1D10C	ZFYVE27
ATP2B4	CMC2	ERC1	IGSF23	MROH1	PHLDB2	RP11-47I22.3	TBC1D19	ZFYVE9
ATP6V0A4	CNTNAP2	ERMN	IQCA1	MROH9	PI4K2A	RP11-47I22.4	TBC1D2	ZMYM1
AVPR1B	CNTNAP3	ESR1	ITGA8	MSH4	PIEZO2	RP11-514O12.4	TBC1D22A	ZMYM6
BACH2	COBLL1	EVI5	ITGAE	MSI2	PIGG	RP11-761B3.1	TBL3	ZMYM6NB
BANK1	COL17A1	EVL	ITGAM	MSLN	PIK3C2G	RPE65	TBXAS1	ZNF326
BCAS3	COL22A1	EXOC2	JAM3	MSLNL	PIP5K1B	RPL3L	TDP1	ZNF423
BCKDHB	COL28A1	EYS	JMJD8	MSR1	PKD1L1	RPS6KA2	TEAD1	ZNF469
BEGAIN	COL4A2	FABP12	KANK1	MTFR2	PKHD1	RPS6KB2	TEKT5	ZNF510
BMP2K	COL6A6	FABP4	KCNAB1	MTMR6	PKNOX2	RPUSD1	TENM2	ZNF536
BNC2	COQ4	FABP9	KCNB1	MTRNR2L12	PLCB1	RSU1	TENM4	ZNF554
BPTF	COTL1	FAM168A	KCNH7	MTUS1	PLCH1	RITN	TET1	ZNF562
C12orf4	COX4I1	FAM168B	KCNH8	MYADM	PLEKHB2	RXFP1	TEX2	ZNF782
C12orf45	CPAMD8	FAM173A	KCNQ5	MYO3A	PLEKHG5	RXRA	THOP1	ZNF839
C14orf79	CPEB2	FAM217A	KCTD13	MYO3B	PLXNA4	SAC3D1	THRB	ZNRF2
C15orf41	CPNE4	FAM65C	KDM2A	NAALADL1	PMPCB	SATB2	THSD7B	ZRANB3
C15orf60	CPPED1	FAM83A	KDM2B	NAALADL2	PNLIPRP3	SCML4	TMEFF2	
C16orf13	CREB3L2	FAP	KEL	NANOS3	POGZ	SCYL2	TMEM117	
C16orf46	CREM	FBXL16	KIAA0226	NAPEPLD	POLD4	SDHC	TMEM132B	
C17orf50	CRLF3	FGF10	KIAA1009	NARFL	PPARA	SDK1	TMEM132C	

Appendix 14.8

AADACL4	C14orf39	CTC-432M15.3	FGD3	ITSN1	MFAP3	PCDH7	RBPJ	SLIT3	TSPAN9
AARS2	C1orf101	CTD-2054N24.2	FGF1	JADE1	MGRN1	PCNXL2	RCAN2	SLX4IP	TSPEAR
ABCC1	C1QTNF1	CTD-2144E22.5	FHIT	JAKMIP3	MGST2	PDCD6IP	RCSD1	SMAD3	TSSK3
ABCC6	C20orf194	CTD-2228K2.5	FKBP9	KANK1	MICAL3	PDE7B	RD3	SMG1	TTBK1
ABCD4	C21orf90	CTD-3074O7.11	FREM2	KANK4	MICU3	PDGFD	REEP1	SMIM11	TTC6
ABI3BP	C4orf17	CTDSP2	FRMD6	KANSL2	MIPOL1	PDHX	RELN	SMIM14	TTI2
ABL2	C4orf22	CTDSPL	FRS2	KCND2	MNAT1	PELI3	RGS3	SMURF2	TXLNA
ABLM2	C5orf63	CTNNA2	FRY	KCNIP4	MRPL11	PFDN2	RGS6	SNTB2	TXNRD1
ABR	C9orf114	CTNND2	FSHR	KCNK9	MRPS22	PGR	RGS7	SNX29	UBE2K
AC026740.1	CABLES1	CTNS	FUOM	KCNMB4	MRPS6	PICALM	RNF103-CHMP3	SOGA3	UBE2Q2
AC105020.1	CACNA2D3	CUL3	FUT10	KCNQ1	MS4A5	PID1	RNF150	SORCS2	UBR2
AC226150.4	CALB2	CXCL13	FZD4	KCNQ5	MTA3	PIEZO2	RNF4	SOX6	UFC1
ACACB	CALU	DAB1	GAL3ST2	KHDRBS1	MTHFD1L	PISD	RNLS	SPAST	UNC79
ACTR3C	CAMKK2	DAPK1	GALNT10	KIAA0319L	MTHFD2	PLCD1	ROBO1	SPATA16	USP20
ACVRL1	CAMTA1	DCLK1	GALNT18	KIAA1244	MTUS2	PLCH1	ROR2	SPINK5	USP21
ADAM19	CAND2	DEDD	GALNT9	KIF15	MYLK4	PLCXD2	RORA	SPNS3	USP41
ADAMTS16	CCBL1	DENND1A	GALNTL6	KIF16B	MYO1E	PLEKHG1	RP11-1105G2.3	SPOCK1	VILL
ADAMTS17	CCBL2	DGKB	GAS8	KIF26B	MYT1L	PLXDC2	RP11-127H5.1	SRGAP1	VPS13B
ADAMTS4	CCDC129	DGKI	GCNT3	KLF12	NAA30	PLXNA2	RP11-162A12.2	ST6GALNAC3	VPS41
ADAMTSL1	CCDC149	DHRS12	GGPS1	KLHDC9	NADK	PLXNC1	RP11-287D1.3	ST7	VRTN
ADAMTSL3	CCDC28B	DLG2	GIF	KLHL1	NADSYN1	PPHLN1	RP11-302M6.4	STK10	VSTM2L
ADARB2	CCDC41	DLGAP1	GIMAP8	KLHL14	NALCN	PPM1A	RP11-444E17.6	STK32B	VWA8
ADCY10	CCDC57	DNAH11	GLI3	KLHL32	NAMPT	PPM1L	RP11-51L5.7	STX8	VWC2
ADCY2	CCDC59	DOCK5	GLRA1	KLHL6	NANS	PPME1	RP11-571M6.15	SUGCT	WBSCR17
ADCY3	CCDC63	DPP10	GLRA3	KPNA6	NAV2	PPOX	RPH3A	SUMF1	WDFY2
ADH7	CCDC67	DPP3	GMDS	KRTAP10-1	NBAS	PPP1R36	RPS6KL1	SUSD5	WDFY4
ADRB3	CCDC83	DPP6	GNA12	KRTAP29-1	NBEA	PPP2R3A	RSAD2	SYCP2	WDR27
AFF3	CCDC91	DPY19L2	GNAQ	KRTAP4-2	NCAM1	PPP2R5D	RTF1	SYN3	WDR64
AGPAT4	CCR7	DRG1	GNAS	KRTAP4-3	NCKAP5	PRAP1	RUNX1	SYNJ2	WNT8B
AICDA	CD36	DSCAM	GOLGA8A	KRTAP4-4	NCOA1	PRDM1	SAMD3	SYT2	WWOX
AIM2	CD8B	DTNA	GORASP2	KRTAP4-5	NCOA3	PRDM2	SASH1	SZRD1	WWP2
AKAP2	CDH12	DTNB	GPATCH2	KRTAP5-10	NDNF	PRELID2	SCD5	TACR1	XKR4
AKR1D1	CDH15	DUSP16	GPATCH2L	KRTAP5-7	NDUFB8	PRICKLE2	SCGB3A2	TANGO6	XPO5
AL441883.1	CDH8	DUSP4	GPATCH8	KRTAP5-9	NDUFS2	PRIM2	SCUBE1	TARBP1	YAP1
ALX1	CDHR3	DYNC1I1	GPC6	KRTAP9-9	NEGR1	PRKCA	SCYL2	TAX1BP3	ZBED6CL
ANGPTL1	CDK6	ECHS1	GPHN	L3MBTL4	NHP2	PRKCB	SDK1	TBC1D13	ZCCHC7
ANKRD28	CELF2	EIF4ENIF1	GPR124	LAMA2	NHSL1	PROSC	SDS	TBC1D22B	ZDHHC21
ANKRD33B	CENPO	EMCN	GPR128	LAMC1	NID2	PROX1	SEC31B	TBC1D23	ZDHHC24
ANXA4	CEP135	ENDOG	GRAMD1B	LARGE	NIT1	PRPH2	SELO	TBC1D4	ZER1
AOAH	CEP41	ENPP3	GREB1	LARP1B	NIT2	PRR16	SEMA3C	TCN1	ZFAT
AP000304.12	CEP72	EPHA6	GRID1	LHX2	NKAIN2	PRR5L	SEMA4D	TDRD9	ZFPM2
APOBEC3H	CESSA	EPHB1	GRIN3A	LIN7A	NLGN1	PRSS23	SERGEF	TENM2	ZMYM4
ARHGAP22	CHFR	ERC1	GRM4	LINGO1	NLK	PSD4	SFI1	TENM4	ZNF268
ARHGAP24	CHMP3	ERLIN2	GRM7	LINGO2	NMNAT3	PSMG4	SFPQ	TGM6	ZNF281
ARHGAP44	CHODL	ESRRB	GRXCR2	LIPI	NOL7	PTCRA	SFTPA1	THEMIS	ZNF407
ARHGEF3	CHSY1	ETF1	GSG1L	LMBRD1	NPAS2	PTK7	SH3RF2	TIAM2	ZNF484
ARID1B	CIRH1A	EXOC3	GSG2	LPP	NPC1L1	PTPN18	SHANK3	TLE4	ZNF511
ARSG	CLDN11	EYS	GSTO1	LRIG1	NRG4	PTPRB	SIM1	TMED3	ZNF831
ASAH2B	CLVS1	FAM107B	HDAC1	LRRC37A3	NRXN1	PTPRC	SIRPB2	TMEM117	ZRANB3
ASIC2	CMPK2	FAM153B	HEATR2	LRRC4C	NRXN3	PTPRD	SIRT5	TMEM178A	
ASTN1	CNTN4	FAM155A	HECW1	LRRC61	NTM	PTPRG	SIX1	TMEM241	
ATP2B2	CNTN6	FAM161B	HIF1AN	LRRC8C	NTRK2	PTPRK	SIX4	TMEM33	
ATP5C1	COL15A1	FAM163A	HIVEP2	LRRK1	NUGGC	PTPRR	SKAP2	TMEM39B	
ATP8A2	COL22A1	FAM184B	HMGCLL1	LRRTM1	ODF3L1	PTPRT	SLC14A2	TMEM45A	
ATRNL1	COL4A1	FAM194A	HOMER2	LSAMP	OFCC1	PTRHD1	SLC15A5	TNRC6C	
AVL9	COQ6	FAM19A4	HOOK1	LTBP1	OR2AE1	RAB11FIP1	SLC16A3	TOMM70A	
AXDND1	COX7B2	FAM19A5	HOXD8	LTBP2	OR5AN1	RAB6C	SLC22A2	TOP2B	
B3GNTL1	CPLX1	FAM227B	HTRA1	MAD1L1	OSBPL6	RABEP1	SLC24A3	TOR1A	
B4GALT3	CPNE7	FAM230A	IFI16	MAGI1	P2RX5	RABGAP1L	SLC25A17	TOR1B	
BAI3	CPOX	FAM46A	IGF1R	MAGI2	P2RX5-TAX1BP3	RAD51B	SLC25A21	TOR3A	
BBS1	CPVL	FARS2	IKZF1	MAGI3	P4HA3	RALGAPA2	SLC2A10	TPPP	
BCAS3	CRADD	FBP1	IL17B	MAK16	PACRG	RALGPS2	SLC30A7	TRABD	
BCL11B	CREB5	FBXL17	IL1RN	MAP2K6	PALD1	RAMP3	SLC36A4	TRAPPC9	
BCR	CRP	FBXO22	IMP4	MAPK10	PALM2	RANBP9	SLC38A6	TRERF1	
BMPER	CSGALNACT1	FBXO40	IRS1	Mar-03	PALM2-AKAP2	RAPGEF6	SLC41A2	TRIM14	
BPIFC	CSMD1	FBXO7	ITFG1		PANX2	RARB	SLC44A1	TRIM27	
BRINP3	CSMD2	FBXO8	ITGAD	MECOM	PARK2	RASEF	SLC47A1	TRIM4	
BTN2A2	CSNK1D	FCER1G	ITGAE	MEIG1	PARM1	RBFOX1	SLC4A4	TRMT5	
BTN3A1	CSPG4	FER1L6	ITGBL1	METTTL21B	PAX9	RBMS3	SLC5A3	TSFM	
C14orf37	CTAGE9	FEZ2	ITPR1	METTTL22	PCDH15	RBMXL1	SLCO3A1	TSHZ1	

Appendix 14.9

AAGAB	BACH2	CCDC87	CRY2	ERCC2	GLRA1	IMMP2L	LMTK2	MYCBP2	PCDHA2	PSMG2	RP11-192H23.4	SLC4A4	TCTN1	UBE2D2
ABCE1	BANK1	CCDC88C	CSDE1	ESRRG	GLRX2	INPP4A	LOXHD1	MYH10	PCDHA3	PTAFR	RP11-321N4.5	SLC5A3	TDGF1	UBE2H
ABHD16B	BAP1	CCDC91	CSMD1	ETFDH	GLTSCR1L	INPP4B	LPAR2	MYLK	PCDHA4	PTEN	RP11-770J1.4	SLC6A11	TDRD6	UBE2L3
ABI3BP	BBX	CCL8	CSMD3	ETS1	GMP5	INPP5A	LPP	MYT1L	PCDHA5	PTPN13	RPAP2	SLC9A1	TEX264	UBE2V2
AC006486.1	BCAP29	CCNY	CSRNP3	EXD2	GNAL	INPP5F	LRCH4	N4BP2	PCDHA6	PTPN3	RPS10-NUDT3	SLCO1B1	TFDP2	UBE3D
AC006486.9	BCAR3	CCS	CTD-2267D19.3	EXOC4	GNAQ	INTS6	LRIF1	NADK	PCDHA7	PTPRD	RPS3	SLC05A1	TFEC	UBR1
AC011997.1	BCHE	CCSER1	CTDSP2	EXOC6	GNB1	INTS7	LRP1B	NANS	PCDHA8	PTPRG	RPS6KC1	SLIT3	TGIF2	UBR5
AC024940.1	BCKDHB	CCT8	CTNNA3	EXOC6B	GNG2	IPPK	LRP6	NCAPD3	PCDHA9	PTPRK	RPTN	SLMAP	TGIF2-C20orf24	UCHL5
AC073342.1	BCL2L14	CD36	CTNBNL1	EXTL2	GOLGA4	IQCH	LRRC2	NCK2	PCDHAC1	PTPRO	RRM2B	SLX4	THEMIS	UGGT2
ACOXL	BCL2L2	CD86	CTTN	EYS	GOPC	IQCJ	LRRC41	NCKAP5	PCDHAC2	PTPRQ	RRP15	SMARCA4	THSD4	UGT2B11
ACPP	BCL2L2-PABPN1	CD96	CUZD1	EZH2	GPATCH2	IQCJ-SCHIP1	LRRC4C	NCOA1	PCDP1	PTPRZ1	RSPH3	SMG7	THSD7B	UPF1
ACSL6	BCL7B	CDC42	CYTH1	FADS1	GPBP1	IQSEC1	LRRC6	NCOR2	PCGF1	QRFPF	RSPRY1	SMNDC1	TIA1	UPF2
ACTN2	BIRC2	CDC6	DAB1	FADS2	GPHN	ISPD	LRRIQ1	NDRG3	PCK2	QRICH1	RTEL1	SMURF1	TMC1	UQCR11
ACTN4	BIRC6	CDH6	DAB2IP	FAHD2A	GPM6A	ITGA5	LSAMP	NDST1	PDE4B	QSER1	RTEL1-TNFRSF6B	SMYD2	TMCC2	UQCR1
ACVR1C	BOLL	CDK5RAP2	DBF4B	FAM117A	GPR116	ITGA9	LSMEM2	NDUFAF6	PDE7B	RAB25	RTN1	SMYD3	TMCO4	UQCRH
ADAMTS17	BRD4	CDK6	DCAF4L2	FAM154B	GPR158	ITGB1	LUC7L	NECAB3	PDS5A	RAB27A	RTN3	SND1	TMCO5A	USH2A
ADCY1	BRIP1	CDRT15L2	DCC	FAM172A	GPT	ITGB6	LYPLA2	NEGR1	PEAK1	RAB3B	RUNX1	SNRNP70	TMEM127	USP16
ADRBK2	BRIX1	CEL	DCDC1	FAM217B	GRAP2	ITPK1	LYRM2	NEK11	PEG10	RAB3IP	RYBP	SNTG2	TMEM130	USP30
AFAP111	BRPF3	CENPF	DCP1B	FAM228B	GRIA1	ITPKB	MACROD2	NELL2	PELI2	RAB6B	RYR1	SNX24	TMEM132B	USP31
AGAP1	BSX	CEP57L1	DDX10	FAM24B	GRID1	ITPR2	MAGI3	NFAT5	PET112	RABAC1	RYR2	SOBP	TMEM139	UVRAG
AGBL1	BTBD9	CEP70	DEDD2	FAM46A	GRID2	ITSN1	MAN2C1	NFE2	PEX1	RABGEF1	SAE1	SOGA1	TMEM145	VAV3
AGK	C10orf11	CEP76	DGCR8	FAM49B	GRIK1	ITSN2	MANBAL	NFIA	PGR	RABL3	SAMD12	SOS1	TMEM178B	VKORC1L1
AGO3	C10orf76	CEP78	DHFR1L	FAM60A	GRIK2	KANSL1L	MAP3K12	NFIX	PHACTR3	RAD1	SAR1B	SPAG17	TMEM182	VPRBP
AHD1	C11orf80	CEPT1	DHX36	FAM65B	GRIK5	KAT7	MAPK1	NISCH	PHF14	RAD51B	SCAF11	SPAG5	TMEM237	VPS13B
AIG1	C15orf41	CERS6	DIAPH1	FANCC	GRM7	KCNAB1	MAPK10	NKAIN1	PHF7	RAD54L	SCAF8	SPAG9	TMEM241	VPS13D
AIM2	C16orf80	CES3	DIS3L2	FAP	GSAP	KCNH8	MAPK8	NLK	PHLPP1	RAD54L2	SCARA3	SPATA16	TMEM248	VPS36
AKAP11	C18orf25	CFHR2	DISC1	FAT4	GSK3A	KCNIP4	MAPT	NLRP1	PI4KB	RALGAPA2	SCLT1	SPECC1	TMEM258	VSNL1
AKAP2	C18orf54	CFHR4	DKK2	FBXL13	GSKIP	KCNK6	MATR3	NMUR2	PID1	RALYL	SCMH1	SPEP1	TMEM5	VTA1A
AKAP7	C19orf52	CHCHD6	DLEU1	FBXL7	GSTK1	KCNMB2	MAX	NOL4	PIG5	RANBP17	SDF2	SPOCK3	TMEM53	VWA3A
AKR1C4	C1orf27	CHMP3	DLG2	FBXO24	GTDC1	KCNQ3	MBD3	NOX5	PIGV	RANBP9	SDS	SPOP	TMEM54	VWA8
AKR1C11	C1QTNF1	CHRM3	DLGAP1	FBXW2	GTF2E1	KCNT2	MBNL1	NPNT	PIK3R5	RAP2A	SEC11A	SPOPL	TMTC2	WDFY2
AL596220.1	C1QTNF1-AS1	CHST9	DLGAP4	FCHO2	GTF2IRD1	KCTD3	MBNL2	NR3C1	PITHD1	RAPGEF2	SEC24A	SPRED2	TMX4	WDR73
ALPK1	C20ORF135	CHSY1	DMTF1	FCHSD2	GTF3C1	KCTD7	MBOAT2	NR6A1	PIWIL2	RAPGEF3	SEC24D	SPTBN2	TNFRSF10D	WIF1
AMBRA1	C20orf24	CHURC1-FNTB	DNAJC13	FCRL2	HADHB	KIAA0100	MCF2L2	NRG3	PKD2	RASEF	SEC61B	SRSF4	TNFRSF6B	WNT3A
ANAPC10	C21orf49	CIC	DNAJC15	FDCSP	HAT1	KIAA0226L	MCTP1	NRL	PKHD1	RASL10B	SECISBP2	SSBP2	TNFSF13B	XIRP2
ANK2	C2orf42	CKAP2	DNM2	FEN1	HCN1	KIAA0319L	MDFIC	NRXN1	PLBD2	RBFOX2	Sep-14	SSFA2	TNRC6B	YIPF2
ANKIB1	C2orf78	CKS2	DNM3	FER1L6	HDAC3	KIAA0586	MED13	NRXN3	PLCB1	RBL1		SERAC1	SSH2	TOMM20L
ANKRD52	C4orf19	CLASP1	DOCK3	FGF6	HDAC9	KIAA0825	MEGF10	NSUN3	PLCE1	RBM14-RBM4	SERINC3	ST7	TOP1	ZBTB1
ANKRD6	C4orf22	CLASP2	DOPEY1	FGFR1	HDHD2	KIAA1147	MEGF11	NUDCD3	PLCL1	RBM15B	SERP2	ST7-OT4	TOP2A	ZBTB34
ANKS1A	C4orf40	CLCA2	DPH5	FGFR1OP	HECTD1	KIAA1199	MEGF8	NUDT21	PLEKHG1	RBM4	SERPINB7	STAC	TP53I3	ZBTB41
ANKUB1	C4orf46	CLDN10	DPP10	FGFR2	HERC2	KIAA1211L	MEI4	NUDT3	PLK4	RBM45	SERPINE3	STAG1	TP63	ZBTB48
AP000304.12	C8orf22	CLN8	DPY30	FGGY	HERC6	KIAA1217	MEMO1	NUP214	PLXNA2	RBM4B	SESN1	STARD7	TPD52	ZC3H8
AP2B1	C9orf147	CLVS1	DRG1	FHIT	HEXIM2	KIAA1328	MEOX2	NUS1	POC1A	RCE1	SETPB1	STAT5B	TPD52L2	ZCWPW2
AP2S1	C9orf43	CMSS1	DSC2	FILIP1L	HFM1	KIAA1407	METTL22	OAS1	POLE3	RCOR1	SF11	STEAP1B	TPGS2	ZDHHC18
AP3B1	CA1	CMTM2	DSN1	FLI1	HGF	KIAA1432	METT18	OCLM	POM121C	RCVRN	SGCD	STEAP4	TPH2	ZFAND3
ARAP2	CA3	CMTM4	DSTYK	FNDC3A	HHEX	KIAA1715	MFNG	OFCC1	POMGNT2	RELL1	SGCE	STH	TPST1	ZFHX3
ARFRP1	CACNA1B	CNB01	DTL	FNTB	HIST1H2BD	KIAA1731	MGAT4C	ORA4A15	POU2F2	RERG	SGCZ	STK3	TRAF3	ZFHX4
ARHGAP15	CACNA1C	CNGB3	DTNB	FOXK1	HIST2H2BF	KIAA1958	MGMT	OR4C6	PPHLN1	RET	SGK1	STK32B	TRAF7	ZFP64
ARHGAP35	CACNA2D1	CNIH3	DUSP5	FOXP2	HIST2H3D	KIF21A	MIPOL1	OR51F2	PPM1L	REV3L	SGMS1	STRBP	TRHDE	ZMIZ2
ARHGAP39	CACNA2D3	CNST	DYM	FRRS1	HIVEP3	KIF26B	MKL1	OSBP	PPP1R12B	RFWD2	SH3GL1	SUCO	TRIM14	ZMYM4
ARID1A	CADM1	CNTN1	DZIP3	FRYL	HMBBOX1	KIFAP3	MKLN1	OSMR	PPP1R16A	RFX1	SHC3	SUPT6H	TRIM2	ZNF148
ARID2	CALCB	CNTNAP2	EDIL3	FSTL5	HNF4G	KLC3	MLLT10	OTUD4	PPP1R3E	RGS3	SHCBP1	SV2C	TRIM38	ZNF280D
ARL13B	CAMK1D	CNTNAP5	EFTUD1	FTCDNL1	HNRNPA0	KLHL29	MLTK	OXSR1	PPP2R3A	RGS5	SIK2	SWSAP1	TRIM49D1	ZNF318
ARMC2	CAMK4	COA1	EHBP1	FUT8	HNRNPA1	KLHL35	MMP26	PAFAH1B3	PPTC7	RGS7	SIL1	SYCP2	TRIM59	ZNF354C
ARPP21	CAMKMT	COBL	ELAVL2	GAB4	HNRNPA2B1	KLLN	MNAT1	PALM2	PRDM2	RICTOR	SIPA1L1	SYNCRIP	TRIP12	ZNF407
ARSK	CAMTA1	COG5	ELF1	GABBR1	HNRNPUL1	KMT2A	MOGAT3	PALM2-AKAP2	PRDM4	RIMS1	SKAP2	SYT1	TRMT11	ZNF484
ASH2L	CAPS2	COL4A3	ELF2	GABRA2	HPCA	KPNA6	MORC3	PAM	PRDM5	RMDN2	SLA2	TAF1L	TROVE2	ZNF574
ASTN2	CARM1	COL4A4	ELK3	GABRG2	HS3ST4	KPNA7	MPDZ	PARD3	PREX1	RNF103-CHMP3	SLC12A5	TANC1	TRPC7	ZNF644
ATG16L2	CASKIN1	COL7A1	ENAH	GAD1	HS6ST3	KRIT1	MPND	PARK2	PRICKLE1	RNF13	SLC16A1	TANC2	TSFM	ZNF704
ATG2B	CASP2	COL8A1	ENOX1	GALNT14	HSDL2	LAMA3	MROH8	PARN	PRKDC	RNF145	SLC16A10	TANGO6	TSHZ1	ZNRF3
ATP10B	CAST	COP21	ENTHD1	GALNTL6	HVCN1	LAMB2	MRPL11	PAWR	PRKG1	RNF150	SLC16A7	TARBP2	TSNAX-DISC1	ZSWIM4
ATP2A2	CATSPERG	CORIN	EPB41L4B	GAS2	IDE	LARGE	MRPS28	PAX3	PROS1	RNF170	SLC19A1	TAS2R1	TTC1	
ATP5L	CBFA2T2	COX7B2	EPB41L5	GDAP2	IER3IP1	LBX2	MRPS6	PAX7	PROSC	RNF220	SLC22A7	TAS2R14	TTC17	
ATP6V0A1	CBFA2T3	CPNE8	EPC2	GHR	IFNA2	LDHB	MRRF	PC	PROX1	RNMTL1	SLC25A12	TAS2R39	TTC23L	
ATXN7	CBX5	CRB1	EPHA3	GJD3	IFNGR1	LDLRAD3	MSI1	PCDH15	PRR14L	ROBO1	SLC30A7	TAS2R40	TTC28	
AVIL	CCDC113	CREBBP	EPHA6	GLI2	IFRD2	LIFR	MSL2	PCDHA1	PRR19	ROBO2	SLC35F3	TAX1BP1	TTC37	
AXL	CCDC144NL	CRHR1	EPOR	GLI3	IFT81	LIMD1	MTA3	PCDHA10	PRR4	ROCK1	SLC39A11	TBCE	TTC6	
B3GNT5	CCDC147	CRIP3	EPS15	GLIPR1L1	IL15	LIPJ	MTHFD2L	PCDHA11	PRSS12	RORA	SLC39A5	TBXAS1	TTI1	
B3GNTL1	CCDC178	CRISP1	EPS8	GLOD4	IL7	LMNB1	MUC2	PCDHA12	PSD3	ROS1	SLC48A1	TCF3	TTL5	
BACH1	CCDC59	CRTC1	ERAP1	GLP2R	IMMP1L	LMO7	MUL1	PCDHA13	PSMD8	RP11-127H5.1	SLC4A10	TCF4	UACA	

Appendix 14.10

AAGAB	BCL2L2-PABPN1	CEP70	DLGAP1	FGFR2	HMBBOX1	LAMB2	MYCBP2	PCDP1	RABGEF1	SEC11A	STARD7	TRIM38
ABCE1	BCL7B	CEP76	DLGAP4	FGGY	HNF4G	LARGE	MYH10	PCGF1	RABL3	SEC24A	STAT5B	TRIM49D1
ABHD16B	BIRC2	CEP78	DMTF1	FHIT	HNRNPA0	LBX2	MYLK	PCK2	RAD1	SEC24D	STEAP1B	TRIM59
ABI3BP	BIRC6	CEPT1	DNAJC13	FILIP1L	HNRNPA1	LDHB	MYT1L	PDE4B	RAD51B	SEC61B	STEAP4	TRIP12
AC006486.1	BOLL	CERS6	DNAJC15	FLI1	HNRNPA2B1	LDLRAD3	N4BP2	PDE7B	RAD54L	SECISBP2	STH	TRMT11
AC006486.9	BRD4	CES3	DNM2	FNDC3A	HNRNPUL1	LIFR	NADK	PDS5A	RAD54L2	SERAC1	STK3	TROVE2
AC011997.1	BRIP1	CFHR2	DNM3	FNTB	HPCA	LIMD1	NANS	PEAK1	RALGAPA2	SERINC3	STK32B	TRPC7
AC024940.1	BRIX1	CFHR4	DOCK3	FOXK1	HS3ST4	LIPJ	NCAPD3	PEG10	RALYL	SERP2	STRBP	TSFM
AC073342.1	BRPF3	CHCHD6	DOPEY1	FOXP2	HS6ST3	LMNB1	NCK2	PELI2	RANBP17	SERPINB7	SUCO	TSHZ1
ACOXL	BSX	CHMP3	DPH5	FRRS1	HSDL2	LMO7	NCKAP5	PET112	RANBP9	SERPINE3	SUPT6H	TSNAX-DISC1
ACPP	BTBD9	CHRM3	DPP10	FRYL	HVCN1	LMTK2	NCOA1	PEX1	RAP2A	SESN1	SV2C	TTC1
ACSL6	C10orf11	CHST9	DPY30	FSTL5	IDE	LOXHD1	NCOR2	PGR	RAPGEF2	SETBP1	SWSAP1	TTC17
ACTN2	C10orf76	CHSY1	DRG1	FTCDNL1	IER3IP1	LPAR2	NDRG3	PHACTR3	RAPGEF3	SFI1	SYCP2	TTC23L
ACTN4	C11orf80	CHURC1-FNTB	DSC2	FUT8	IFNA2	LPP	NDST1	PHF14	RASEF	SGCD	SYNCRIP	TTC28
ACVR1C	C15orf41	CIC	DSN1	GAB4	IFNGR1	LRCH4	NDUFAF6	PHF7	RASL10B	SGCE	SYT1	TTC37
ADAMTS17	C16orf80	CKAP2	DSTYK	GABBR1	IFRD2	LRIF1	NECAB3	PHLPP1	RBFOX2	SGCZ	TAF1L	TTC6
ADCY1	C18orf25	CKS2	DTL	GABRA2	IFT81	LRP1B	NEGR1	PI4KB	RBL1	SGK1	TANC1	TTI1
ADRBK2	C18orf54	CLASP1	DTNB	GABRG2	IL15	LRP6	NEK11	PID1	RBM14-RBM4	SGMS1	TANC2	TTLL5
AFAP1L1	C19orf52	CLASP2	DUSP5	GAD1	IL7	LRRC2	NELL2	PIGS	RBM15B	SH3GL1	TANGO6	UACA
AGAP1	C1orf27	CLCA2	DYM	GALNT14	IMMP1L	LRRC41	NFAT5	PIGV	RBM4	SHC3	TARBP2	UBE2D2
AGBL1	C1QTNF1	CLDN10	DZIP3	GALNTL6	IMMP2L	LRRC4C	NFE2	PIK3R5	RBM45	SHCBP1	TAS2R1	UBE2H
AGK	C1QTNF1-AS1	CLN8	EDIL3	GAS2	INPP4A	LRRC6	NFIA	PITHD1	RBM4B	SIK2	TAS2R14	UBE2L3
AGO3	C20ORF135	CLVS1	EFTUD1	GDAP2	INPP4B	LRRIQ1	NFIX	PIWIL2	RCE1	SIL1	TAS2R39	UBE2V2
AHDC1	C20orf24	CMSS1	EHBP1	GHR	INPP5A	LSAMP	NISCH	PKD2	RCOR1	SIPA1L1	TAS2R40	UBE3D
AIG1	C21orf49	CMTM2	ELAVL2	GJD3	INPP5F	LSMEM2	NKAIN1	PKHD1	RCVRN	SKAP2	TAX1BP1	UBR1
AIM2	C2orf42	CMTM4	ELF1	GLI2	INTS6	LUC7L	NLK	PLBD2	RELL1	SLA2	TBCE	UBR5
AKAP11	C2orf78	CNBD1	ELF2	GLI3	INTS7	LYPLA2	NLRP1	PLCB1	RERG	SLC12A5	TBXAS1	UCHL5
AKAP2	C4orf19	CNGB3	ELK3	GLIPR1L1	IPPK	LYRM2	NMUR2	PLCE1	RET	SLC16A1	TCF3	UGGT2
AKAP7	C4orf22	CNIH3	ENAH	GLOD4	IQCH	MACROD2	NOL4	PLCL1	REV3L	SLC16A10	TCF4	UGT2B11
AKR1C4	C4orf40	CNST	ENOX1	GLP2R	IQCJ	MAGI3	NOX5	PLEKHG1	RFWD2	SLC16A7	TCTN1	UPF1
AKR1CL1	C4orf46	CNTN1	ENTHD1	GLRA1	IQCJ-SCHIP1	MAN2C1	NPNT	PLK4	RFX1	SLC19A1	TDGF1	UPF2
AL596220.1	C8orf22	CNTNAP2	EPB41L4B	GLRX2	IQSEC1	MANBAL	NR3C1	PLXNA2	RGS3	SLC22A7	TDRD6	UQCR11
ALPK1	C9orf147	CNTNAP5	EPB41L5	GLTSCR1L	ISPD	MAP3K12	NR6A1	POC1A	RGS5	SLC25A12	TEX264	UQCRC1
AMBRA1	C9orf43	COA1	EPC2	GMPS	ITGA5	MAPK1	NRG3	POLE3	RGS7	SLC30A7	TFDP2	UQCRH
ANAPC10	CA1	COBL	EPHA3	GNAL	ITGA9	MAPK10	NRL	POM121C	RICTOR	SLC35F3	TFEC	USH2A
ANK2	CA3	COG5	EPHA6	GNAQ	ITGB1	MAPK8	NRXN1	POMGNT2	RIMS1	SLC39A11	TGIF2	USP16
ANKIB1	CACNA1B	COL4A3	EPOR	GNB1	ITGB6	MAPT	NRXN3	POU2F2	RMDN2	SLC39A5	TGIF2-C20orf2	USP30
ANKRD52	CACNA1C	COL4A4	EPS15	GNG2	ITPK1	MATR3	NSUN3	PPHLN1	RNF103-CHMP	SLC48A1	THEMIS	USP31
ANKRD6	CACNA2D1	COL7A1	EPS8	GOLGA4	ITPKB	MAX	NUDCD3	PPM1L	RNF13	SLC4A10	THSD4	UVRAG
ANKS1A	CACNA2D3	COL8A1	ERAP1	GOPC	ITPR2	MBD3	NUDT21	PPP1R12B	RNF145	SLC4A4	THSD7B	VAV3
ANKUB1	CADM1	COPZ1	ERCC2	GPATCH2	ITSN1	MBNL1	NUDT3	PPP1R16A	RNF150	SLC5A3	TIA1	VKORC1L1
AP000304.12	CALCB	CORIN	ESRRG	GPBP1	ITSN2	MBNL2	NUP214	PPP1R3E	RNF170	SLC6A11	TMC1	VPRBP
AP2B1	CAMK1D	COX7B2	ETFDH	GPHN	KANSL1L	MBOAT2	NUS1	PPP2R3A	RNF220	SLC9A1	TMCC2	VPS13B
AP2S1	CAMK4	CPNE8	ETS1	GPM6A	KAT7	MCF2L2	OAS1	PPTC7	RNMTL1	SLCO1B1	TMCO4	VPS13D
AP3B1	CAMKMT	CRB1	EXD2	GPR116	KCNAB1	MCTP1	OCLM	PRDM2	ROBO1	SLCO5A1	TMCO5A	VPS36
ARAP2	CAMTA1	CREBBP	EXOC4	GPR158	KCNH8	MDFIC	OFCC1	PRDM4	ROBO2	SLIT3	TMEM127	VSNL1
ARFRP1	CAPS2	CRHR1	EXOC6	GPT	KCNIP4	MED13	OR4A15	PRDM5	ROCK1	SLMAP	TMEM130	VTI1A
ARHGAP15	CARM1	CRIP3	EXOC6B	GRAP2	KCNK6	MEGF10	OR4C6	PREX1	RORA	SLX4	TMEM132B	VWA3A
ARHGAP35	CASKIN1	CRISP1	EXTL2	GRIA1	KCNMB2	MEGF11	OR51F2	PRICKLE1	ROS1	SMARCA4	TMEM139	VWA8
ARHGAP39	CASP2	CRTC1	EYS	GRID1	KCNQ3	MEGF8	OSBP	PRKDC	RP11-127H5.1	SMG7	TMEM145	WDFY2
ARID1A	CAST	CRY2	EZH2	GRID2	KCNT2	MEI4	OSMR	PRKG1	RP11-192H23.4	SMNDC1	TMEM178B	WDR73
ARID2	CATSPERG	CSDE1	FADS1	GRIK1	KCTD3	MEMO1	OTUD4	PROS1	RP11-321N4.5	SMURF1	TMEM182	WIF1
ARL13B	CBFA2T2	CSMD1	FADS2	GRIK2	KCTD7	MEOX2	OXSRI	PROSC	RP11-770J1.4	SMYD2	TMEM237	WNT3A
ARMC2	CBFA2T3	CSMD3	FAHD2A	GRIK5	KIAA0100	METTTL22	PAFAH1B3	PROX1	RPAP2	SMYD3	TMEM241	XIRP2
ARPP21	CBX5	CSRNP3	FAM117A	GRM7	KIAA0226L	METTTL8	PALM2	PRR14L	RPS10-NUDT3	SND1	TMEM248	YIPF2
ARSK	CCDC113	CTD-2267D19.1	FAM154B	GSAP	KIAA0319L	MFNG	PALM2-AKAP2	PRR19	RPS3	SNRNP70	TMEM258	YTHDF3
ASH2L	CCDC144NL	CTDSP2	FAM172A	GSK3A	KIAA0586	MGAT4C	PAM	PRR4	RPS6KC1	SNTG2	TMEM5	ZBTB1
ASTN2	CCDC147	CTNNA3	FAM217B	GSKIP	KIAA0825	MGMT	PARD3	PRSS12	RPTN	SNX24	TMEM53	ZBTB34
ATG16L2	CCDC178	CTNBNBL1	FAM228B	GSTK1	KIAA1147	MIPOL1	PARK2	PSD3	RRM2B	SOBP	TMEM54	ZBTB41
ATG2B	CCDC59	CTTN	FAM24B	GTDC1	KIAA1199	MKL1	PARN	PSMD8	RRP15	SOGA1	TMTC2	ZBTB48
ATP10B	CCDC87	CUZD1	FAM46A	GTF2E1	KIAA1211L	MKLN1	PAWR	PSMG2	RSPH3	SOS1	TMX4	ZC3H8
ATP2A2	CCDC88C	CYTH1	FAM49B	GTF2IRD1	KIAA1217	MLLT10	PAX3	PTAFR	RSPRY1	SPAG17	TNFRSF10D	ZCWPW2
ATP5L	CCDC91	DAB1	FAM60A	GTF3C1	KIAA1328	MLTK	PAX7	PTEN	RTEL1	SPAG5	TNFRSF6B	ZDHC18
ATP6VOA1	CCL8	DAB2IP	FAM65B	HADHB	KIAA1407	MMP26	PC	PTPN13	RTEL1-TNFRSF	SPAG9	TNFSF13B	ZFAND3
ATXN7	CCNY	DBF4B	FANCC	HAT1	KIAA1432	MNAT1	PCDH15	PTPN3	RTN1	SPATA16	TNRC6B	ZFHX3
AVIL	CCS	DCAF4L2	FAP	HCN1	KIAA1715	MOGAT3	PCDHA1	PTPRD	RTN3	SPECC1	TOMM20L	ZFHX4
AXL	CCSER1	DCC	FAT4	HDAC3	KIAA1731	MORC3	PCDHA10	PTPRG	RUNX1	SPESP1	TOP1	ZFP64
B3GNT5	CCT8	DCDC1	FBXL13	HDAC9	KIAA1958	MPDZ	PCDHA11	PTPRK	RYBP	SPOCK3	TOP2A	ZMI22
B3GNTL1	CD36	DCP1B	FBXL7	HDHD2	KIF21A	MPND	PCDHA12	PTPRO	RYR1	SPOP	TP53I3	ZMYM4
BACH1	CD86	DDX10	FBXO24	HECTD1	KIF26B	MROH8	PCDHA13	PTPRQ	RYR2	SPOPL	TP63	ZNF148
BACH2	CD96	DEDD2	FBXW2	HERC2	KIFAP3	MRPL11	PCDHA2	PTPRZ1	SAE1	SPRED2	TPD52	ZNF280D
BANK1	CDC42	DGCR8	FCHO2	HERC6	KLC3	MRPS28	PCDHA3	QRFPR	SAMD12	SPTBN2	TPD52L2	ZNF318
BAP1	CDC6	DHFRL1	FCHSD2	HEXIM2	KLHL29	MRPS6	PCDHA4	QRICH1	SAR1B	SRSF4	TPGS2	ZNF354C
BBX	CDH6	DHX36	FCRL2	HFM1	KLHL35	MRRF	PCDHA5	QSER1	SCAF11	SSBP2	TPH2	ZNF407
BCAP29	CDK5RAP2	DIAPH1	FDCSP	HGF	KLLN	MSI1	PCDHA6	RAB25	SCAF8	SSFA2	TPST1	ZNF484
BCAR3	CDK6	DIS3L2	FEN1	HHEX	KMT2A	MSL2	PCDHA7	RAB27A	SCARA3	SSH2	TRAF3	ZNF574
BCHE	CDRT15L2	DISC1	FER1L6	HIST1H2BD	KPNA6	MTA3	PCDHA8	RAB3B	SCLT1	ST7	TRAF7	ZNF644
BCKDHB	CEL	DKK2	FGF6	HIST2H2BF	KPNA7	MTHFD2L	PCDHA9	RAB3IP	SCMH1	ST7-OT4	TRHDE	ZNF704
BCL2L14	CENPF	DLEU1	FGFR1	HIST2H3D	KRIT1	MUC2	PCDHAC1	RAB6B	SDF2	STAC	TRIM14	ZNRF3
BCL2L2	CEP57L1	DLG2	FGFR1OP	HIVEP3	LAMA3	MUL1	PCDHAC2	RABAC1	SDS	STAG1	TRIM2	ZSWIM4

Appendix 14.11

AAED1	BMP2K	CIRBP	DTNA	GNAI2	KCTD17	MMP28	PARN	PTPRK	SERAC1	TFDP2	WDR75
AAK1	BMP5	CIT	DYM	GNAL	KDM2A	MN1	PARP15	PTPRM	SET	TGIF2	WIBG
AARS	BRF1	CKAP2	DYNC1LI1	GNB4	KHDRBS1	MPDZ	PATL2	PTPRN2	SF3B1	TGIF2-C20orf24	WISP3
ABCC11	C10orf11	CLEC16A	DZIP3	GOLM1	KIAA0319L	MRPL11	PAX1	PURG	SGCE	THSD1	WWC2
ABCC12	C11orf58	CLEC5A	EBF1	GPHN	KIAA0586	MRPS28	PBXIP1	PWWP2A	SGCZ	TIMD4	WWOX
ABCC6	C11orf80	CLPB	ECT2L	GPR182	KIAA0825	MRV11	PC	PYGL	SGPP1	TIMM9	WWTR1
ABCC9	C11orf86	CLSTN1	EDF1	GPR89A	KIAA1107	MSH6	PCCB	PYGO2	SGSM1	TM7SF2	XIRP1
ABHD12B	C15orf60	CLUAP1	EDRF1	GRIA4	KIAA1109	MSL2	PCDHA1	QRICH1	SGSM3	TMCO1	XPNPEP3
ABHD17B	C16orf80	CLVS1	EIF1	GRID1	KIAA1199	MSRB3	PCDHA10	RAB11FIP1	SH3BP2	TMCO2	XPR1
ABHD5	C17orf104	CMTM2	EIF2B5	GRID2	KIAA1217	MTA1	PCDHA11	RAB22A	SHANK2	TMED3	XRN1
ABL1	C1D	CNBD1	EIF4G1	GRIK2	KIAA1467	MYCBP2	PCDHA12	RAB3GAP1	SHB	TMEM117	XRRA1
ABL2	C1orf185	CNPY2	ELF2	GRIK3	KIAA1958	MYH10	PCDHA13	RAD51L3-RFFL	SHC3	TMEM132B	ZBTB20
AC003043.1	C1orf228	CNST	ELMO2	GRIP1	KIAA2018	MYL4	PCDHA2	RAD54L2	SHCBP1	TMEM139	ZBTB39
AC018816.3	C1QTNF1	CNTLN	EML1	GSE1	KIF22	MYO3A	PCDHA3	RAG1	SIK2	TMEM178B	ZBTB8A
AC024940.1	C1QTNF1-AS1	CNTN1	ENAH	GSTK1	KIRREL3	MYT1L	PCDHA4	RALGAPA2	SIM1	TMEM182	ZCCHC4
AC027763.2	C1QTNF7	CNTN4	ENAM	GTDC1	KLHL35	NAA16	PCDHA5	RALYL	SIRT7	TMEM194A	ZDHC12
ACOXL	C20orf24	CNTNAP2	ENTHD1	GTF3C1	KLHL6	NAALADL2	PCDHA6	RAP2A	SLA2	TMEM202	ZER1
ACVR1B	C4orf19	CNTNAP3	EPB41L1	GZMA	KLLN	NABP1	PCDHA7	RASA2	SLC13A1	TMEM232	ZFAND4
ACVR1C	C4orf29	COBL	EPB41L4B	GZMK	KPNA6	NANS	PCDHA8	RASEF	SLC22A9	TMEM241	ZFHX4
ADAMTS17	C4orf40	COL20A1	EPB41L5	H2AFY	KPNA7	NBAS	PCDHA9	RASSF1	SLC23A1	TMEM261	ZFPM2
ADAMTS3	C5AR1	COL7A1	EPHA3	HACL1	L3MBTL4	NBEA	PCDHAC1	RB1CC1	SLC25A45	TMEM39B	ZHX1
ADAMTS9	C5AR2	COL9A2	EPS15L1	HCN1	LAMB2	NCALD	PCDHAC2	RBM8A	SLC26A7	TMEM5	ZHX1-C8ORF76
ADD1	C5orf24	COPZ1	EPS8	HDAC4	LCMT1	NCAPD3	PCDP1	RBX1	SLC30A7	TMX4	ZMYM1
ADRBK2	C5orf66	CORIN	ERBB2IP	HDAC9	LDB2	NCK2	PCNXL2	RCAN2	SLC4A1	TNFRSF10D	ZMYM4
ADSL	C8orf46	CPA6	ERC2	HEATR5A	LDHB	NCKIPSD	PCYT2	RCOR1	SLC4A4	TNFRSF1B	ZNF20
AFF3	C9orf147	CREBBP	ERLIN2	HECTD4	LDLRAD3	NCMAP	PDE11A	RCSD1	SLC7A1	TNIK	ZNF263
AGAP1	C9orf172	CREBZF	ERMN	HECW2	LECT1	NCOA2	PDE6A	RDX	SLC9A1	TNKS	ZNF35
AGMO	C9orf43	CRYBA2	EVI5	HGF	LECT2	NCOR1	PDE6B	RECK	SLC9B2	TNNC1	ZNF366
AGO3	C9orf85	CSDE1	EXOC4	HIST1H3I	LEF1	NDRG3	PDE7B	RELL1	SLCO5A1	TNRC6C	ZNF442
AHDC1	CA1	CSGALNACT1	EXT1	HIST1H4L	LGR5	NDST1	PDGFC	RFFL	SLCO6A1	TOMM20L	ZNF510
AIG1	CA3	CSNK1E	EXTL2	HIVEP3	LGSN	NDUFAF3	PDP1	RFX1	SLIT3	TOX	ZNF519
AKAP2	CABIN1	CSRNP3	EYS	HMBOX1	LHFP	NEGR1	PDPK1	RFX3	SLX4	TPCN1	ZNF536
AKAP7	CABLES1	CTC-273B12.7	FAF1	HMGA1	LINGO2	NEMF	PDZK1	RGS20	SMIM11	TPD52	ZNF585A
AL162407.1	CACNA1C	CTC-454I21.3	FAM105B	HNRNPLL	LIPH	NFIA	PEAK1	RGS3	SMURF2	TPH2	ZNF687
AL627171.2	CACNA1H	CTDSP2	FAM111B	HOOK3	LIX1L	NFIX	PELI1	RGS7	SMYD3	TPK1	ZNF710
AMDHD2	CACNA2D1	CTDSPL	FAM126B	HS6ST3	LMTK2	NHLRC2	PGR	RLF	SNRK	TRHDE	ZNF75A
AMN1	CACNB4	CTNBNBL1	FAM184B	HSD17B2	LONP2	NISCH	PGRMC2	RNF103-CHMP3	SOGA1	TRIB2	ZNF788
ANAPC11	CAMSAP1	CTTN	FAM217B	HSDL2	LOXHD1	NKAIN2	PHC3	RNF11	SOX6	TRIM14	ZNF90
ANK2	CASP12	CUL9	FAM60A	HSPA4L	LPHN3	NKAIN3	PHF14	RNF121	SPAG17	TRIM24	ZNRF2
ANKFN1	CASP2	CUX2	FAM65B	HVCN1	LPIN1	NKD1	PHF3	RNF170	SPAG9	TRIM72	ZNRF3
ANKRD30A	CBFA2T2	CYTH2	FAM73A	HYAL2	LRRC4C	NLGN1	PHF7	RNF24	SPECC1L	TRMU	ZSWIM5
ANKRD50	CBFA2T3	CYTIP	FAM73B	IFIH1	LRRC7	NLK	PHPT1	ROBO1	SPECC1L-ADOR	TRPC7	
ANKS1B	CBL	DAB2IP	FAP	IFRD2	LRRC8D	NNT	PI4KB	ROBO2	SPESP1	TSPAN9	
ANO10	CCDC102B	DACH1	FAT2	IFT140	LRRFIP1	NOL4	PIGV	RP11-176H8.1	SPG11	TTC28	
ANO6	CCDC178	DBF4B	FAT4	IFT43	LSAMP	NOX4	PIK3C2A	RP11-247C2.2	SPG7	TTC37	
ANO9	CCDC39	DBX2	FBF1	IGF1R	LSMEM2	NOX5	PIK3C2G	RP11-302M6.4	SPIDR	TTC39A	
ANXA4	CCDC43	DCAF15	FBXL13	IGF2R	LTV1	NPB	PIK3R5	RP11-362K2.2	SPINK6	TTI1	
AP000304.12	CCNY	DCC	FBXL7	IGJ	LYVE1	NPFFR2	PIP5K1A	RP11-512M8.5	SPOP	TTLL4	
APBB3	CCSER1	DCLRE1A	FBXO48	IKZF3	MACROD2	NR3C1	PKHD1	RP11-529K1.3	SPTBN2	TUSC2	
APLF	CD74	DDX19A	FBXW7	IL15	MAFG	NRAS	PKN3	RP11-552F3.12	SRFBP1	TWISTNB	
ARHGAP15	CDC14B	DDX19B	FCHSD2	IL18BP	MAGI3	NRG1	PLCB1	RP11-598P20.5	SSFA2	TXLNA	
ARHGAP39	CDC20B	DDX46	FCRL2	IL1R1	MAL2	NRG4	PLEKHB2	RP11-613M10.9	ST3GAL2	UACA	
ARHGAP5	CDC42	DDX60	FDCSP	IL23A	MAMDC4	NRXN3	PMPCB	RP11-849H4.2	ST6GALNAC3	UBE2H	
ARHGDIA	CDC42SE2	DGAT2	FDPS	IMMP2L	MANBAL	NSUN3	POLA2	RP11-863K10.7	ST7	UBE2V2	
ARHGEF38	CDH12	DGKA	FEV	IMPDH2	MAP6	NTRK3	POLE3	RP1-27O5.3	ST7-OT4	UBE3D	
ARHGEF7	CDH18	DGKI	FGD5	INPP4A	MAP7	NUDC	POP1	RP3-468K18.5	STAC	UBE4B	
ARID1A	CDH19	DHFRL1	FGF14	INPP5A	MAPK10	NUDT3	PPM1D	RPAP2	STAG1	UBR1	
ARID1B	CDH6	DHRS7B	FGF23	INPP5F	MAPK6	NUMA1	PPP1R12B	RPL13	STARD3	UCHL5	
ARID5B	CDH8	DHX36	FGFR2	INSR	Mar-08	NUP153	PPP1R17	RPS10-NUDT3	STAT2	UGGT2	
ARIH2	CDK5RAP2	DIABLO	FGGY	INTS6		OCA2	PPP1R1C	RPS3	STEAP1B	UGT2B11	
ARSK	CDKN2C	DIAPH1	FLI1	INTS7	MBD3	OFCC1	PPP1R21	RRP9	STK3	ULK2	
ASH1L	CDRT15L2	DIRC3	FNBP1L	IQSEC1	MBOAT2	OLFML1	PPP1R9A	RUFY3	STK36	UNC5D	
ASH2L	CDYL	DKK2	FNTA	IRS1	MCF2L2	OPRM1	PPP2R3A	RUND3B	STOX2	UNC80	
ASZ1	CEBPD	DLEU1	FOLR1	ISLR2	MCM4	OR10AG1	PRKAR2A	RUSC1	STT3B	UNKL	
ATAD2	CEL	DLG2	FOXP1	ISPD	MCU	OR8H3	PRKDC	RUVBL2	SUSD4	UQCR11	
ATP2A2	CELF1	DLGAP4	FRMD5	ITGA5	MEGF10	OSBP	PROS1	RXFP1	SYCP2	UQCRC1	
ATP6V0E1	CELF2	DMTF1	FRMD8	ITGA6	MEGF11	OSBPL9	PROSC	S100A7A	SYT12	USP43	
ATP6V1H	CELSR1	DNAJC12	FUK	ITPR2	MEGF9	OSR2	PRR4	SAE1	TAC3	USP46	
ATP8A1	CELSR3	DNAL1	FUS	ITSN1	MEMO1	OTOGL	PRRT2	SAFB	TANK	UTP3	
ATR	CEMP1	DNPH1	FUT10	IZUMO2	MFNG	P4HTM	PRSS27	SAFB2	TAS2R14	UVRAG	
ATRNL1	CEP70	DNTT	GAB2	JARID2	MFS11	PACS2	PSEN1	SAP30	TBC1D13	VPS13B	
AVIL	CEP95	DOCK3	GALNTL6	JUP	MFS18	PAGR1	PSMD4	SCAF4	TBC1D22B	VPS33A	
B3GNT5	CERS6	DOCK4	GAS2	KCNAB1	MGAM	PAIP2	PTEN	SCFD2	TBC1D32	VPS36	
BACH1	CES3	DOPEY1	GBF1	KCND2	MGAT4C	PAK1IP1	PTGFR	SCR1	TBC1D5	VPS51	
BAP1	CETN3	DPP10	GCA	KCNH7	MITF	PALM2	PTH2R	SCRN1	TBXAS1	VRK1	
BCAR3	CHCHD6	DPP4	GCG	KCNH8	MKLN1	PALM2-AKAP2	PTP4A1	SDK1	TDP1	VWA8	
BCL7B	CHD3	DPY30	GDAP2	KCNIP4	MLLT10	PAM	PTPN13	SEC24D	TERF2IP	WDFY2	
BCR	CHMP3	DPYD	GHR	KCNJ8	MME	PAN2	PTPN14	SEMA3C	TET1	WDFY3	
BICC1	CHRN3	DPYSL3	GIF	KCNT2	MMP2	PAQR5	PTPRD	SEMA4F	TEX2	WDR16	
BIRC6	CHSY3	DTL	GMPS	KCTD16	MMP21	PARM1	PTPRG	SEMA6A	TEX22	WDR3	

Appendix 14.12

ABCE1	BACH1	CDRT15L2	DNAJC6	FTCDNL1	HPCA	LACE1	MTHFD2L	PARD3	PSEN1	RP11-295K3.1	SMYD3	TMEM108	WDPCP
ABI3BP	BACH2	CEL	DNM2	FUS	HS3ST4	LAMA3	MTMR3	PARM1	PSMB7	RP11-321N4.5	SND1	TMEM127	WDR12
AC002310.13	BANK1	CELF2	DOCK10	FUT8	HS6ST1	LAMTOR2	MTPN	PATL2	PSMC2	RP11-404P21.8	SNRK	TMEM132B	WDR20
AC015987.2	BBS9	CEP112	DOPEY1	GABBR1	HS6ST3	LARGE	MUC19	PAWR	PSMD8	RP11-762I7.5	SNRNP70	TMEM135	WDR63
AC016757.3	BCAR3	CEP192	DPH6	GABRA2	HSD11B1	LECT1	MUL1	PAX3	PTEN	RP11-770J1.4	SNTG2	TMEM139	WDR73
AC024940.1	BCKDHB	CEP70	DPP10	GABRB1	HSD17B4	LIMD1	MUTYH	PAX7	PTGFR	RPAP2	SNX24	TMEM178B	WDTC1
AC068533.7	BCL2L14	CERS6	DPYD	GALC	HSDL2	LIMD2	MYCBP2	PBX4	PTH2R	RPL15	SOBP	TMEM182	WHSC1
AC073342.1	BCL7C	CES3	DSC2	GALNT13	HVCN1	LIPA	MYL12B	PC	PTP4A1	RPL22L1	SOGA1	TMEM2	WIBG
AC110792.1	BDKRB2	CES5A	DSN1	GALNT14	ICA1	LIPH	MYL4	PCBP2	PTPN13	RPS3	SORCS3	TMEM241	WIPF1
ACSL6	BIRC2	CFHR2	DTL	GALNTL6	IDH1	LMNB1	MYLK	PCDH15	PTPRD	RPTN	SOX6	TMEM243	WIZ
ACTL6B	BIRC6	CFHR4	DTNB	GAPVD1	IER3IP1	LMO7	MYLK2	PCDH17	PTPRG	RRAS2	SPAG17	TMEM248	WNT3A
ACTN2	BLVRA	CGRRF1	DUSP5	GAS2	IFNA2	LOXHD1	MYO3B	PCDH9	PTPRK	RRBP1	SPAG5	TMEM258	WWC2
ACVR1C	BRIX1	CHCHD6	DYM	GATAD1	IFNGR1	LPHN2	MYO9A	PCDHA1	PTPRO	RRP9	SPAG9	TMEM261	XIRP2
ACYP2	BRPF3	CHIC2	EDEM1	GDAP2	IFT43	LRCH1	MYT1L	PCDHA10	PTPRQ	RSPH3	SPESP1	TMEM54	YAF2
ADCK3	BTAF1	CHMP2B	EHBP1	GDF11	IFT81	LRIF1	N4BP2	PCDHA11	PTPRZ1	RSPRY1	SPINK2	TMEM65	YARS
AFAP11L	BTBD9	CHODL	EHMT2	GGN	IGF2BP3	LRP6	NCAPD3	PCDHA12	PUM2	RTEL1	SPINK6	TMTC2	YIPF2
AFF3	BYSL	CIC	ELF2	GHR	IGSF6	LRPPRC	NCAPH	PCDHA13	PURA	RTEL1-TNFRSF	SPOCK3	TMX4	YKT6
AGAP1	C10orf11	CKAP2	ELMOD3	GIPC2	IL1R1	LRRC40	NCK2	PCDHA2	PURG	RTN1	SPOP	TNFRSF10D	YTHDC1
AGBL1	C10orf67	CLASP1	ELOVL1	GJD3	IL7	LRRC41	NCKAP5	PCDHA3	PVRL3	RYR1	SPOPL	TNFRSF6B	YTHDF3
AGO3	C10orf76	CLDN10	ENAH	GLI2	ILF3	LRRC4C	NCOA1	PCDHA4	QRFRP	S100PBP	SPPL2A	TNFSF18	ZBTB12
AHCYL2	C11orf30	CLIP4	ENPP1	GLI3	IMMP1L	LRRC7	NCOA2	PCDHA5	QRICH1	SAE1	SPRED3	TNRC6B	ZBTB20
AIG1	C11orf58	CLN8	ENTHD1	GLIPR1L1	INPP5A	LRRIQ1	NDRG3	PCDHA6	R3HDM2	SARNP	SPTBN2	TOE1	ZBTB41
AKAP11	C11orf80	CLSTN1	EPB41L4B	GLOD4	INTS12	LRRIQ3	NDST1	PCDHA7	RAB3IP	SCAF11	SRGAP1	TOX2	ZC3H8
AKAP2	C17orf104	CLTCL1	EPB42	GLYATL1	INTS2	LRRN2	NDUFAF6	PCDHA8	RAB42	SCAF8	SSBP2	TPD52L2	ZDHHC13
AKAP6	C17orf112	CLVS1	EPC2	GNAI2	INTS3	LSAMP	NDUFB5	PCDHA9	RABGAP1L	SCARA3	SSH1	TPST1	ZEB1
AKAP8	C18orf25	CMS51	EPCAM	GNAL	INTS6	LST3	NEGR1	PCDHAC1	RABGEF1	SCFD2	SSH2	TRAF7	ZFHX3
AL162407.1	C18orf54	CNBD1	EPHA3	GNB1	INTS7	LUZP6	NEK11	PCDHAC2	RAD1	SCMH1	STAC3	TRIM15	ZFYVE9
ALG11	C19orf52	CNOT11	EPHA6	GNPNAT1	IQCH	LYPLA2	NELL1	PCK2	RAD51B	SCN9A	STAG1	TRIM2	ZGPAT
ALG14	C1D	CNST	EPHA7	GOLGA5	IQCJ	MACROD2	NFATC3	PCMT1	RAD54L	SDAD1	STARD7	TRIM31	ZIC1
ALG9	C2	CNTN4	EPN2	GOPC	IQCJ-SCHIP1	MAGI2	NFE2	PDCD5	RAD54L2	SDF2	STAT5B	TRIM38	ZIC4
ALX1	C20orf24	CNTN5	ERBB2	GPBP1	IRAK1BP1	MAGI3	NFIA	PDE10A	RALGAPA2	SDS	STATH	TRIM49D1	ZMIZ2
AMN1	C4orf19	CNTNAP2	ERVW-1	GPC5	IRS1	MALRD1	NFIX	PDGFC	RALGPS1	SEC11A	STEAP1B	TRIP12	ZNF138
ANAPC10	C4orf22	CNTNAP3	ESR2	GPM6A	ISLR2	MAN2C1	NFX1	PELI2	RALYL	SEC24A	STK3	TRPM3	ZNF148
ANK2	C4orf40	COA1	ETS1	GNP2	ITFG1	MANBAL	NHLRC2	PET112	RANBP17	SEC24D	STRBP	TRPS1	ZNF20
ANK3	C6orf136	COBL	ETV4	GPR116	ITGB1	MAP3K12	NIF3L1	PEX1	RANBP9	SEC61B	STX6	TSHR	ZNF248
ANKIB1	C8orf34	COG5	EXD2	GPR89B	ITPKB	MAP3K3	NIM1K	PHC2	RAP2A	SECISBP2	STXBP5	TTC17	ZNF263
ANKRD17	C9orf147	COL20A1	EXOC6	GPT	ITPR2	MAP4K1	NKIRAS1	PHF14	RAPGEF4	SEMA3A	STYX	TTC23L	ZNF33A
ANKRD50	CA10	COL7A1	EXPH5	GRAP2	ITSN1	MAP4K5	NLGN1	PHF3	RAPGEF5	SEMA3G	STYXL1	TTC28	ZNF35
ANKRD6	CA3	COPS4	EYS	GRB14	ITSN2	MAP6	NLK	PHF7	RASA1	SERP2	SUGT1	TTC37	ZNF407
ANKRD7	CABIN1	COX7B2	EZH2	GRB2	JARID2	MAPK8	NMB	PHIP	RASGEF1A	SERPINB7	SUMF2	TTF1	ZNF438
ANKS1A	CABLES1	CPEB3	F2	GRIA1	KANSL1	MAPT	NOX5	PHKB	RASGRP4	SERPINE3	SUPT6H	TTI1	ZNF592
ANKS6	CACNA1B	CPNE8	FADS1	GRID1	KANSL1L	Mar-05	NPFFR1	PHKG1	RB1CC1	SERTAD2	SYNCRIP	TTLL5	ZNF644
ANKUB1	CACNA1D	CRB1	FADS2	GRID2	KAT6A	MARK2	NR6A1	PHLDB1	RBFOX1	SF3A3	SYNE2	TTPAL	ZNF662
ANO3	CACNA2D1	CRCP	FAF1	GRIK2	KAT6B	MBD3	NRBP2	PHLPP1	RBFOX2	SGCD	SYT1	UBA2	ZNF764
ANO6	CACNA2D3	CRHR1	FAHD2A	GRIK3	KAT7	MBNL1	NRIP1	PI4KB	RBM14	SGCE	TAB1	UBE2D2	ZNF788
AP000304.12	CAMK2B	CRISP1	FAM120AOS	GRIP1	KATNAL1	MBOAT2	NRL	PID1	RBM14-RBM4	SGCZ	TAF12	UBE2V2	ZNF827
APC	CAMK4	CRTC1	FAM172A	GRM7	KCNAB1	MCF2L2	NRP1	PIGN	RBM25	SH3GL1	TAF1B	UBE3D	ZSCAN1
ARAP2	CAMKMT	CRYBG3	FAM188A	GSTCD	KCNIP4	MCOLN3	NRXN1	PITHD1	RBM4	SHC3	TAF1L	UBE4B	ZSCAN2
ARCN1	CAMLG	CSGALNACT2	FAM189A1	GSTK1	KCNK13	MCTP1	NRXN3	PITPNB	RBM4B	SHISA9	TANC1	UBOX5	ZSWIM5
ARFGAP1	CAMSAP1	CSMD1	FAM192A	GTF2IRD1	KCNQ5	MCU	NSUN3	PIWIL2	RCE1	SIK2	TANC2	UBQLN4	ZZZ3
ARFRP1	CAMTA1	CSMD3	FAM214A	GTF3C1	KCNT2	MDC1	NTN1	PKD2L2	RCOR1	SIPA1L1	TARBP2	UBR1	
ARHGAP15	CAPS2	CSNK1G1	FAM227B	HADHA	KCTD17	MDGA2	NUDCD3	PKHD1	RELL1	SIRT5	TAS2R1	UBR3	
ARHGAP32	CARM1	CSRNP3	FAM24B	HAND1	KCTD3	MDN1	NUMA1	PKNOX1	RERG	SKAP2	TAS2R14	UBR5	
ARHGAP39	CASKIN1	CTD-2116N17	FAM46A	HBP1	KCTD7	MECOM	NUP205	PLAG1	RET	SLA2	TAS2R39	UCHL5	
ARHGAP5	CASP2	CTD-2267D19	FAM49B	HCN1	KIAA0100	MED13	NUP210	PLCB1	RETSAT	SLC10A7	TAS2R40	UGGT2	
ARHGEF3	CATSPERG	CTNNA3	FAM60A	HDAC2	KIAA0226L	MED13L	NUP214	PLCE1	REV3L	SLC12A5	TAS2R43	UGT2B11	
ARHGEF38	CBFA2T2	CTNND2	FAM98C	HDAC9	KIAA0556	MEF2A	NUS1	PLEKHA7	RFWD2	SLC12A6	TAX1BP1	UNKL	
ARID1A	CBFA2T3	CTPS1	FANCC	HECTD1	KIAA0586	MEGF10	NYAP2	PLEKHG1	RFX7	SLC16A1	TBC1D32	UPF1	
ARID2	CBX5	CTSD	FANCL	HERC1	KIAA0825	MEGF11	OAS1	PLOD3	RGS5	SLC16A10	TBC1D5	UPF2	
ARL13B	CCDC12	CUZD1	FASTKD5	HERC6	KIAA1147	METTL8	OCA2	PMPCB	RGS7	SLC16A7	TCEB3	UQCR11	
ARL17B	CCDC126	DAB1	FBXL13	HES6	KIAA1199	METTL9	OFCC1	POC1A	RICTOR	SLC19A1	TCF12	UQCRC1	
ARL2BP	CCDC144NL	DACH1	FBXW2	HEXIM2	KIAA1217	MFNG	OPALIN	PPHLN1	RIMS1	SLC26A5	TCF24	UQCRH	
ARL6IP6	CCDC178	DBF4B	FBXW7	HFM1	KIAA1239	MGAM	OPRM1	PPIL3	RMDN2	SLC35D2	TCF3	USH2A	
ARMC2	CCDC43	DCAF4L2	FCHSD2	HGF	KIAA1328	MGAT4C	OR10AG1	PPP1R10	RNF114	SLC35E3	TCF4	USP24	
ARSK	CCDC60	DCC	FCRL2	HIBADH	KIAA1468	MIEN1	OR2M5	PPP1R12B	RNF13	SLC35F3	TCHHL1	USP30	
ASAH2B	CCDC87	DCLRE1A	FDCSP	HINT3	KIAA1522	MITF	OR4M1	PPP1R16A	RNF144B	SLC38A1	TCP10L2	USP47	
ASCC3	CCDC91	DDX10	FEN1	HIST1H2BD	KIAA1958	MKLN1	OR4N2	PPP1R3A	RNF145	SLC39A11	TDRD3	USPL1	
ATAT1	CC18	DENND1B	FER	HIST1H2BJ	KIF15	MLLT6	OR5AK2	PPP1R42	RNF150	SLC4A10	TDRD6	UST	
ATG2B	CCND3	DGKA	FGF7	HIST2H2BF	KIF26B	MMP26	OR5AS1	PPP2R3A	RNF165	SLC5A3	TESK2	UTP14C	
ATG5	CCNDBP1	DHFRL1	FGFR10P	HIST2H3D	KIFAP3	MNAT1	OR5F1	PRAMEF10	RNF187	SLC9A1	TEX264	UVRAG	
ATL1	CCNH	DHX36	FGFR2	HIVEP1	KIRREL3	MORC3	OR8I2	PRDM2	RNF2	SLC9A9	TFDP2	VAV3	
ATM	CCS	DHX8	FILIP1L	HIVEP2	KITLG	MOSPD3	OR9Q1	PREX1	RNMTL1	SLCO1B3	TFEC	VKORC1L1	
ATP10B	CCSER1	DIAPH1	FIP1L1	HIVEP3	KLHL3	MPDZ	OSBPL10	PRICKLE1	ROBO2	SLCO1B7	TFR2	VPS13A	
ATP5L	CD163L1	DKK2	FLI1	HMBOX1	KLHL35	MPND	OSBPL9	PRKAR2A	ROCK1	SLFNL1	TGIF2	VPS13D	
ATP6V1C1	CDC25C	DLEU1	FMOD	HMCN1	KLLN	MRPS18B	OSMR	PRKD2	ROS1	SLIT2	TGIF2-C20orf2	VPS36	
ATP8B4	CDC42	DLGAP4	FNDC3A	HNF4G	KMT2A	MRPS5	OTUD4	PRKDC	RP11-123K3.4	SMC6	TGM6	VPS54	
ATRNL1	CDH20	DMTF1	FO XK1	HNRNPA0	KPNA7	MRPS6	OXCT1	PRKG1	RP11-125O5.2	SMG7	THRB	VSNL1	
AXL	CDH4	DNAJC1	FOXP1	HNRNPA1	KRBOX1	MSH6	PACSIN1	PROS1	RP11-127H5.1	SMIM13	THSD1	VWA3B	
B3GALT1	CDK14	DNAJC21	FOXP2	HNRNPA1L2	KRIT1	MSI1	PALM2	PRR4	RP11-192H23.4	SMNDC1	TJP1	VWA8	
B3GNT5	CDR2	DNAJCSB	FRYL	HNRNPUL1	KRT85	MSL2	PALM2-AKAP2	PRRX1	RP11-247C2.2	SMOC2	TM4SF4	WDFY2	

Appendix 15.1

Baganda & Ethiopia		Baganda & Zulu		Ethiopia & Zulu	
BICD1	OR6J1	BRK1	NDNF	BEND7	NIFK
BMP2K	P2RX3	C10orf107	NIT2	BMP2K	NME4
BMPR1B	PDE4C	C10ORF68	NR2C2	BPTF	NPS
BPTF	PDGFD	C12orf10	NRG4	C10orf107	NUP210
C10orf107	PIGC	C12orf5	NRP1	C12orf10	OFCC1
C14orf79	PITX1	C12orf66	OR4C6	C14orf79	OR2T1
C15orf48	POTEE	C15orf26	OR5B2	C16orf54	OR2T27
C16orf78	PRKG1	C1orf63	OR5B3	C19orf57	OR2T29
C19orf57	PRR4	C4orf29	OR5D18	C20orf112	OR2T34
C1orf116	PRSS45	C6orf226	OR7G3	C20orf194	OR2T35
C1QTNF7	PRSS50	CCDC169	PFDN5	C2orf50	OR4D6
C20orf112	PSD4	CCDC7	POU3F1	C6orf201	OR51D1
C2CD3	PSMD13	CCDC91	PPP1R36	C7	OR51E1
C6orf201	PTPRO	CD1B	PPP1R3G	CCDC127	PDE4C
CCDC172	PTPRQ	CD1E	PPP2R5D	CCDC85C	PDGFD
CCDC85C	RCN1	CDS1	PPP6R2	CENPU	PFDN5
CCNG2	RGPD2	CNPY3	PRRT3	CEP112	PIGC
CD320	RGPD4	CNTN4	PSMD4	COG4	PIGN
CDC25B	RIN3	CPE	PTDSS2	CPNE4	PITX1
CEP112	RNF41	CPNE4	RD3	CTB-133G6.1	PKN1
CEP170B	ROBO2	CTC-490E21.12	RGS6	CTC-512J12.6	POP5
COG4	RP11-125O5.2	CTD-2140B24.4	RIPK4	CTD-2207O23.3	POTEE
CPNE4	RP11-410N8.4	CYFIP2	RNF6	CYP4F31P	PRKG1
CTD-2207O23.3	RP11-723G8.2	CYP4F3	ROS1	DCXR	PRR4
CYP4F31P	RPS19	DCXR	RP11-180C1.1	DDX11	PRRT3
DDX11	SCRN3	DDX60	RP11-204N11.1	DMRTC2	PSMC1
DOCK2	SERPINB5	DEK	RP11-295P9.3	DOCK2	PTPRO
DSG1	SERPINI2	DMRTC2	RP11-302M6.4	DSCR4	RBFOX3
DUSP12	SGMS2	DSG1	RP11-315O6.2	DSG4	RBM19
DYTN	SI	DSP	RP11-399J13.3	DST	RCN1
ECT2	SIRT3	EEF1G	RP11-444E17.6	DUSP12	RFX8
EIF3D	SNRNP27	ENO4	RP11-872D17.8	DYTN	RGPD2
EMR1	SPOCK3	ENPP3	RP1-27O5.3	EIF3D	RIN2
EMR2	SPSB3	ERCC1	RPS19	EMR2	RIN3
ENPP4	SSBP2	FBXO27	RUNX1	ENPP4	RNF41
ENPP5	SUMF1	FCGR2B	RYBP	ENPP5	ROBO2
EXD1	SVOP	FGD4	SETD9	EPRS	RP11-1084J3.4
EXOC2	SYN3	FKSG52	SI	ERBB2IP	RP11-125O5.2
EYS	SYT2	FMO1	SIX4	ESRRB	RP11-180C1.1
FBXO27	TBC1D32	FNDC9	SMG1	EXD1	RP11-210M15.2
FKSG63	TBX10	FRMD4B	SP7	EXOC2	RP11-307N16.6
FMN2	TEC	FRMD6	SPIRE2	EYS	SERPINI2
GDPD5	TET1	FUOM	SPOCK1	FBXO27	SI
GGT1	TEX2	GC	SPTB	FKSG63	SIK2
GMDS	TMEM120B	GGPS1	SRRM5	FMO1	SMCO2
GPR155	TMPRSS9	GGT1	STK10	GDE1	SNX29
GSTO1	TNIP1	GKN2	STXBP6	GDPD5	SOX6
GSTO2	TP63	GMPR	SYN3	GGT1	SP7
IFI16	TTC24	GRM4	TBCCD1	GMDS	SPSB3
IRS2	TTC7B	GRTP1	TCF4	GRM4	STK10
KREMEN1	TXNRD2	GSTO1	TEX26	GSTO1	SUMF1
KRT71	UBE2Q1	GSTO2	TMEM123	GSTO2	SVOP
KRT78	UBR3	IFI16	TMEM132D	IFI16	SYN3
MEIS3	UTP20	IRF6	TP53I11	IRS2	TDRD10
MICU1	VPS16	IRGQ	TP63	KCNG1	TEX2
MINOS1	WDR90	IST1	TTC23	KCNK7	TFDP1
MMP26		KCNC4	TTC4	KRT38	TIGIT
MOXD1		KCNE4	TTC6	KRT71	TIMP4
MPP7		KIF6	TUT1	KRT78	TMBIM6
MPPE1		KREMEN1	TXNDC17	MCTP1	TMEM120B
MSRB3		KRT31	TXNRD1	MED31	TMEM132D
MSTO1		KRT33B	UBE3D	MEIS3	TMPRSS9
MXD1		KRT34	UBFD1	MICU1	TNIP1
MYSM1		MBD5	UBR2	MINOS1	TP63
NIFK		MED31	UGT2B4	MMP2	TPO
NMI		MFSD8	UTS2B	MPPE1	TTBK1
NOP58		MIER3	VPSS3	MSI2	TTC23
NRXN2		MIR3654	VRTN	MSMO1	TTC7B
NUDT8		MMP2	WDFY2	MSRB3	TXNDC17
NUP210		MSI2	WDFY4	MSTO1	UBE2K
OFCC1		MSMO1	XPO5	MXD1	UBE2U
OR2T1		MUC16	YES1	MYO5B	VRK2
OR2T27		MYCBP2		NBPF3	VTCN1
OR2T29		MYOM1		NEDD9	WDR25
OR2T34		NCK1		NFIC	WWC1

Appendix 15.2

Baganda			Ethiopia		Zulu	
BRINP3	MRC2	TEF	BRD1	PDE6B	BPIFB2	OBSCN
C10ORF68	MRGPRX1	TEX19	BTBD2	PDGFD	C10orf111	OFCC1
C11orf40	MSR1	TFDP1	C16orf11	PERP	C10orf53	OPRD1
C14orf37	MT1E	TIGIT	C16orf13	PEX26	C11orf44	OR1C1
C14orf80	MT4	TMEM132B	C1orf101	PIGG	C14orf37	OR1I1
C1orf177	MTSS1	TMEM179	C1orf186	PIGQ	C15orf27	PDPR
C1orf180	MTUS2	TMEM244	C20orf96	PIK3R6	C19orf69	PGM1
C21orf128	MUC8	TMEM40	C22orf42	PNP	C1orf112	PIGG
C2CD4D	MYPN	TMPRSS9	C2CD3	POTEI	C20orf78	POR
C2orf61	MYRF	TNC	C2orf61	PPP2R5C	C22orf42	PPP2R5C
C4orf27	NBPF4	TNIK	C2orf91	PPT1	C2CD4D	PRDM6
C7orf71	NEK11	TNP2	C6orf201	PRKG1	C6	PRSS54
C9orf141	NFKBID	TP73	CCDC136	PRPF4B	C9orf152	PSG11
C9orf171	NKD2	TSSK4	CCDC7	PRR4	C9orf91	PSG2
C9orf85	NRROS	TTC22	CCDC78	PRRX2	C9orf92	PSG4
C9orf91	NRXN2	TTC26	CCNG2	PRUNE2	CCDC113	PSG9
CCDC170	OPRD1	TTC27	CD96	PTDSS1	CCDC85C	PTPRN2
CCDC83	OR1C1	TXNDC16	CDRT1	PTPN18	CD276	PUS7
CCDC85C	OR1S1	TYW1	CIT	PTPN2	CD96	RBM20
CCNK	OR5P2	UNC79	CNTFR	PTPRN2	CDON	RIMS2
CES1	OR5P3	USP14	CNTN4	PTPRO	CERK	ROBO2
CMIP	OR6J1	UTS2R	CORO2B	PWWP2B	CMIP	ROR2
CMTM7	OSBP	VIT	CPNE4	PYY	CMTM7	RORC
CNBD1	PDE1C	VPS11	CPNE7	RBFOX3	COG4	RP11-169F17.1
CNTN4	PDPR	VRK2	CTB-133G6.1	RCN1	CPNE2	RP11-210M15.2
CPOX	PIGG	WDFY4	CTD-2207O23.3	RDM1	CTC-435M10.3	RP11-352D3.2
CREB5	PIGX	WDR3	DDX11	RERG	CTIF	RP11-408E5.4
CTBP2	PIK3R6	WWP2	DDX60	RFX3	CYP4F12	RP11-463C8.4
CTD-2215E18.1	PITPNC1	XRCC4	DISC1	RIMS1	DCPS	RPP38
CTD-2287O16.3	PNP		DKK2	RNPS1	DDX25	SCUBE1
CTD-3088G3.8	PPP1CC		DMRT3	RP11-108K14.8	Dec-01	SMIM8
CTD-3203P2.2	PPP1R3B		DMTN	RP11-15E18.4	DKK2	SNX29
CYBRD1	PPP2R2C		DOCK5	RP11-169F17.1	DPEP1	SORBS1
CYP4F12	PPP2R5C		DST	RP11-286N22.8	DPT	SPINK5
DEXI	PPP5D1		DTX1	RP11-295P9.3	DPYS	SPOCK1
DKK2	PRDM1		ECI1	RP11-351M8.1	EFNB2	SPSB3
DPF3	PRKG1		ECI2	RP11-385D13.1	ENPP6	SQSTM1
DPT	PRM2		EMP2	RP11-47I22.3	EPDR1	SSR1
DPYS	PRM3		ERC2	RP11-47I22.4	ERCC1	STK10
DUSP16	PRR4		ESR1	RP11-505K9.4	ERVMER34-1	SUMF1
EEPD1	PTPN2		EXOC2	RP11-514O12.4	ESYT3	SYT2
EIF3B	PTPRN2		EXT1	RP11-761B3.1	EXOC2	TECTB
EIF3D	PTPRQ		EYS	RP5-1052I5.2	EYS	TEX9
EMC6	PXMP2		FGFR3	RSU1	FGGY	TIMM13
ERC2	RBM20		FJX1	RUFY3	FMN1	TMC6
ERG	RBPJ		FOXI2	RUNX2	FMN2	TMEM114
ERVMER34-1	RGS6		GC	SBNO2	FRMD6	TMEM2
FGD3	RIN2		GPX4	SDF4	FUT3	TMEM63C
FRMD3	RIOK2		GRIK4	SDK2	GINS3	TMOD1
FRY	RMDN2		GSE1	SDS	GNB5	TMPRSS9
FUT3	RMI2		ICT1	SEC11C	GPR98	TNIK
GPR128	ROBO2		IFFO1	Sep-09	GRK4	TXN
GPR148	RORB		IFT46	SGK3	GRXCR2	TXNDC8
GPR98	RORC		IQCJ	SMOC1	GSE1	TYW1
GPX4	RP11-147C23.1		JUP	SOX12	GSR	UBE2E2
GYPE	RP11-169F17.1		KCNT1	SOX6	GSTO1	USP14
IFT46	RP11-297N6.4		KCTD2	SOX9	IGFBP7	
IKBKE	RP11-382J12.1		KIF6	SPSB3	INIP	
INIP	RP11-47I22.4		KRT78	STK10	INMT	
INMT	RP11-505K9.4		MBP	STX12	IQCJ	
INPP5J	RP11-637O19.3		MEGF6	SUMF1	ISPD	
IP6K3	RP11-761B3.1		MEP1B	SUN1	ITPR1	
ISM2	RP11-796G6.2		MGRN1	SWI5	KDM1B	
ITPR1	RP13-672B3.2		MRC2	SYN3	KRT32	
KCNB2	RRM1		MSMB	SYNPO	KRT36	
KCNC2	RUNX1		MSR1	TET1	MB	
KCNE4	SBNO2		MTUS1	TMEM132C	MCTP1	
KCNK12	SCUBE1		MUM1	TMEM179	MECOM	
KCNK16	SDCBP2		MXD1	TMEM192	MEGF6	
KIF6	SDS		MYO10	TMEM25	MMP14	
KRT32	SGSM1		MYOM1	TMEM44	MNS1	
MB	SIDT1		MYRF	TMEM64	MPPED1	
MDFI	SMPD3		NBPF6	TMEM88B	MRGPRX1	
MED27	SPOCK1		NEK7	TMOD1	MSMO1	
MED30	SPSB3		NFIC	TMPRSS9	MTUS1	
MEGF6	SQSTM1		NFKBID	TSSC1	MUC13	
MGC10955	SSBP2		NOD1	TUB	MYPN	
MKI67	SUGCT		NREP	TYW1	NEK11	
MMP14	SUMF1		NRSN2	UBE2U	NIT2	
MMP2	SYN3		NTNG1	UBN1	NME8	
MMP25	SYT2		NXN	USP10	NREP	
MMP26	SYT3		OR1F1	VIT	NRP1	
MOB3B	TBC1D12		OR5V1	WFIKKN1	NTN1	
MPP4	TBC1D32		OTOG	XRCC4	NTNG1	

Appendix 15.3

Baganda & Ethiopia		Baganda & Zulu		Ethiopia & Zulu	
BMP2K	NEK1	BMPER	OFCC1	B3GNT4	NFIC
BPTF	NEK11	BPIFC	PDGFD	BMP2K	NOX3
C14orf79	NFIC	BRINP3	PGR	BPTF	NRSN2
C15orf60	NOX3	C14orf37	PPP1R36	BRINP2	NTNG1
C16orf13	NOXO1	C14orf39	PPP2R5D	C14orf79	NUDT16
C17orf50	NREP	C1orf101	PRDM1	C15orf60	NUGGC
C19orf25	NRSN2	C20orf194	PRKCB	C16orf13	OR1F1
C1orf186	NTNG1	CCDC129	PROSC	C16orf54	P2RY1
C22orf34	NUBP2	CCDC83	PROX1	C16orf96	PIGG
C2orf61	NUDT16	CCDC91	PSD4	C17orf50	PKN3
C4orf27	P2RY1	CCR7	PTK7	C1D	PPP2R5C
C6orf201	PIGG	CD8B	PTPN18	C1orf186	PPP2R5D
C9orf3	PPP2R5C	CDK6	PTPRB	C2orf61	PROX1
CCDC172	PRR25	CEP135	PTPRR	C2orf69	PRRX2
CCDC78	PRRX2	CEP41	RBPJ	C4orf29	PRUNE2
CDIPT	PRSS33	CEP72	RD3	C6orf201	PTDSS2
CINP	PRUNE2	CMPK2	RGS3	C9orf3	PTPN18
CMC2	PTPN2	CNTN4	RGS6	C9orf50	PTPN2
CPEB2	PTPRN2	COQ6	RNF4	CCDC172	PTPRN2
CPNE4	PTPRO	COX7B2	ROR2	CCDC78	PTPRO
CPPED1	RBFOX3	CPNE7	RP11-287D1.3	CCNG2	RBFOX3
CREM	RCN1	CPOX	RP11-302M6.4	CDIPT	RBM33
CTB-133G6.1	RFX3	CREB5	RP11-444E17.6	CEP95	RCN1
CTC-429P9.4	RGS20	CRP	RP11-571M6.15	CINP	RFX1
CTC-432M15.3	RIMBP2	CTC-432M15.3	RTF1	CPEB2	RFX3
CTD-2207O23.3	RND3	CTD-2054N24.2	RUNX1	CPNE4	RND3
CTD-2349B8.1	RP11-15E18.4	CTD-2144E22.5	SCUBE1	CTB-133G6.1	RP11-15E18.4
CTD-3088G3.8	RP11-169F17.1	CTD-2228K2.5	SDS	CTC-429P9.4	RP11-287D1.3
CTIF	RP11-399J13.3	CTD-3074O7.11	SIM1	CTD-2207O23.3	RP11-302M6.4
CTTN	RP11-47I22.3	DGKB	SIRPB2	CTD-2349B8.1	RP11-351M8.1
DEPDC1	RP11-47I22.4	DOCK5	SIRT5	CTD-3088G3.8	RP11-362K2.2
DEPDC4	RP11-514O12.4	DUSP16	SIX1	CTIF	RP11-399J13.3
DISC1	RP11-761B3.1	DYNC1I1	SIX4	CTSE	RP11-403P17.5
DMRT3	RPE65	ENPP3	SMG1	CTTN	RP11-512M8.5
DOCK5	RPUSD1	ESRRB	SMIM11	DISC1	RP11-571M6.15
DSG4	RSU1	ETF1	SMIM14	DMRT3	RP11-761B3.1
EGR4	SEC62	EYS	SNX29	DOCK5	RP5-1052I5.2
EME2	Sep-09	FBP1	SOX6	DSG4	RRP36
EMP2	SMIM7	FBXO7	SPINK5	DST	RSU1
ESR1	SOX12	FBXO8	SPNS3	ECI2	Sep-09
EXOC2	SPSB3	FGD3	SPOCK1	ESR1	SET
EYS	STK10	FREM2	ST7	EXOC2	SGK3
FJX1	SWI5	FRMD6	STK10	FKBP1C	SI
FMN2	SYNDIG1	FRS2	STX8	FMN2	SMIM7
FRMD8	SYS1-DBNDD2	FRY	SUGCT	FOXI2	SORBS2
FYTTD1	TBC1D19	FUOM	SUMF1	FOXP4	SOX12
GCNT6	TENM2	GGPS1	SUSD5	FRMD8	SPTB
GGT1	TET1	GMDS	SYN3	GNG13	STX3
GNG13	TEX2	GPR124	SYT2	GNG7	SUMF1
GNG7	TMEM132B	GPR128	TCN1	GRM1	SWI5
GPR98	TMEM132C	GRM4	TDRD9	GSE1	SYNDIG1
GRB7	TMEM132D	GRXCR2	TENM2	IFT43	TBC1D19
GRM1	TMEM14C	GSTO1	TMED3	JMJD8	TET1
GSE1	TMEM179	IFI16	TMEM241	KCNT1	TEX2
JMJD8	TMEM213	IMP4	TMEM39B	MECOM	TMC6
KDM2B	TMEM64	ITPR1	TOR1B	MEGF6	TMEM132B
MECOM	TNIK	KCNK9	TTBK1	MEIOB	TMEM132C
MEGF6	TWIST1	MECOM	TTC6	MFSD11	TMEM132D
MEGF9	UBN2	MEIG1	TTI2	MFSD8	TMEM14C
MEIOB	VIPR2	MGRN1	TXNRD1	MGRN1	TMEM213
MFSD11	VPS37B	MGST2	UBE2K	MMP28	TMEM217
MFSD7	VTCN1	MICU3	UBE2Q2	MORN4	TTI2
MKX	WDR24	MRPS6	UBR2	MRPS28	TYW5
MMP28	WFIKKN1	MTUS2	UNC79	MSI2	VIPR2
MSI2	XRCC4	NDNF	VRTN	MSR1	VPS37B
MSR1		NDUFS2	WDFY2	MTFR2	VTCN1
MTFR2		NIT2	WDFY4	MTMR6	WDR24
MTMR6		NRG4	WWP2	NEK1	WDR34
MTUS1		NUGGC	XPO5	NEK11	WFIKKN1

Appendix 15.4

Baganda			Ethiopia			Zulu			
B3GNT5	GNG2	RGS3	B3GNT5	MFSD11	SIRT7	B3GNT5	IFT43	RIMS1	WDR20
BIRC2	GPBP1	RICTOR	BIRC6	MFSD8	SMIM11	BDKRB2	IFT81	RMDN2	WDTC1
BIRC6	GPT	RIMS1	BMP2K	MME	SOX6	BIRC2	INTS2	ROBO2	XIRP2
BRD4	GRIK5	RMDN2	BMP5	MMP2	SPG11	BIRC6	INTS3	ROCK1	YKT6
BRIP1	GSKIP	ROBO2	C10orf11	MMP21	SPG7	BRIX1	INTS6	ROS1	
BRIX1	GTDC1	ROCK1	C11orf58	MMP28	SPIDR	BRPF3	INTS7	RP11-123K3.4	
BRPF3	GTF3C1	ROS1	C15orf60	MN1	SPINK6	C10orf11	IQCJ	RP11-125O5.2	
BSX	IDE	RP11-321N4.5	C16orf80	MRPS28	SPOP	C10orf67	ITPKB	RP11-247C2.2	
C10orf11	IER3IP1	RP11-770J1.4	C17orf104	MSRB3	SRFBP1	C10orf76	ITPR2	RP11-295K3.1	
C10orf76	IFRD2	RPS3	C1D	MYCBP2	ST7	C11orf30	KCNK13	RP11-321N4.5	
C16orf80	IFT81	RPS6KC1	C1QTNF7	NCOR1	ST7-OT4	C11orf58	KCTD3	RP11-404P21.8	
C18orf25	INTS6	RPTN	C20orf24	NDRG3	STOX2	C17orf104	KRBOX1	RP11-762I7.5	
C19orf52	INTS7	RRM2B	C4orf19	NDST1	STT3B	C17orf112	KRT85	RP11-770J1.4	
C20ORF135	IPPK	RTN3	C4orf29	NFIX	TBC1D32	C18orf25	MBD3	RPS3	
C20orf24	IQCJ	RUNX1	C4orf40	NOX4	TET1	C19orf52	MCTP1	RPTN	
C21orf49	IQSEC1	RYBP	C9orf147	NOX5	TEX2	C1D	MDC1	RRBP1	
C2orf78	ISPD	SDS	C9orf172	NPB	TEX22	C2	MDN1	RRP9	
C4orf19	ITPKB	SEC24D	C9orf43	NR3C1	TFDP2	C20orf24	MECOM	S100BPB	
C4orf40	ITPR2	SEC61B	C9orf85	NRG4	TIMD4	C4orf19	MEGF10	SDS	
C9orf147	KCTD3	SECISBP2	CCDC178	NSUN3	TIMM9	C4orf40	MFNG	SEC24D	
C9orf43	MBD3	SERP2	CCNY	NUDC	TMCO1	C8orf34	MIEN1	SEC61B	
CBX5	MCTP1	SERPINB7	CDC20B	NUP153	TMCO2	C9orf147	MMP26	SECISBP2	
CCDC113	MEGF10	SERPINE3	CEBPD	OFCC1	TMED3	CBX5	MPND	SERP2	
CCDC178	MEI4	SESN1	CEMP1	OSBP	TMEM132B	CCDC12	MRPS18B	SERPINB7	
CCDC88C	MFNG	SETBP1	CEP70	PBXIP1	TMEM178B	CCDC126	MRPS5	SERPINE3	
CCDC91	MGMT	SGK1	CEP95	PDE6B	TMEM241	CCDC178	MRPS6	SIK2	
CCNY	MMP26	SGMS1	CERS6	PDGFC	TMEM261	CCDC91	MSI1	SIRT5	
CCT8	MPND	SIK2	CES3	PDP1	TMEM39B	CDC25C	MTMR3	SMG7	
CD96	MRPS28	SMG7	CETN3	PDPK1	TMEM5	CDK14	MUC19	SMIM13	
CDC6	MRPS6	SMYD2	CIRBP	PGR	TMX4	CDR2	MYCBP2	SMOC2	
CDK6	MRRF	SND1	CIT	PGRMC2	TNIK	CEP112	N4BP2	SND1	
CENPF	MSI1	SNRNP70	CMTM2	PI4KB	TNNC1	CEP192	NDRG3	SNRNP70	
CEP70	MYCBP2	SNX24	CNBD1	PIGV	TOX	CEP70	NDST1	SNX24	
CEP76	N4BP2	SPECC1	CNPY2	PIK3R5	TPD52	CERS6	NEK11	SOX6	
CEP78	NDRG3	SPOCK3	CNST	PKN3	TTI1	CES3	NFE2	SPINK2	
CEPT1	NDST1	SPOP	CNTN4	POP1	TUSC2	CIC	NFIX	SPINK6	
CERS6	NEK11	SSBP2	CORIN	PPP1R17	TWISTNB	CMSS1	NFX1	SPOCK3	
CES3	NFE2	ST7	CREBBP	PPP1R1C	UBE2V2	CNBD1	NOX5	SPOP	
CIC	NFIX	ST7-OT4	CTC-454I21.3	PPP1R21	UBE3D	CNOT11	NPFFR1	SSBP2	
CKS2	NOX5	SUCO	CTTN	PRKDC	UNC80	CNST	NRIP1	STX6	
CMSS1	NR3C1	TCF3	DDX19B	PROS1	UQCRC1	CNTN4	NRP1	STXBP5	
CMTM2	NSUN3	TCF4	DDX60	PROSC	UTP3	COPS4	NSUN3	STYX	
CMTM4	NUDCD3	TCTN1	DKK2	PRR4	VPS36	COX7B2	NTN1	SUGT1	
CNBD1	NUDT21	TDGF1	DMTF1	PRRT2	VPS51	CRCP	NUDCD3	TBC1D32	
CNGB3	NUP214	TDRD6	DPP4	PSEN1	WDFY2	CRISP1	NUP205	TCEB3	
CNST	NUS1	TEX264	DPY30	PSMD4	WDFY3	CRTC1	NUP210	TCF3	
CORIN	OFCC1	TFDP2	DYM	PTEN	WDR16	CRYBG3	NUP214	TCF4	
COX7B2	OR4C6	TFEC	EBF1	PTPRN2	WDR3	CTD-2116N17.1	NUS1	TDRD6	
CREBBP	OSBP	TMC1	EDRF1	PURG	WISP3	CTD-2267D19.3	OFCC1	TEX264	
CRIP3	OTUD4	TMEM132B	EIF1	RBX1	XIRP1	DDX10	OR4M1	TFDP2	
CRISP1	OXSRI	TMEM145	ERBB2IP	RCOR1	XPNPEP3	DENND1B	OR4N2	TFEC	
CRTC1	PEX1	TMEM178B	ERC2	RDX	XRN1	DKK2	OR9Q1	TFR2	
CRY2	PGR	TMEM237	EXT1	RECK		DMTF1	OTUD4	TMEM132B	
CTD-2267D19.3	PI4KB	TMEM241	EYS	RFX1		DNM2	OXCT1	TMEM135	
CTTN	PIGS	TMEM258	FBXW7	RFX3		DSC2	PDGFC	TMEM178B	
DCDC1	PIGV	TMEM5	FEV	RG520		DSN1	PEX1	TMEM2	
DCP1B	PIK3R5	TMEM53	FGD5	RG53		DUSP5	PI4KB	TMEM241	
DDX10	POM121C	TMEM54	FGGY	ROBO2		DYM	PIGN	TMEM243	
DGCR8	PPP1R3E	TMX4	FRMD8	RP11-247C2.2		ERBB2	PKNOX1	TMEM258	
DISC1	PPTC7	TOP1	FUS	RP11-302M6.4		ERVW-1	PPP1R10	TMEM261	
DKK2	PRDM4	TP53I3	GBF1	RP11-362K2.2		ESR2	PPP1R42	TMEM54	
DMTF1	PRKDC	TP63	GNB4	RP11-512M8.5		ETS1	PRKD2	TMEM65	
DNM2	PRKG1	TPD52	GRIP1	RP11-529K1.3		ETV4	PRKDC	TMX4	
DPY30	PROS1	TPGS2	GSE1	RP11-552F3.12		EXOC6	PRKG1	TOE1	
DSC2	PROSC	TTC1	GTDC1	RP11-598P20.5		EYS	PROS1	TOX2	
DSN1	PROX1	TTC17	GTF3C1	RP11-613M10.9		FBXW7	PRR4	TTC17	
DSTYK	PRR19	TTC6	IFRD2	RP11-863K10.7		FER	PSEN1	TTF1	
DUSP5	PRR4	TTI1	IFT43	RP1-27O5.3		FGF7	PSMB7	TTI1	
DYM	PSMG2	UBE2D2	INSR	RP3-468K18.5		FGFR1OP	PTEN	UBE2D2	
ESRRG	PTEN	UBE2V2	INTS6	RPS3		FMOD	PTPRO	UBE2V2	
ETS1	PTPN3	UBE3D	INTS7	RRP9		FUS	PTPRQ	UBE3D	
EXOC6	PTPRO	UBR5	IQSEC1	RUFY3		GDF11	PUM2	UBOX5	
EYS	PTPRQ	UPF1	ISPD	RUSC1		GJD3	PURG	UBR3	
FBXO24	QSER1	UQCRC1	ITPR2	SCRN1		GPBP1	RBFOX2	UBR5	
FGF6	RBFOX2	USP16	JUP	SEC24D		GPN2	RBM25	UPF1	
FGFR1	RCOR1	VPS13D	MBD3	SET		GPR89B	RCOR1	UQCRC1	
FGFR1OP	RCVRN	VPS36	MCM4	SGSM1		GPT	RERG	UTP14C	
FGGY	RERG	WDFY2	MEGF10	SGSM3		GRIP1	RFWD2	VPS13D	
FNTB	RFWD2	WIF1	MEGF9	SIK2		GTF3C1	RFX7	VPS36	
GJD3	RFX1	XIRP2	MFNG	SIM1		IER3IP1	RICTOR	WDFY2	