Leishmaniasis is a disease acquired by humans, due to Leishmania parasites, which exist in two forms. A flagellated extracellular promastigotes in the sandfly vector or in vitro culture and aflagellar intracellular amastigotes in the macrophage cells of mammals, lizards and tissue culture. Leishmaniasis takes several clinical forms including: cutaneous, mucocutaneous and visceral disease.

Leishmaniasis and especially cutaneous leishmaniasis was reviewed in terms of epidemiology, biology and isoenzyme electrophoresis. Leishmania research in Saudi Arabia is some what a new undertaking. Cutaneous leishmaniasis is found to be a wide spread disease in Saudi Arabia which eventually affects a large number of people each year and is regarded as a public health problem. In the present study three human isolates of cutaneous leishmaniasis were obtained from patients living in Abha province, with the objectives of critical investigation on some biological aspects of this organism. These isolates were cultivated in different culture media and the growth rate of promastigotes was assessed quantitatively in three culture media including (NNN, MEM and 199). Animal susceptibility to infection with the three isolates was also tested using syrian hamsters and BALB/c mice. The ultrastructure and morphological characteristics of the parasite were investigated. The three human isolates were also biochemically characterized using isoenzyme electrophoresis technique. The growth rate studies showed that NNN medium was the most suitable culture medium which gave the the highest promastigote count. After inoculating the promastigotes of the three isolates into healthy syrian hamsters and BALB/C mice no symptoms of positive infection was observed. Examination of ultra-thin sections of promastigotes of the three isolates using electron microscopy revealed certain consistency of the principal structure of keishman promastigotes. Each promastigote possessed an elongated form with a single smooth plasma membrane, a subpellicular layer of microtubules together with many organelles within the cytoplasm. Biochemical characterization of the three isolates was performed by...