SUMMARY

This was a study of patients with newly diagnosed active pulmonary tuberculosis compared with control patients with other medical/surgical diagnoses other than tuberculosis. There were seventy one study patients with tuberculosis who were matched for age, gender, race, suburb of residence against eighty nine control patients. The study measured vitamin C, stress hormone and acute phase reactant levels in patients with newly diagnosed active pulmonary tuberculosis and control patients (without tuberculosis) and determined a relationship between vitamin C and the other variables. The major findings in the study were;

- Few differences were demonstrated in the demographic profile of the study patients and the control group;

- There were decreased plasma vitamin C levels and white cell vitamin C levels in patients with newly diagnosed active pulmonary tuberculosis, the reasons for which were not investigated, but may be related to increased turnover of vitamin C, decreased intake of vitamin C containing foods and increased shifts of concentrations of micronutrients in the body as previously suggested by other researchers;

- Surprisingly there were decreased plasma and white cell vitamin C levels in the control patients, the reasons for which were not clear but could be related to cigarette smoking or the possibility that African people, in general, have low levels of vitamin C;

- Serum cortisol levels in both study patients and the controls were generally within normal ranges with only a small percentage of patients in
each group with high levels of serum cortisol, in contrast to low levels reported by other researchers;

- Plasma catecholamine levels were normal or high in both the study patients and controls, in partial conformity with previous work, which demonstrated increased catecholamine in patients with active pulmonary tuberculosis;

- Acute phase reactants (ferritin and CRP) were of higher magnitude in the study patients than in the controls indicating an apparently appropriate response in tuberculosis patients;

- Despite the role of vitamin C in steroidogenesis and catecholamine synthesis, the low levels of vitamin C found in the study did not appear to have any influence/correlation with stress hormone levels (catecholamine and cortisol) and acute phase reactants (ferritin and CRP).