Dear ISV members and friends,

The Executive Board of ISV and the ISV Congress organizers have been very busy with arrangements for the upcoming ISV Congress, October 2-4, 2016 and with strengthening the society. As you will notice, one of the first accomplishments has been the revamping of the Newsletter. The Newsletter that was previously put together by Ted Ross and the Outreach committee [Danielle Basore, Clarisa Beatriz Palatnik de Sousa, Shan Lu, Mark Schleiss, Leora Suprun, Thiru Vanniasinkam, and Heather Wilson] has always been a great and interesting resource for members and visitors to the ISV website. We have however made several changes, including the appointment of ISV member Randy A. Albrecht as Editor, working with ISV Secretary Ted Ross and the Outreach committee, and have worked with our IT consultant to facilitate formatting and to increase the security of the distribution of the newsletter.

The Congress website now lists the excellent confirmed speakers and is open for abstract submission. As previously announced, ISV combined with two additional meetings, Vaccine Renaissance (in its 10th year, a regional New England vaccine meeting) and DNA Vaccine 2016, a technologically specialized meeting, as well as collaborating with the Institute Pasteur and its 33 worldwide institutes for a Congress that promises to have even more topics covered, and more speaking opportunities for attendees than in the past. Sessions will also, as in the past, be sponsored by the Korean Vaccine Society and the Japanese Society of Vaccines. We also will be implementing – new this year– Presidential travel awards for trainees, to be selected from amongst the top abstracts as determined by the Scientific Committee. We also plan an opportunity for the top-rated posters scientists to present mini-talks or “elevator speeches” (i.e., what you can say during an elevator ride of 1 minute) at the beginning of the poster sessions. This will help attendees better determine which posters they may want to visit, and will provide opportunities for poster presenters to also give a short oral talk.

Perhaps most importantly, ISV is utilizing the meeting to provide opportunities for our members. We are increasing the scope of sessions to try to emphasize all aspects of immunization, including therapies and veterinary applications. We continue our emphasis of training by having a career development workshop, and are establishing a mentoring program. And we will have a job bank where members can advertise open positions, or that they are seeking opportunities. The ISV Congress is structured to not simply be the best meeting for all aspects of vaccinology, but to help with the careers of the vaccinologists attending. See you in Boston!

Margaret

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Paper of the Month

Protection against malaria at 1 year and immune correlates following PfSPZ vaccination.

Issizuka AS, et al.

Nat Med. 2016 May 9. doi: 10.1038/nm.4110. [Epub ahead of print]

According to World Health Organization estimates, malaria is a global scourge that causes 214 million clinical cases and 438,000 deaths annually. Infection results when a blood meal by an Anopheles mosquito delivers Plasmodium falciparum parasites. Antimalarial drugs are available for prophylaxis and therapeutic intervention; however, there is currently no malarial vaccine that confers long-lived sterilizing immunity. Seder and colleagues sought to examine the efficacy and durability of protection provided by intravenous immunization with an attenuated Plasmodium falciparum (Pf) sporozoite (SPZ) vaccine, PfSPZ Vaccine. This study by Ishizuka et al is notable for analyzing vaccine efficacy by assessing protection against parasitemia following controlled human malaria infection (CHMI), demonstrating that tissue resident T cell responses are a correlate of protection, and including animal models of malarial disease to obtain in vivo data that support the T cell correlate of protection.

Greece extends immunization programs to migrants

Despite managing economic and migrant crises at home, Greece, in accordance with its national immunization schedule, extended two vaccination campaigns to migrants in early May 2016. These programs will help provide the migrant population, who have been displaced by civil unrest and war, protection against vaccine-preventable diseases, including respiratory diseases, diarrhea and skin infections. Alarmingly, one third of this population is children. Providing vaccines to this susceptible population will help prevent reintroduction of diseases, such as measles and rubella in Greece, which is a central focus of the European Immunization Week that was observed from April 24th to 30th, 2016.

Contributed by Eun Hye Kim, Ph.D.
2016 ISV Annual Congress update

The website for the ISV Congress www.ISVCongress.org is now open for registration and abstract submission! You won’t want to miss this Congress in Boston, USA, October 2–4, 2016 because:

1) Uniquely, this Congress is being held in conjunction with two other meetings: Vaccine Renaissance, in its 10th year, and DNA Vaccine 2016. Plus The Institute Pasteur, with its 33 institutes located throughout the world, is a collaborator, and will hold a special session showcasing Institute Pasteur scientists. As usual we will also have sessions sponsored by the Korean Vaccine Society and the Japanese Society of Vaccines.

2) An outstanding group of invited speakers have already committed to attending, covering hot issues of vaccinology, both human and veterinarian (see inset). This is an incredible opportunity to hear their latest work and to interact with them and the other attendees.

3) The ISV Congress offers an unusually large number of speaking slots selected from submitted abstracts. As usual, you can request that your presentation be considered for either an oral or poster presentation. The Scientific Committee will evaluate the abstracts taking into account your preference.

4) New this year will be the opportunity for authors of those posters considered of high quality, but not selected for full oral presentations, to present brief summaries of their posters at the beginning of the poster session. This will enable attendees to better select the posters they would like to spend more time perusing, and also provides an ideal way for individuals to have more visibility. This option would also be ideal for people who would like a less stressful experience than a full platform presentation for speaking.

5) Travel awards are being offered on a competitive basis for trainees and other categories. These will be awarded based upon the evaluation of the submitted abstracts by the Scientific Committee.

6) As we did last year in Seoul, a career development workshop will be held with the opportunity to meet and get career advice from senior scientists. We are establishing a mentoring program; this will be unveiled at the Congress.

7) Boston, and the location of the Congress at the Marriott Long Wharf, is an ideal venue for the Congress and for enjoying Boston sights. The Congress dinner will be held at the Aquarium, just steps away from the hotel.

The Congress covers all aspects of vaccines, zoonotic and veterinary in addition to human acute and chronic diseases, from basic research to clinical trials, and all the development and manufacturing aspects in between, from prophylactic vaccines to immunotherapy. We are planning to have novel topics and sessions, addressing issues such as mechanisms and funding for crucial but commercially unattractive vaccines, such as those that were the focus of the Global Vaccine Development Fund (profiled in a recent cover article in Science). Emerging diseases such as Zika virus will be addressed by leading figures.

Accepted 2016 ISV Congress Speakers and Session Chairs:
• Rip Ballou, GSK
• Jasmine Belkaid, NIH
• Clare Cutland, NIHLS, South Africa
• Victor Dzau, President, Institute of Medicine, National Academy of Sciences
• TongMing Fu, Merck
• Michael Good, Griffith Univ.
• Cyril Gray, USDA
• Tom Heineman, GSK
• Adrian Hill, Director Jenner Inst. Prof. Univ. Oxford
• Michael Houghton, U. Alberta
• Luis Jodar, Pfizer
• Marie-Paule Kieny, Ass’t Director General, WHO
• Philip Krause, Deputy Director, CBER, FDA
• Myron Levine, CVD, Univ. Maryland
• Bonnie Maldonado, Stanford Univ.
• Kees Melief– Leiden Univ., Isa Pharmaceuticals
• Tom Monath, New Link Genetics Corp
• Flor Munoz, Baylor
• Albert Osterhaus, Hannover Univ.
• Tom Ottenhoff, Leiden Univ.
• Stan Plotkin, UPenn, Sanofi
• Ed Rybicki, U. Cape Town
• John Shiver, Sanofi
• Thomas Wisniewsk, NYU

Question of the Month
There is increasing interest among the scientific community and national funding agencies for research and clinical data to be deposited within databases that provide open access platforms for research data sharing. Does searching of public databases that are designed to share research and clinical data advance your hypothesis-driven research?
• Very little if any
• Moderately
• Significantly
• I do not search public databases

WHO Immunization Campaign
The Global Vaccine Action Plan (GVAP) that is based on six guiding principles and six strategic objectives was endorsed by the World Health Assembly in 2012. The GVAP outlined a ten-year framework for providing universal and equal access to immunization. To accelerate success in meeting the objectives outlined by the GVAP and in observance of the World Immunization Week, 24–30 April 2016, the World Health Organization (WHO) launched its “Close the Immunization Gap” campaign which emphasizes that people of all ages of life need vaccines. Delegates of the World Health Assembly recently discussed progress in achieving these immunization goals.

News Article
ISV Fellow of the month

Dr. Schmaljohn is a Senior Research Scientist at the United States Army Medical Research Institute of Infectious Diseases (USAMRIID). Dr. Schmaljohn is also an inventor who holds numerous patents protecting inventions involving prophylactic and therapeutic monoclonal antibodies and DNA vaccines. She earned her Bachelor's Degree in Microbiology and Immunology from University of Nebraska-Lincoln, and her doctor of philosophy degree from Colorado State University. An internationally recognized expert on Bunyaviruses, her research has focused extensively on studying the molecular biology of Hantaviruses. One major area of research is the development of DNA vaccines and therapeutics against highly pathogenic viruses of military or biodefense importance. She has authored or co-authored over 135 peer-reviewed publications, her scientific portfolio spans fundamental research that has focused on investigating molecular biology and pathogenesis of Bunyaviruses and clinical research. She was a co-investigator of two phase 1 clinical trials and a phase 2a trial examining the safety and immunogenicity of DNA vaccines designed to provide protection from Hantavirus disease, specifically hemorrhagic fever with renal syndrome (HFRS). In addition, she was a co-investigator in a Phase 1 trial that examined the safety, reactogenicity, tolerability, and immunogenicity of a DNA vaccine against Venezuelan equine encephalitis virus (VEEV), the results of which were just recently published. Dr. Schmaljohn will attend the 2016 ISV Annual Congress, and looks forward to discussing her research with Congress attendees.

Point of View

Zika: Are we making vaccines that work? Or are we just making vaccines.

The first Zika-infected, micro encephalic baby was born in the US this week, raising the volume on the Zika debate. As we rush to conquer Zika, it’s important to consider the obstacles. I work at a vaccine design company, and we’ve taken a look at Zika. Our opinion? We think that it won’t be so easy to make an effective Zika vaccine. And yet, several Zika vaccines are being rushed into development by large and small vaccine companies. We ask: Are we, by rushing vaccines into the clinic, just ‘checking the box'? Are we trying to satisfy public opinion by “making vaccines” rather than taking the time to think about how to make effective vaccines? We don’t have to look far to find a similar situation where rushing a vaccine into development satisfied the public, but did not fulfill the public health need for an effective vaccine. In the case of avian influenza H7N9, vaccine developers rushed to produce a vaccine. The result? One of the least effective vaccines ever developed in response to a pandemic threat.

Here’s the deal. Zika is a Flavivirus. Do we have an effective West Nile Virus vaccine? (WNV is from the same family of viruses). Not for humans. Do we have a Hepatitis C vaccine? Same answer. On the other hand, do we have an effective vaccine for Yellow Fever? Yes we do. Can we learn from Yellow Fever, Dengue, and WNV about making a new vaccine? Certainly! We argue that now is the time to be thoughtful, to pause, and to consider carefully consider the best approach. To contribute to this debate, we put our opinion on the web here: http://www.epivax.com/blog/we-rush-to-conquer-zika-but-how/.

Briefly, computational screening using our immuninformatics tools reveals that the Zika envelope protein has few T cell epitopes. In the past, we’ve demonstrated that proteins that have low T cell epitope content (like avian influenza A H7N9 HA) are poorly immunogenic. Can something be done? Yes. And that “thing” is something that protein engineers in the biologics industry are doing every day. That is: immune engineering. Protein engineers (and immuninformatics vaccine designers) can improve vaccines, and we think that this approach could be applied to Zika.

Influenza is an example that’s closer to home than Zika, at least for the time being. Every time we produce a new influenza vaccine, millions of doses are purchased and distributed by the government. Dutifully, we put the vaccines in our arms and in the arms of our patients. But, when the results come in: efficacy is as low as 18%. Is that truly a vaccine? Or are we just going through the motions. Can we engineer influenza vaccines to be better? Yes, we can.

What are we saying? We think that it’s not good enough to simply make vaccines. Why not make vaccines faster, and better, when you have an opportunity? Well, if you are in the business of making money to produce vaccines, instead of being in the business of making better vaccines (it’s different), then you can definitely help the US government ‘check the box’ on an emerging infectious disease (Zika) need. While that may be a great business model, we ask, is that how you want your tax dollars spent? As scientists, and as vaccine developers and designers, we argue that the time to start making vaccines that work, rather than simply making vaccines, is now.

Contributed by Annie De Groot, MD.