



PREFACE

May God bless all of us.

It gives me great to extend you all a very warm welcome to the Proceedings of the International conference on Biological Science: Advances in Biological Science: Biological Approach for Sustainable development of Tropical Biodiversity for Human Prosperity (ICBS Bio-UGM 2013), Yogyakarta, Indonesia.

It is gratifying to note that the conference is designed to improve awareness on environmental sustainability, in order to understand the right policy regarding bio-conservation action. To increase the consciousness and understanding on the potential, economic value and sustainable management of tropical biodiversity through biotechnology and bioengineering application and To strengthen international scientific network of biological and biology-related scientists to share and exchange progress in various fields of biological research.

No matter how much we can do by ourselves on the institutional and national level, it is never enough. International level of collaboration work would be the best answer. Therefore I wish that this event which is attended by distinguish speaker and attendants from Japan, Sweden, Australia, Korea, Malaysia, and Indonesia, would be a great opportunity for us to established scientific collaboration between scientists internationally.

Hereby, on the behalf of Organizing committee I acknowledge Prof. dr. Ali Ghufon Mukti M.Sc.,Ph.D (Universitas Gadjah Mada/Ministry of Health) as a Keynote speaker, and also for the following invited speakers, Prof Yasumasa Bessho (NAIST, Japan), Prof. Woo Je-Tae (Chubu University, Japan), Prof. Choi Byeong-Dae (Gyeong Sang National University, Korea), Assoc. Prof. Eva Albers (Chalmers University of Technology, Sweden), Prof. Manshor Mashoor (USM, Malaysia), Dr. Fransisco Lopez Ruiz (Curtin University, Australia) and Dr. Tjut Sugandawaty Djohan, M.Sc. (Universitas Gadjah Mada, Indonesia) for willingness to share their valuable knowledge and scientific information.

To make this conference happen, I would like to gratefully acknowledge to the valuable contributions from personal and institutional sponsorships including Universitas Gadjah Mada, Bank Negara Indonesia (BNI), CIDES, PT. Fajar Mas Murni Semarang, Miconos Transdata Nusantara, P.T. Roche, Drs. Heri Susanto, MM., Dr. Suwarno Hadisusanto, and Dra. Lucia Rina.

I would like also to take this opportunity to express my sincere thanks to Dean and Vice Dean of Biology Faculty, Universitas Gadjah Mada, for giving us opportunity and support to organize this conference. Heartfelt thank is delivered to steering committee, academic re-viewer, Organizing Committee, for all of participation and hard works. All of them have been working since the beginning of the planning stage and they are still here today for all of us.

Despite our best efforts, it is inevitable that there is a lack in organizing this conference and I profoundly apologize to all invited speakers, oral and poster presenters, attendants, donators and committee members.

Special thanks to Knowledge E Digital Libraries for publish on-line the proceedings ICBS Bio – UGM 2013 on KnE life Science Volume 2.

Finally, I would like to offer my best wishes for a highly enjoyable, successful, productive and fruitful conference.

Thank you very much

Dr. Bambang Retnoaji
Chairperson of the Organizing Committee