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MESSAGE FROM  
THE HONOUR CHAIRMAN OF 5<sup>th</sup> ICBWI



Assalamualaikum and Greetings to All,

It is a great pleasure to host the 5<sup>th</sup> ICBWI 2014. On behalf of the organizing committee I would like to extend our warmest welcome to participants to this exciting field of biotechnology for human health and wellness. The 5<sup>th</sup> ICBWI aims to provide platform for researchers, practitioners and policy makers to present their works and interact with the wellness community. The theme of the conference, 'Wellness for Health and Productivity' is highly relevant as there is a need to shift the paradigm in the healthcare community from sickness centered to wellness focus. Wellness biotechnology is regarded as a proactive strategy that focuses on the enhancement of human health and wellbeing by promoting physiological function for meaningful existence. The quest for healthier body, better and younger looking, superior physical strength and happier personality are some of the most desirable wellness attributes. As such products and services and policy that promote the production of wholesome nutritious food, nutraceutical, cosmeceutical and healthy living environment are crucial. Thus 5<sup>th</sup> ICBWI is intended to highlight the new development in research and foster collaboration amongst the researchers in this global era.

I would like to take this opportunity to offer my sincere gratitude to all participants and organizations involved in organizing the event. We hope 5<sup>th</sup> ICBWI 14 will enrich us with the knowledge, wisdom and happiness to enhance our health and productivity in life.

Thank you.

**PROF. DR. MOHAMAD ROJI BIN SARMIDI**

Chairman  
The organizing committee 5<sup>th</sup> ICBWI

ABSTRACTS FOR POSTER PRESENTATION

PS2-14

**Medium Composition Effects On Growth Kinetic Of *Cordyceps Militaris* Cells Using Agar Plate Method**  
**Mohamad Soltani<sup>1,2</sup>, Mohanad Al-Ali<sup>1</sup>, Nor Zalina Othman<sup>1</sup>, Roslinda Abd Malek<sup>1</sup>, Hesham A. El-Enshasy<sup>1,3</sup>**

<sup>1</sup>Institute of Bioproduct Development (IBD), Universiti Teknologi Malaysia (UTM), 81310 Skudai, Johor, Malaysia.

<sup>2</sup>Department of Food and Biological Engineering (FABE), Negeri-e-Jonoob Food Industry Sdn. Bhd., Tehran, Iran.

<sup>3</sup>Genetic Engineering and Biotechnology Research Institute, City for Scientific Research and Technology Applications (CSAT), New Burg Al Arab, Alexandria, Egypt.

**Abstract**

Mushroom *Cordyceps*, as one of the most well known fungi with numerous bioactive compounds possess therapeutic actions; many years used as medicinal food particularly in China and Japan. Interestingly, the long history of mushroom as a therapeutic agent is not far from its role as a food component among Asian people specifically in Traditional Chinese Medicine (TCM). It has been cultivated naturally or in artificial media. Fungal mycelia contain adenosine, cordycepin, and polysaccharides, which are responsible for its biological activities. Cordycepin is the best-known and most potent mushroom-derived substances possessing anticancer, antitumor, antiviral, antihypertensive, immune response stimulating effects, blood lipid lowering effects and several other immunomodulating activities. Therefore, it can be a potential alternative or supplement to chemotherapy in order to treat or accelerate the treatment efficiency on the different types of human related cancer diseases. However, high quality and large-scale production of bioactive products from mushroom *Cordyceps* are the issues need to be investigated. Thus, optimization of cultural conditions such as medium composition and also the type of components used in medium are two essential factors, which are so effective on the acceleration of the product formation by the cells. In this study, optimized solid state cultivation of fungal mycelia cells using modified potato dextrose agar (PDA) medium culture supplemented with specific amount of malt extract (ME) together with yeast extract (YE) was investigated. The mycelial growth diameter was monitored during 21 days of cultivation time using two series of experiments including 2, 4, 6 and 8 g of ME and 6 g of ME with 0, 2, 4 and 6 g/L of YE in the PDA medium culture, respectively. Results illustrated the highest mycelial growth diameter around 7.5 cm using medium composed of PDA supplemented with 6 g/L ME and 4 g/L. Further investigations are now undertaken in our laboratories to clarify the effects of the new medium presented here on the bioactive metabolite formation (e.g. cordycepin).

**Keyword.** *Cordyceps militaris*, Chinese medicine, fungi, mycelia growth, mushroom.

PS2-15

**Natural Sources Of Antifungal Products From Wood-Decay Fungi *Xylaria* Species**

**P. Somboon and N. Soontorngun**

Division of Biochemical Technology, School of Bioresources and Technology, King Mongkut's University of Technology Thonburi, 49 Soi Thian Thale 25, Bang Khun Thian Chai Thale Road, Tha Kham, Bang Khun Thian, Bangkok, 10150, Thailand.

**Abstract**

Increasing incidents of drug resistant opportunistic fungal pathogens led to therapeutic failures of fungal infection related treatments in hospital settings. The discovery of novel bio-based compounds with biological activities, including antifungal property is one of interesting research topics nowadays. To overcome this obstacle, we search for novel sources of antifungal products with expectation of higher capability to kill fungal pathogens. *Xylaria* is a group of decomposer fungi that are found throughout the world, especially in the tropical forests. Various secondary metabolites has been isolated and identified such as xylactam, xylaramide and multipolides A and B, confirming *Xylaria* as the worthwhile source of bioactive metabolites. In this study, we found some new *Xylaria* species with antifungal activities and plan to further identify and to characterize attractive antifungal candidate compounds for applications in alternate treatments of fungal infections.