An ethno-medical survey of plants used by Abagusii Traditional Medical Practitioners was carried out and 166 plant species representing 138 genera and 62 families were botanically identified. Antimicrobial and phytochemical screening of 20 plants selected from the survey, and reputed to be widely used in the treatment of infectious diseases, was carried out. The various plant parts (roots, stems, leaves and flowers) of one of the medicinal plants, *Euphorbia hirta* L. were Sohxlet extracted with three solvents in order of increasing polarity (ether, methanol and water). The solvent with the most active extracts (methanol) was used for subsequent extractions of the rest of the plants. The extracts were screened for bioactivity using the disc diffusion method. Using the same method representative organisms were screened to represent a broad spectrum of microorganisms including specific clinical isolates from Kenyatta National Hospital. Tests were performed using the selected plant extracts to find out how effective individual extracts were against specific human pathogens. The phytochemical screening was done by the use of successive and selective extractions with solvents of different polarities (ether, methanol and water). The screening covered mainly nitrogenous compounds, acetogenins, polyketides, isoprenoids and carbohydrates. In the antimicrobial screening it was found that most of the plant extracts inhibited the growth of the 7 bacterial species, the fungus and the majority of the 13 pathogenic micro-organisms that they were tested against. In the phytochemical screening 12 plants (60%) gave a positive reaction for alkaloids, 14 plants (70%) tested positive for tannins, 12 plants (60%) tested positive for flavonoids, 17 plants (85%) tested positive for coumarins, 9 plants (45%) tested positive for polyketides (emodin), 7 plants (35%) showed the presence of anthocyanins, 7 plants (35%) tested positive for anthracene glycosides and 6 plants (30%) showed the presence of fatty acids, 17 plants (85%) showed the presence of steroids/triterpenoids, 13 plants (65%) tested positive for saponins, 17 plants (85%) tested positive for volatile oils and 10 plants (50%) showed the presence of carotenoids, 9 plants (45%) showed the presence of polyuronoids, 11 plants (55%) tested positive for polyoses while 2 plants (10%) showed a positive reaction to starch and 18 plants (90%) tested positive for reducing compounds.

The results show that the local flora has a diversity of plant species with potential medicinal value. The results also confirm that there is credence to a number of uses to which herbalists put in certain plants and their use in traditional medicine and that the plants used by Abagusii Traditional Medical Practitioners are effective against pathogenic micro-organisms. The results supported the hypothesis that the plants used by the Abagusii Traditional medical practitioners have compounds of curative value and therefore they play an important role in the basic health care of these people.