

## ABSTRACT

Part I contains a summary of the chemical investigations of the extracts of Andrographis paniculata. An outline is given of the work leading to the structural elucidations of andrographolide, its transformation product isoandrographolide, and neoandrographolide. Paniculides obtained from tissue cultures and a new natural flavone extracted from the roots of the plant are also mentioned.

In Part II the details of the multistage conversion of andrographolide to the iso-aglucone of neoandrographolide are presented. Reduction of the C-3 secondary alcohol to a saturated methylene group proved to be the most difficult stage and was finally achieved by employing the Caglioti method. This successful correlation of the two compounds verifies the proposed structural and stereochemical similarities between them.

Part III consists of an account of the main attempts to reduce the butenolide system of deoxyandrographolide to a furan. None of these trials was successful.