

ABSTRACT

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Thesis title: Secondary metabolites of the Apocynaceae family as a source of cytotoxically active substances

The diploma thesis is focused on elaborating a comprehensive overview of secondary metabolites of the Apocynaceae family with a focus on their application in practice and the importance of Vinca alkaloids in the treatment of Hodgkin's and non-Hodgkin's disease.

First, the major representatives of the Apocynaceae family, their constituents and mechanisms of action are mentioned. The uses and the desired and side effects are described and the effects of cardenolides are also stated.

The work also deals with Hodgkin's and non-Hodgkin's disease, their incidence, symptomatology and classification of these diseases. Risk factors, including biological and genetic characteristics, are listed. Furthermore, the topic of staging and the treatment of these diseases according to the individual stages of the disease and differences in therapy of specific groups of patients are elaborated.

The individual types of lymphomas, their diagnosis and subsequent treatment, including side effects, are described in detail. The aim was to define the role of Vinca alkaloids in the treatment of these malignancies. At the end of the work, new possibilities of therapy and the importance of immunotherapy are also outlined.

Key words: Secondary metabolites, Apocynaceae, cytotoxic activity, Vinca alkaloids, cardenolides, Hodgkin's lymphoma, non-Hodgkin's lymphoma, therapy