

**Emerging Theories of Host Defense**  
**The 10<sup>th</sup> Meeting Hirosaki International Forum of Medical Science Communication Center**  
**Hirosaki University School of Medicine Hirosaki on November 21-22, 2006**

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## PREFACE

Since 1970s, emerging and re-emerging infectious diseases have been a worldwide problem. Outbreak and worldwide spread of severe acute respiratory syndrome (SARS) seems a typical type of modern infectious diseases. Moreover, human flu caused by avian influenza virus H5N1 has been a serious problem for the possibility of pandemic. Recent studies on host immune response to influenza virus H5N1 demonstrated that aberrant innate immune response including excessive cytokine production might be involved in fatal outcome of avian flu in humans. This fact indicates that outcome of severe infectious disease is dependent on the interaction between the pathogenic factors of pathogens and host immune response. Thus, host immune response is essential in host defense in most cases but play a detrimental role in some cases. Host defense is performed by immune system. However, recent extensive studies show that crosstalk between immune system and endocrine is critical in host defense. Cytokines in immune system regulate synthesis and secretion of various hormones. Alternatively, various hormones reportedly regulate cytokine production.

This volume comprises the translocations of the 10<sup>th</sup> Meeting of the Hirosaki International Forum of Medical Science. The theme of the meeting was “Emerging Theories of Host Defense”. Distinguished guests from abroad and from all over the country were invited to the conference, and lectures and discussions were performed concerning infectious diseases, immunology and endocrinology and especially crosstalk among them. All participants were deeply impressed by the special guest speakers and the conference was greatly successful in providing opportunities to exchange recent new developments in these fields.

We hope that this compendium of manuscripts provides a current source of information on the state of host defense through crosstalk immunology and endocrinology.

We would like to thank all the authors for their contribution to the publication and for their efforts in advancing knowledge of these fields.

Finally, we would like to thank especially the Alumni Association of Hirosaki University Graduate School of Medicine and Aomori Association for Promotion of Medical Science for continuous financial support and Hirosaki University Press for its support of this volume.

Akio Nakane, Ph.D.

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## Chairman's Address

Hirosaki International Forum of Medical Science held the 10th annual meeting on November, 21-22, 2006. The meeting was one of the most commemorating of the series because it was 10 years since the commencement of the Forum and the theme -Emerging Theories of Host Defense- was scientific and up-to-date. We were fortunate to have many distinguished guests from abroad and other parts of Japan. We had highly stimulating discussion on relatively a wide range of medical and biological science, which is clearly materialized in this volume.

I would like to thank the participants of the meeting and the authors for their contributions to this volume. I hope this volume would provide scientific inspiration particularly for young investigators in Hirosaki and everywhere else. Finally, I would express my gratitude to all the individuals, organizations and companies for supporting the Forum and helping the publication of this volume.

Kei Satoh

Chairman, The 10th Meeting, Hirosaki International Forum of Medical Science  
Dean, Hirosaki University Graduate School of Medicine