

URI/EpiVax Westin Immunogenicity Seminar 2013

THE
UNIVERSITY
OF RHODE ISLAND



Venue:
The Westin Tokyo
Kiri Room

Thursday, May 9, 9:30 am – 5:00 pm
1-4-1 Mita Meguro-ku, Tokyo 153-8580 Japan

Speakers:

Dr. Keizo Yoshida, PhD.
EpiVax Asia

Dr. Shingo Niimi, PhD
Manager, Division of Medical Devices
National Institute of Health Sciences (NIHS)

Dr. Annie De Groot, M.D.
Professor and Director, Institute of Immunology and Informatics,
University of Rhode Island, CEO/CSO, EpiVax, Inc.

Dr. Naonobu Sugiyama, MD, PhD
JCR-board Certified Rheumatologist
Associate Director, RA & Inflammation
Medical Affairs Pfizer Japan

Dr. Chris Bailey-Kellogg, PhD
Associate Professor of Computer Science
Dartmouth College

Ms. Frances Terry
Bioinformatics Program Manager
EpiVax, Inc.





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Time	Presenter	Topic
9:30	Dr. Keizo Yoshida, PhD. EpiVax Asia	Introduction & Welcome
9:40	Dr. Shingo Niimi, PhD Manager, Division of Medical Devices, National Institute of Health Sciences (NIHS)	Regulatory Perspective on Immunogenicity
10:10	Prof. Annie De Groot, M.D. Professor, URI and CEO, EpiVax	Immunology Perspective: What Drives Immunogenicity
10:50	Break	
11:15	Dr. Naonobu Sugiyama, MD, PhD, Associate Director, RA & Inflammation, Medical Affairs Pfizer Japan	Case Study: Immunogenicity and Clinical Outcomes in RA Treatment
12:00	Dr. Chris Bailey-Kellogg, PhD Associate Professor of Computer Science, Dartmouth College	New Technologies: Immunogenicity, Deimmunization & 3D Modeling
12:45	Lunch (Provided)	
1:30	Ms. Frances Terry, Bioinformatics Program Manager EpiVax, Inc.	Live Demonstration: In-Silico Immunogenicity Screening Platform (ISPRI)
2:30	Prof. Annie De Groot, M.D. Professor, URI and CEO, EpiVax	Into the Clinic: Immunogenicity Solutions
3:10	Break	
3:30	Prof. Annie De Groot, M.D. Professor, URI and CEO, EpiVax	Quick Update: Rapid Vaccine Design for (H7N9) Pandemic Readiness
4:00	All Speakers	Panel Discussion and Questions from Participants
5:00	Close	

More Info - [HERE](#), Sign up Here - <http://eepurl.com/wO-iv>.





EpiVax and iCubed Introduction:

The team at **EpiVax, Inc.**, led by Dr. Annie De Groot and Bill Martin, has pioneered the development of a set of immunoinformatics tools which allows researchers to predict the immunogenicity of peptides and proteins. The potential applications of this technology are vast: for instance, one could be to predict which vaccines will be most effective or which protein therapeutic drugs will have the possibility of eliciting an adverse immune response. It is a powerful research and development tool for designing effective and safe protein/peptide based therapeutics. The leaders of EpiVax, Inc. have been resolute in availing these tools to the research community. To that end, Dr. De Groot and her team, with funding from an NIH U19 grant, have developed the iVAX website where investigators can access their own set of genome sequences, proteins of interest, and tools for the analysis of vaccines and diagnostics. Using the iVAX toolkit, researchers can quickly and efficiently identify the most reactive proteins contained within a given pathogen, and optimize the antigenic content of vaccines. Furthermore, by selecting the highest quality epitopes from a protein sequence new antigens that are relevant for vaccine development can be discovered.

The **Institute for Immunology and Informatics (iCubed)** was established in 2008 under the leadership of Annie De Groot, M.D. and Denice Spero, Ph.D., as part of the University of Rhode Island's emerging Biotechnology Program. iCubed's research focuses on new and safer vaccines, new methods of predicting and treating adverse immune responses, and improving tolerance in the case of transplantation. iCubed supports a wide variety of training efforts that will provide opportunities to teach the next generation the tools for effective vaccine design.

The iCubed excels in immunoinformatics-driven vaccine development, colloquially known as "Gene-to-Vaccine". The approach involves computer-driven analysis of genome sequences, selection of immunogenic segments, and composition of vaccines *in silico*. The next step in the process is to validate the vaccine candidates *in vitro* and *in vivo*, using methods developed in the iCubed laboratories. A wide array of vaccine delivery technologies are under evaluation, including monoclonal antibodies, liposomes, and DNA vaccines (De Groot with the Department of Defense). Using immunoinformatics tools, research also is being conducted on eliminating parts of vaccines that may contribute to deleterious immune responses. Collaborations extend internationally to Thailand (Dengue virus), and Mali (HIV, TB, HPV). Cross-disciplinary collaborations exist between the iCubed, which is actively developing vaccines using immunoinformatics tools, and the laboratory of Geoff Bothun, where the vaccines are being packaged in liposomes for delivery. Research collaborations also have been developed with Steve Williams (filariasis, Smith College), another investigator that will be involved in the iCubed program. In addition, iCubed researchers are actively carrying out field research in vaccines that will accelerate the delivery of new vaccines to the developing world; iCubed student researchers are collaborating with clinicians in Mali to evaluate 'knowledge, attitudes and practices' related to vaccines and the efficacy of existing vaccines (such as HPV) in that setting. Each of these cross-cutting areas of research, comprising experience that covers the biotech field 'from gene to vaccine' is currently being integrated into the activities of the iCubed.