



## WATCHARA KASINRERK

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### Education

Dr. rer. nat., Universitat fur Bodenkultur Wien, Austria, 1992  
M.Sc. (Microbiology), Chiang Mai University, Thailand, 1985  
B.Sc. (Medical Technology), Chiang Mai University, Thailand, 1981

### Research Interest

- Development of high-efficiency hybridoma technique for monoclonal antibody production
- Biochemical and functional studies of leukocyte surface molecules
- Development of immunodiagnostic reagents

### Honors

- 1993 The Dissertation Prize, Austrian Society of Allergology and Immunology, Austria
- 1996 Outstanding Research Award of the TRF Scholar, The Thailand Research Fund
- 1996 Career Development Award, The National Sciences and Technology Development Agency
- 1998 The Best Thesis Supervisor (Master degree), Graduate School, Chiang Mai University
- 1999 Alumni Award to the Distinguished Former Students, Faculty of Associated Medical Sciences, Chiang Mai University
- 1999 Taguchi Prize: Outstanding Research Achievements Award, Thai Society of Biotechnology
- 2003 Outstanding Research Work, The National Research Council, Thailand
- 2004 The Best Thesis Supervisor (Doctoral degree), Graduate School, Chiang Mai University

- 2006 Outstanding Research of the Year, The Thailand Research Fund
- 2006 The Best Thesis Supervisor (Master degree), Graduate School, Chiang Mai University
- 2006 The CMU Golden Elephant Award (The Best Teacher Award), Chiang Mai University
- 2007 National Innovation Award (the Second level), The National Innovation Agency
- 2007 Chiang Mai University Alumni Award, Chiang Mai University
- 2008 Outstanding Scientist Awards, Foundation for the Promotion of Science and Technology under the Patronage of His Majesty the King
- 2008 Innovation Ambassador 2009, National Innovation Agency
- 2009 National Outstanding Achievement Award 2009 (Category: Outstanding Individual, Science and Technology), Bureau of National Identity

### **Invitations and Guest Professorships**

- 1987-Present Member, The Association of Medical Technologist of Thailand
- 1989-Present Member, Austrian Society of Allergology and Immunology
- 1999-Present Member, Thai Society for Biotechnology
- 2003-Present Member, Thai Academic of Science and Technology Foundation
- 2004-2008 Scientific Committee, Allergy and Immunology Society of Thailand
- 2007 Scientific Committee, World Allergy Congress 2007, Bangkok, Thailand
- 2008-Present Vice President, Allergy and Immunology Society of Thailand
- 2008-Present Visiting Research Fellow, The University of New South Wales, Australia

## Abstract

### Monoclonal Antibody: A Tool for Development of Disease Diagnostics

Watchara Kasinrerak

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Faculty of Associated Medical Sciences, Chiang Mai University

Following the innovation of hybridoma technique by Cesar Milstein and George Köhler in 1975, numerous of monoclonal antibodies have been produced and become invaluable tool for biomedical research as well as for development of diagnostic kits. However, by the conventional hybridoma technique, production of monoclonal antibodies is not always victorious in some cases. To overcome this limitation, recently, we have established various efficient strategies for production of monoclonal antibodies. By using the established methods, various monoclonal antibodies were then produced in our research center. Some of the produced monoclonal antibodies were employed for the development of diagnostic methods and kits for diseases that are Thailand public health issue. The novel methods for enumeration of CD4+ lymphocytes for monitoring of HIV therapy were developed. The immunological methods for screening of alpha thalassemia carriers were also established. In addition, several other immunodiagnostic kits are under developing. In this presentation, ideas, conceptions and troubles on the development of diagnostic kits will be discussed.