

Abstract

Charles University

Fakulty of Pharmacy in Hradec Králové

Department of Biophysics and Physical Chemistry

Candidate: Bc. Barbora Parýzková

Supervisor: Mgr. Pavel Bárta, Ph.D.

Title of diploma thesis: Radiolabelled receptor-specific peptides for cancer diagnosis and therapy.

The presented diploma thesis is based on literature review and it deals with receptor-specific radioactive labeled peptides and their usage in the cancer diagnostic and treatment. It focuses on general knowledge about radiopharmaceuticals, further on the descriptions of either diagnostic or therapeutic radionuclides as well as on currently used chelating agents.

The particular attention is paid to peptides like somatostatin and cholecystokinin and their usability in Nuclear Medicine for the imaging and treatment of certain malignancies. The other stated peptides in this diploma thesis are bombesin, vasoactive intestinal peptide and alpha melanocyte stimulating hormone.

Keywords: receptor-specific peptides, radiolabelling, radionuclides for diagnosis and therapy, radiotherapy, radiodiagnostics, octreotide.