

Benzodioxoles

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■Preface

Medicinal plants are sources of natural compounds and many Scientists are interested to find the ability of these phytochemicals to cure different problems. The use of natural remedies for treatment of various diseases has a long history which began with folk medicine and has been incorporated into traditional and allopathic medicine through the years. This use has great importance, because plants can provide drugs to enlarge the therapeutic treasures. Several drugs currently used in clinical such as vincristine, teniposide, paclitaxel and etc. were isolated from plant species or derived from a natural prototype.

However, many plants are known to be toxic. For this reason, research is carried out in order to determine pharmacological and toxicological actions of medicinal plants which have many phytochemicals. The combined toxic effects of multiple chemicals have been recognized as an important consideration in ecotoxicology because mixtures of chemicals can have a greater negative impact than the individual constituents of the mixture. Thus, it is important to examine not only plants but also the toxicity of pure compounds.

Cancer is a problem which nowadays the health organizations of the world and especially our country Iran have been interested to it. Because of enhancement of industrial life, the amounts of people conflict with this disease are increasing. Therefore, the search for new drugs exhibiting activity against several types of cancer is the most interesting subjects in the field of natural products research in pharmacy field.

The purpose of this book is Introduction and elucidation new

benzodioxoles from roots extract of *Astrodaucus persicus* (Boiss.) Benzodioxoles are aromatic ring containing the methylenedioxy functional group. Famous drugs such as vincristine, Vinblastine, podophyllotoxin, Etoposide, Teniposide, Tadalafil, Steganacin and Combretastatine are Benzodioxole.

The topics covered in this book can be divided into three sections: (1) Benzodioxoles, (2) *Astrodaucus persicus*, and (3) Five Novel Benzodioxole.

We have tried to eradicate as many mistakes as possible, probably not with complete success. We are therefore grateful for any suggestions and comments.

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