

Preface

There is perhaps an everlasting quest in biology and that is to learn about ourselves, human being in particular and the living community as a whole. However, through this learning procedure man has also learnt to exploit the living world for its well being. Since the dawn of the civilization, he started to realize about the importance of plants, animals and microbes.

This has become more apparent as we entered in to the 21st Century. More than ever before, human communities are now dependent on plants and microbes. Therefore, research in the field of medicinal, cosmetics and other products from native plants and microbes has once again taken the centre stage of biological research.

Another important aspect is the coordinated interaction between microbes and plants. This interaction is of paramount importance for their healthy association in almost all agricultural settings.

Realizing the importance of plants, microbes and their everlasting association, modern techniques are widely used these days which has led to the development of new disciplines in biology. One such discipline is Bioinformatics.

Bioinformatics is the field of science in which biology, computer science and information-technology merge to form a single discipline. Its ultimate goal is to enable the discovery of new biological insights as well as to create a global perspective from which unifying principles in biology can be discerned. These days, techniques and principles of bioinformatics have been widely used in analyzing the genomes of various beneficial and harmful microbes as well as economically important plants. This way bioinformatics has come up as a major tool for studying the modern day biology. It is in this context Department of Botany, University of North Bengal in association with NBU Bioinformatics Facility organized a three day National Conference on "Biology and Bioinformatics of Economically Important Plants and Microbes". In that conference it was decided that a proceeding volume will be published on the papers presented. The present volume is a culmination of that effort. There are all together 28 articles in this book which may be broadly divided into two parts. One part is biology of economically important plants and microbes and the other part is bioinformatics study of various plants and microbes along with description of various bioinformatics tools.

This book couldn't have been materialized without the active support of University of North Bengal, financial support from Department of Biotechnology, Government of India and Narosa Publication House, New Delhi for agreeing to publish this volume. I am also thankful to Dr. T. Madhanmohan, Adviser, DBT, Government of India for providing help as and when required and also for writing a foreword for this book. I am also thankful to the contributors for conferring

considerable confidence on me and contributing in this volume. I would like to thank my colleagues in the Department of Botany, NBU as well as in the laboratory, especially Mr. Arvind K. Goyal for giving me great editorial support. Thanks are also due to my mother, wife and children for allowing me to spend most of the time working on this book which I should have spent with them. Above all I would like to thank the Almighty God, without whose blessings no work can be done, I believe.

Arnab Sen

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