

Abstract

Charles University in Prague, Faculty of Pharmacy in Hradec Králové

Department of Biological and Medical Sciences

Consultant: PharmDr. Jana Rathouská, Ph.D.

Candidate: Kateřina Havlíková

Title of diploma thesis: Immunopharmacology and immunotherapy of cancer

Main goal of this work is to summarize modern trends of immunopharmacology and immunotherapy of tumour disease and to stress their importance for the future of therapy. To add context to immunotherapy there are also described characteristics of tumour disease and immune system, on which many principles of immunotherapy are directly based.

This diploma thesis is divided into three individual parts – carcinogenesis, immune system and immunotherapy.

The carcinogenesis chapter includes basic mechanism of cancer development, principles how body protects itself against tumour disease and mechanisms how this protection fails.

In the immune system chapter there are described individual types of immunity and mechanism by which immunity fails in the case of tumor disease.

The immunotherapy chapter describes recent findings of how the properties of immune system can be utilized to combat tumor disease. Approved and used therapies are included.