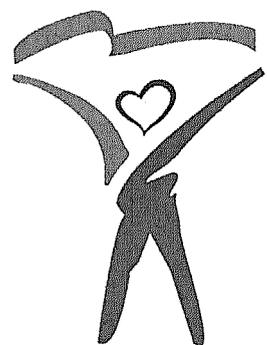


**第一届**

# 免疫疾病与治疗大会



**WCIT-2010**

BIT's 1<sup>st</sup> Annual World Congress of

**Immunodiseases & Therapy**

**主题：促进健康 提升活力**

**Theme: Boosting Health and Vitality**



**时间：2010年5月15-17日**

**地点：中国北京国际会议中心**

**Time: May 15 - 17, 2010**

**Venue: Beijing International  
Convention Center,  
Beijing, China**

[www.bitlifesciences.com/wcit2010](http://www.bitlifesciences.com/wcit2010)



BIT's 2<sup>nd</sup> Annual World Congress of

# Immunology, Immunodiseases and Therapy (WCIT) 2011

Time: November, 2011 Venue: HangZhou, China

## Conference Highlights

At the Conclusion of this Conference, Participants Should be able to Meet the Following Objectives:

- A Comprehensive Overview of the Immune System and Disorders
- An Update on Recent Clinical Developments in the field of Medical Immunology
- A Review of the Latest Pharmacological Therapies for Immune-mediated Diseases
- A Review of the Latest Strategies for Management of Clinical Immunology
- A Greater Understanding of the Long-term Complications of Autoimmune and Immunodeficiency Disorders
- An Opportunity to Share and Exchange Ideas with Leading Practitioners in the Field

## ► WCIT-2011 will cover the following topics:

- Track 1: Basic Research of Immunology
- Track 2: Novel Technologies & Medical Devices for Immunodiseases
- Track 3: Medical Research and Immune Diseases
- Track 4: Drug Discovery & Development of Major Immune Diseases
- Track 5: The Immune Pipeline: A Strategic Review
- Track 6: Diagnostics, Therapeutics and Clinical Management of Immune Diseases

## ► Presentation Style

All accepted abstracts will be presented as oral presentations or poster presentations. Presentations will be evaluated and notified accordingly by the Program Committee.

## ► Contact Us

Ms. Kayla Liu

Organizing Committee of WCIT 2011

26 Gaoneng St., R401

Dalian Hightech Zone

Dalian, LN 116025, China

Tel: 0086-411-84799609-821

Fax: 0086-411-84799629

Email: kayla@webbitmail.cn

## ► Call for Abstracts

We look forward to your abstract submission!

Please register your abstract online at

<http://www.bitlifesciences.com/WCIT2011>

[www.bitlifesciences.com/WCIT2011/](http://www.bitlifesciences.com/WCIT2011/)



## **Title: The Immune Network Organization and Functioning, Idiotypic Mechanisms of Autoimmunity Regulation, Theoretical and Experimental Studies**

*Dr. Igor Menshikov*

Professor

Immunology and Cell Biology Department

Udmurt State University

Russia

### *Abstract*

Nowadays nobody denies the fact of autoreactive lymphocytes and autoantibodies existence to many antigens with healthy individuals. These data cannot be explained by existing conceptions of natural tolerance and autoimmunity regulation. It is not convincing to explain these facts by the imperfection of negative selection in thymus. Taking into account the fact that regulation autoimmunity should be specific, we consider the hypothesis of autoimmunity idiotypic regulation more appropriate. This idea is not new, but limited knowledge concerning mechanisms of the immune network organization and functioning restrains its development. Experimental data only confirm the fact of idiotypic interactions existence and do not reveal its regulatory properties. We have developed the mathematical model of an immune network based on idio-anti-idio interactions between lymphocytes. The model study has shown that it reproduces the basic types of immune response—the normal immune response, tolerance development and hypersensitivity. Having used this mathematical model including autoreactive clone we studied the immune network fragment reaction in response to foreign antigen. In experimental researches of autoimmune hemolytic anemia in mice induced by rat erythrocytes injection it has been shown, that autoclone induction is mediated by idio-anti-idio interactions with clones against foreign antigen. Immune response kinetics in the experiment is well correlated with the results of mathematical modeling. Thus our results explain the mechanisms of induction and idiotypic regulation of autoreactive clones.

### *Biography*

Having graduating from the Biology and Chemistry faculty at the Udmurt State University in 1982 Dr. Igor Menshikov joined the department of Anatomy and Human Physiology as an assistant. There he directed research in the field of sport biochemistry and physiology. The theme of the study was “Changes in lipids metabolism of man during physical exercises under high temperature circumstances». In 1991 he got Candidate of Science degree in Physiology (the Russian equivalent of Ph.D.). In 2005 he got Doctor of Science degree in Physiology (second Russian doctoral degree) for the research of regulation of glucose and free fatty acids metabolism of the sportsmen training in different biopower modes (Men'shikov, 2004). In 1994 he became the head of the Immunology and Cell biology department at the Udmurt State University, the faculty of Medical Biotechnology. He reads lecture courses on biophysics, immunology and molecular biology. Since 2000 he has been investigating idiotypic mechanism of immunoregulation. He has developed the mathematical model of an immune network, revealing the mechanism of the immune network organization and functioning (Menshikov et al. 2004). The results of his study explain the mechanisms of induction and idiotypic regulation of autoreactive clones (Menshikov et al. 2008, Beduleva et al. 2009).