Preface

Plants are one of the best reservoirs of medicinal wealth among the natural medicines. The interest in harvesting them for the well-being of mankind has increased with increasing demand of drugs for diseases of major concerns and those emerging with modern lifestyles. But the challenge is in ensuring the safety and sustainability of such drugs over synthetic ones. Hence, it becomes necessary to validate the natural medicine from plants with various scientific experiments. At the same time, it also becomes necessary to built conservation strategies to resist mass destruction of plant life from earth. The prime aim of the book is to include all those scientific analyses of a plant that would promote it to a reliable medicine for human health. Here, an attempt has been made to combine the works done by the eminent researchers and scientists all over the world in such a manner that a quick glance would give hand full of information about how to initiate and move on research in phytomedicine. The book compiles the most relevant and recent trends of scientific information pertinent to ethnobotany, ethnopharmacology, phytochemistry, bioinformatics and biotechnology. The book also comprises experiments and protocols standardized by the research scholars of Bioprospecting Laboratory, Department of Botany, Bharathiar University. A researcher would find it very useful for the selection of plant, its use in various in vitro and in vivo studies, isolation and identification of active molecules, etc. This book contains 32 major assays with a special emphasis laid on screening of herbal drugs for antioxidant potential, pharmacological activity and phytochemistry involved in herbal research. The review processes of the articles have been carried out by the experts from various universities and research institutes. We hope the present compilation will be useful for the students, research scholars, academicians and industrialists, and people associated with herbal research. The author would like to convey sincere thanks to the Bharathiar University authorities and Prof. V. Narmatha Bai, head of the department, for their support and encouragement. The author would also like to thank his research team comprising of Dr. R. Senthil Kumar, Dr. Blassan P. George, Dr. M. Iniyavan, Dr. K. Arunachalam, Dr. S. Saravanan, Rahul Chandran, Sajeesh T., Murugan R., P. Revathi, Harini S., Dhivya S., Saikumar S., Kasipandi M. and Elizebeth George for their contribution in the
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compilation of the assays in a well-designed manner. We would like to express our special appreciation for the publishers and their team for the sincere efforts in bringing out the book in time.

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