

IV. Conclusions

Through the ICBG program and a continuing search for anticancer compounds the extracts of two plants were determined to be cytotoxic. These extracts were further fractionated to yield four compounds. The structures of these compounds were elucidated using mass spectrometry and 1-D and 2-D NMR.

The ethyl acetate extract of the twigs of *Garcinia macrophylla* from Suriname was found to be weakly cytotoxic in the A2780 human ovarian cancer cell bioassay. The known benzophenone guttiferone A and a new guttiferone (guttiferone G) analog were isolated from the extract and found to be responsible for the bioactivity. A known triterpene, friedelin, was also isolated from the extract and found to be inactive. The structure of guttiferone A was determined by comparison of the NMR data to that found in the literature. The structure of guttiferone G was determined by comparison to guttiferone A and through careful examination of both 1D and 2D NMR data.

An extract of *Bridelia tulasneana* from Madagascar yielded one active compound. It was identified as the known lignan deoxypodophyllotoxin and found to be responsible for the bioactivity. It was identified by a comparison of its spectral data to that found in the literature and that of an authentic sample.