



# American Association of Veterinary Immunologists

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## Message from the AAVI President Susan Eicher



I am honored to have your support as President for AAVI in 2014. As President-elect this past year, I witnessed the ability of the officers, board, and members to overcome obstacles and the ever-changing environment of institutions and electronic challenges. Regardless, we have remained true to a primary premise of the organization to support student attendance and participation in our annual meeting as well as national (AAI) and international (IVIS)

veterinary immunology and immunology meetings.

We are grateful for the financial support by AAI for the Distinguished Veterinary Immunologist (DVI) and student competition awards. Additionally, we continue to collaborate with the AAI-VIC committee in development, funding, and presentations of the AAI-VIC/AAVI symposium at the annual AAI meetings. We had a great lunch provided by Weber Grill which was followed with a provocative and timely DVI lecture on “The future of veterinary immunology: The emerging role of the intestinal microbiota in regulating almost anything!” by Dr. Ian Tizard. The lecture probed the new and exciting area of the interactions of the gut microbiota and the development and response of the host immune system. Congratulations and thank you to Dr. Tizard!

Congratulations to this year’s winners in the oral and poster competitions. Oral presentation: 1<sup>st</sup> place Valeria Ryman and 2<sup>nd</sup> place William Raphael, Michigan State University; 3<sup>rd</sup> place Sally Robinson, University of Minnesota. Poster winners were: 1<sup>st</sup> place Mari Lehtimaki, Virginia Tech, 2<sup>nd</sup> place Jagadish Hiremath, Ohio State, and 3<sup>rd</sup> place Alejandro Benitez-Guzman, Universidad Nacional Autonoma de Mexico. Please see the graduate competition report by Dr. Laura Miller. We are pleased to welcome Renukaradhya Gourapura to the position of Student Presentation Competition Chair. He has been active in the student competition as a mentor and a judge, so he has a great background to assume that position.

We have a special issue from the 2012 mini-symposium “Dual Purpose with Dual Benefit Research Models in Veterinary and Biomedical Research” in Veterinary Immunology and Immunopathology coming early this year. The 2013 mini-symposium “Vaccine design – Targeting the immune system”, chaired by Crystal Loving, was very successful and will tie-in well with the AAI-VIC/AAVI symposium entitled “Vaccines for the Modern Era: Implications for Human and Animal Health” that will occur on May 3, 2014 at the AAI meeting in Pittsburg (co-chaired by Lauren Gershwin and Carol Chitko-McKown).

I want to personally welcome the incoming newsletter editor Katherine Petersson. It is a difficult job in regard to getting contributors to submit on time. So, please give Katherine your utmost cooperation with timely submissions and we rely on our members for information regarding upcoming events. She has been collecting pictures during the 2013 CRWAD meeting to create an informative and entertaining newsletter coming out early this year. She was responsible for the last issue and did a fantastic job!

I also extend a warm welcome to Glenn (Gulong) Zhang who is assuming the position of Treasurer. He has already stepped up to the plate to help keep things moving during the transition. We would be remiss if we didn't acknowledge the transitional guidance that Gina Pighetti provided this year, even though her term was completed.

We need to recognize the wonderful job that Kevin Lahmers has done in getting us back on-line after a major crash of the system and coordination of the change to PayPal for membership and dues. With these things in place we should be able to improve membership opportunities with fewer frustrations and provide members with a great communication resource. Carol Chitko-McKown is creating a pamphlet to go to the AAI meeting and for our table at CRWAD.

Additional officers and board members for the 2014 years are Vice-President: Laura Miller, Board Members At Large: Radhey Kaushik and Sheela Ramamoorthy, and Nominating Committee: Linda Saif and Chris Chase.

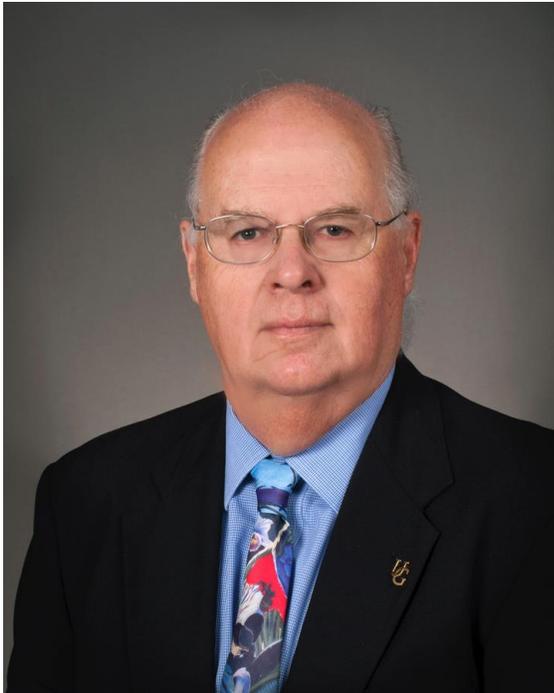
Welcome to all and we will work together to provide timely and prudent guidance for the organization. To all members, this is your organization, so I encourage comments to the officers and board members for our consideration. I look forward to a productive and successful year.

The membership approved the proposed changes in the constitution and by-laws, that bring our processes in-line with the electronic age and more importantly, the secretary/treasurer position is now officially split into 2 positions. The Board meeting was moved to 1:00 pm CST for the 2014 meeting on Sunday of the CRWAD meeting. Some things on the agenda for this year include: another special VII issue on vaccines, a successful AAI-VIC/AAVI joint symposium in Pittsburg, re-visiting the financing of the mini-symposium at the CRWAD meeting, fine tuning of the payment/membership process, finding ways to become more visible to attract new members, and of course we look forward to a terrific meeting in Chicago in 2014.



**2013 AAVI Business lunch at the Weber Grill.**

## 2013 AAVI Distinguished Veterinary Immunologist Awarded to Dr. Ian Tizard



This award was sponsored by The American Association of Immunologists (AAI).

Ian Tizard received his B.V.M. & S. and B. Sc. (Honours) from the University of Edinburgh, and his Ph.D. from the University of Cambridge. He was a Post-Doctoral Fellow at the University of Guelph where he was later hired as an Assistant Professor, and subsequently promoted to Associate Professor, and Professor. He then relocated to Texas A&M University where he became Professor and Head of the Department of Veterinary Microbiology and Pathology. In 1999, he became the Richard M. Schubot Professor of Exotic Bird Health – a position he still holds.

Dr. Tizard's research has covered the depth and breadth of veterinary immunology including but not limited to macrophage cytophlyic antibodies in mice, phagocytosis, immunoparasitology, autoimmunity, dendritic cells, diagnostic test development, feline leukemia virus, avian immunology, and

immunomodulation. Dr. Tizard is the author or co-author of over 145 research papers and numerous book chapters. However, he may be most recognized by his textbook *An Introduction to Veterinary Immunology* that is now in its 9<sup>th</sup> edition and has been translated into numerous languages.

Dr. Tizard has been Major Professor of 16 graduate students, and served on the committees of approximately 45 more. He has won numerous national and international awards for his research and teaching including a Special Award for “Distinguished Contributions to Veterinary Immunology” from AAVI, and the first “Outstanding Veterinary Microbiologist Award” from the ACVM. He is a member of numerous scientific, veterinary, avian, and immunology societies for which he frequently serves on committees. Ian presented the immunology keynote address “The future of veterinary immunology: The emerging role of the intestinal microbiota in regulating almost anything!”



**Dr. Tizard speaking at CRWAD 2013**

**2013 IVIS Distinguished  
Veterinary  
Immunologist Awarded to  
Dr. Cynthia Baldwin**  
*By Susan Eicher*



This past year we were thrilled to see that one of our members, Dr. Cynthia Baldwin, was awarded the IVIS DVI award at their annual meeting held this year in Milan, Italy from August 28<sup>th</sup> to September 1<sup>st</sup>. Her nomination letters were a testament to her contributions to the field of immunology. We have included comments below from one of the anonymous nomination letters that superbly captures Cynthia's distinguished career.

*“Cynthia has been at the forefront of ruminant immunology for over 30 years, establishing a track record of excellence in cellular responses to bacterial and protozoan pathogens of cattle with a particular emphasis on the characterisation and function of  $\gamma\delta$  T cells. Among her notable discoveries are the association of demonstration that expression of particular WCI co-receptors by  $\gamma\delta$  T cells designates antigen reactivity and the*

*identification of immunological memory in  $\gamma\delta$  T cells in response to vaccination. These discoveries have changed the way we think about  $\gamma\delta$  T cells as players in adaptive immunity and potentially vaccine development. In addition, her work on brucellosis, an important bacterial pathogen of cattle and other livestock species, has shown that responses by B lymphocytes actually impede protective inflammatory immune responses. In the process of defining immune function in cattle, Cynthia has put a considerable amount of effort into reagent development which she has willingly shared with the veterinary immunology research community. She currently leads the DHS/NIFA-funded Veterinary Immunology Reagent Network (VIRN), a consortium of academic researchers developing reagents and improving immunological capability in a number of species, linked with an industrial partner for technology transfer. Cynthia is a long-serving Editor-in-Chief of Veterinary Immunology and Immunopathology, the leading journal for comparative immunology. She also established and manages the VetImm email distribution list, a mechanism by which researchers can rapidly communicate globally. Such activities are reflective of Cynthia's dedicated and altruistic approach to science and her colleagues, highly commendable traits that I greatly respect. Cynthia is serving as a Jefferson Science Fellow at the US Department of State (2009 – 2014) in Washington, DC. As part of her duties, she has travelled to Africa on several occasions in conjunction with development of the Obama administration's "Feed the Future" program, a major component of its foreign policy and crafted portions of the research agenda associated with this regarding livestock and infectious diseases and their impact on poverty and nutrition. In addition she worked with the National Science Foundation to help develop a pilot program with USAID to fund developing country partners of NSF-funded US-based scientists. This program was officially rolled out in June 2010 as the Partnerships for Enhanced Engagement in Research (PEER) program for scientists in developing countries to build scientific capacity and empower researchers in developing countries to use science and technology to address local and*

*global development challenges. This unique portfolio of research excellence and advisory activities demonstrates why Cynthia is held in such high esteem internationally by her colleagues.”*

## **AAVI Constitution and By-Laws Update**

*By Carol Chitko-McKown, Past-President*

Changes to the AAVI Constitution and By-Laws, approved by the Officers, were voted on by the AAVI Membership at the 2013 AAVI Business Meeting held at the Weber Grill on Monday, December 9<sup>th</sup>. Briefly, the position of Secretary-Treasurer was split into two separate positions due to the amount of work required to fulfill the duties of both roles. We have moved into the electronic era by revising the means by which information is disseminated and votes are taken – email versus the postal service. This change will not only save time, but also money since we won't be paying for postage. Other specific duties of AAVI offices have been revised. Please visit the Constitution and By-Laws pages of the AAVI website to read the current document.

## **Mini-symposium report**

*By Crystal Loving, President Elect*

This year's AAVI sponsored Mini-Symposium at CRWAD “Vaccine Design – Targeting the Immune System” was a great success. The symposium was well attended and there was great dialogue and discussion both during and after the presentations. Our invited speakers included **Dr. Anne de Groot** from EpiVax and the University of Rhode Island (URI), **Dr. Philip Griebel** from VIDO-InterVac and the University of Saskatchewan, and **Dr. David Suarez** from USDA-ARS-Southeast Poultry Laboratory. Dr. Suarez presented his work in chickens “Passive antibody transfer in chickens to model maternal antibody after avian influenza vaccination”, which highlighted the impact of transferred maternal immunity (antibody) can have on vaccination of offspring – essentially inhibiting vaccine efficacy.

We continued with the precedent set in prior mini-symposia by incorporating presentations by junior members of the invited speakers' laboratories. Thus, **Andres Gutierrez** from URI presented his work on “Immunoinformatics approach to design influenza genome-derived T cell epitope-based vaccines for swine” after Dr. de Groot's talk, entitled “From genome to vaccine using the iVax toolkit: epitope driven vaccine design and development for humans and animals”. Her talk highlighted how species specific MHC can be used to identify immunogenic peptides from a pathogen and incorporated into a vaccine for induction of T cell immunity. Dr. Griebel's talk “Neonatal vaccination: working with maternal antibody” focused on when and how calves should be vaccinated (mucosally) when maternal antibody is present. A postdoc in his lab, **Dr. Patricia Gonzalez-Cano**, presented her work on “Uptake of lambda phage by the mucosal immune system” as a method to vaccinate at the mucosal surface.

Additional short talks were selected from abstracts submitted to the immunology section of CRWAD that fit the topic of the mini-symposium. This included **Dr. Patricia Sharp** from the University of Wisconsin, who presented “A comparative study of protective immunity provided by oral, intranasal, and parenteral canine *Bordetella bronchiseptica* vaccines” which highlighted the importance on the consideration of route for vaccines. **Dr. Daniela Rajao** from USDA-ARS-National Animal Disease Center presented her work “Heterologous challenge of weaned piglets in the presence of maternal-derived antibodies results in vaccine-associated enhanced respiratory disease” which highlighted how antibody can actually exacerbate disease as opposed to provide protection when there is a mismatch between antigenicity of the vaccine versus infecting influenza virus.

Collectively, the talks fell under the umbrella of vaccines and immunology, but encompassed a wide range of pathogens and animal species. As veterinary immunologists the task of vaccine design can be complicated by numerous factors, including the pathogen, tools available to evaluate immunogenicity, immune

status at the time of vaccination, and ease of vaccine administration. The mini-symposium was an excellent opportunity to bring together various researchers in the field to discuss approaches to consider for collectively move forward in this area. I personally thank every participant, including the speakers and audience members, for making the mini-symposium a great success.

## **10th International Veterinary Immunology Symposium (IVIS 2013)**

*By Joan Lunney, USDA BARC*

The IVIS 2013 was held August 28 – September 1, 2013 in the historic Università degli Studi di Milano in Milan, Italy. The Italian Local Organizing Committee (LOC) was chaired by Massimo Amadori, Istituto Zooprofilattico Sperimentale, Brescia and included members from all areas of Italy. The logo of the Symposium was a horse's head drawn by Leonardo da Vinci, who spent most of his artistic life in Milan. The IVIS 2013 followed the International Congress of Immunology (ICI 2013) that ended on August 27 in the same town. There were 358 attendees for the IVIS 2013 representing 34 countries with 115 oral and 188 poster presentations.

Prior to the meeting there was a workshop on "Proteomics in farm animal immunology" and a symposium on "Recent Developments in Veterinary Vaccinology." The latter focused on transboundary diseases and discussed 1) priorities for new and revised vaccination strategies, 2) technologies for analyzing immune responses in livestock species, and 3) networking in veterinary vaccinology and identification of challenges.

The scientific program of the IVIS 2013 was organized in concert with the Scientific Advisory Committee with plenary sessions on Innate immunity, Regulation of the immune response, Immunogenetics and molecular immunology and Infection and immunity. There were 8 concurrent sessions and numerous workshops. Attendees presented data on cattle (31%), swine (28%), poultry (9%) as well as buffalo, sheep, goats,

fish and Tasmanian devils. Presentations emphasized basic immunity, and disease and vaccine responses. There was a special Networking and Career workshop for young immunologists as well as Merial sponsored awards for best posters.

The IVIS 2013 was supported by the Veterinary Immunology Committee (VIC) of the International Union of Immunological Societies (IUIS) and included several workshops on immune toolkit development and comparisons of major histocompatibility complex. The meeting ended with the presentation of the Zoetis sponsored Distinguished Veterinary Immunologist Award to Cynthia Baldwin, Univ. Massachusetts Amherst, for her outstanding research on bovine immunology.

With the meeting's end, the leadership of the IUIS VIC transitioned from Wayne Hein of James Cook University, Australia to Gary Entrican, Moredun Institute, Scotland. Andrew Bean and Wayne Hein introduced the next IVIS meeting. The IVIS 2016 is expected to be held in the Gold Coast, Queensland, Australia, in mid-August 2016.

## **2013 AAVI Student Presentation Competition at CRWAD**

*By Laura Miller, Chair, AAVI Awards Committee*

The 2013 AAVI Student Presentation Competition sponsored by AAI was held during the 94th annual meeting of CRWAD, December 8-10, in Chicago, Illinois. Of the twenty-two entries, seventeen students participated in the oral (8 contestants) and poster (9 contestants) categories. The presenters represented Mexico, Korea, Canada and 9 universities within the United States. A broad range of research topics in veterinary immunology were covered, however, cattle were the prominent species studied accounting for 13 out of the 17 presentations! Pigs were second place (3) followed by horses (1). At least three judges were assigned to judge each contestant, and the three presentations in each category earning the highest overall scores captured the awards. The winners for 2012 are as follows:



**First Place Oral:** \$500 award, certificate, and membership No. 099, **Valerie Ryman**, Michigan State University: *Oxylipid production by bovine macrophages in response to Streptococcus uberis.*



**Poster, 1st Place:** \$350 award, certificate, and membership No. 055P, **Mari Lehtimäki**, Virginia Tech: *Staphylococcus aureus antigens induce long term Th17 cell responses.*



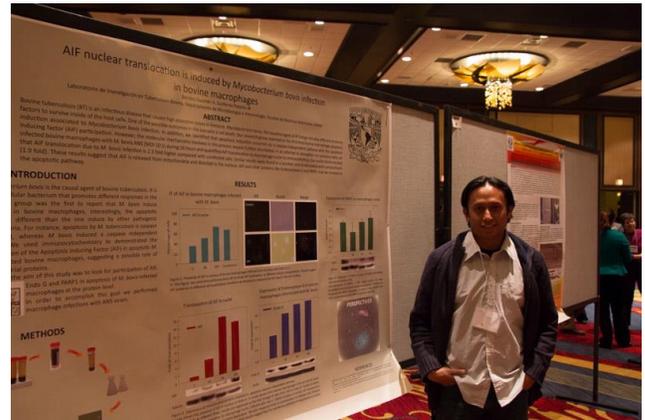
**Second Place Oral:** \$250 award, certificate, and membership No. 098, **William Raphael**, Michigan State University: *Oxidized polyunsaturated fatty acid metabolites are associated with leukocyte inflammatory markers in periparturient dairy cows.*



**Poster, 2nd Place:** \$150 award, certificate, and membership No. 064P **Jagadish Hiremath**, Ohio State University: *Differential expression of DAP12 molecule and its associated receptors in the lungs of pigs infected with swine influenza.*



**Third Place Oral:** \$100 award, certificate, and membership No. 102, **Sally Robinson**, University of Minnesota: *Broadly neutralizing antibodies against Porcine reproductive and respiratory syndrome virus: a rapidly evolving RNA virus.*



**Poster, 3rd Place:** \$75 award, certificate and membership No. 047P, **Alejandro Benítez-Guzmán**, Mexico. *AIF nuclear translocation is induced by Mycobacterium bovis infection in bovine macrophages.*

Once again, this competition would not be possible without AAI sponsorship and provision of certificates, and the support of the AAVI membership, board, and especially our fine judges 2013 -- Drs. Aradhya Gourapura, Katherine Petersson, Nicole Aulik, Sheela Ramamoorthy, Crystal Loving and Jenny Wilson-Welder.

**Please note: entry into the AAVI Student Presentation Competition at CRWAD requires the student and/or mentor to be an AAVI member in good standing (as defined by dues paid in the last 3 years).**

Also as 2013 CRWAD Immunology Section chair I would like to thank the presiders: Drs. Susan Eicher, Lorraine Sordillo, Aradhya Gourapura, Katherine Petersson and Crystal Loving. And the 2013 sponsors of the CRWAD Immunology Section: Merck Animal Health, Merial, Boehringer Ingelhiem, and Zoetis.

## 2013 AAVI travel awards

By Laura Miller, Chair, AAVI Awards Committee

### Immunology 2013

The American Association of Immunologists Annual Meeting (IMMUNOLOGY2013) was held May 3-7, 2013 in Honolulu, Hawaii. The winners of \$1000 Junior Scientist Travel Stipends for IMMUNOLOGY 2013, celebrating 100 years, were:

- **Jessica Switzenberg**, Ph.D. Student, Michigan State University to present "*Transcriptomic studies of Mycobacterium avium subsp. paratuberculosis infected monocyte-derived macrophages from individual dairy cows*".
- **Jonathan Roussey**, Ph.D. Student, Michigan State University to present "*Investigating regulatory T cell responses to MAP antigen stimulation using a monocyte-derived macrophage antigen presentation system*".
- **Lakshmi Sunkara**, Postdoctoral Research Associate, Oklahoma State University to present "*Role of histone acetylation, cAMP*

*signaling, and mitogen-activated protein kinase pathways in butyrate-induced host defense peptide gene expression in chicken HD11 macrophage cells*"

- **Mahmoud Darweesh**, Graduate Research Assistant, South Dakota State University to present "*Bovine Natural Killer Cells are infected by BVDV and the Infection Results in Changes in Phenotype and Activation Markers*".
- **Nicole Behrens**, Ph.D. Student, University of California-Davis to present "*Study of the inverse correlation between the level of T regulatory cells and IgE during a type I hypersensitivity reaction in the equine model*".
- **Renukaradhya Gourapura**, DVM, PhD; Assistant Professor, Ohio State University to present "*Natural killer T cell adjuvanted inactivated swine influenza virus vaccine enhanced the viral load and suppressed the host immune response to pandemic 2009 H1N1 virus in pigs*".

### International Veterinary Immunology Symposium 2013

The 10<sup>th</sup> International Veterinary Immunology Symposium (IVIS) was held August 28-September 1st, 2013 in Milan, Italy. The winners of \$2000 Junior Scientist Travel Stipends for IVIS 2013 were:

- **Eveline D. de Geus**, Post Doc, Dept. of Infectious Diseases and Immunology, Faculty of Veterinary Medicine, University of Utrecht, The Netherlands. "*Glycans from avian influenza virus are recognized by chicken dendritic cells and are targets for the humoral immune response in chicken.*"
- **Lasse Eggers Pedersen**, Post Doc, The Danish Technical University, National Veterinary Institute of Denmark. "*Monitoring expansion of T cell specificities against Foot-and-mouth-disease virus (FMDV) in swine with MHC class I tetramers following a prime/boost vaccination.*"
- **Abid Ali**, PhD student, Federal University of Rio Grande do Sul, Porto Alegre, Brazil. "*Putative repolysin metalloproteases from ticks *Rhipicephalus sanguineus*, *Ixodes persulcatus* and *Rhipicephalus microplus**"

## Corporate Sponsors

*By R.D. Schultz*

Corporate Sponsorship remains similar to what has been in the past years. We continue to get support through Corporate Memberships in AAVI, primarily from Corporate Dues that are \$1,500/yr. The following companies have been on and off members during the past 10 or more years, however, some names and owners have changed: Merial Limited is now solely owned by Sanofi. Pfizer Animal Health (current name Zoetis) is a new public company. Schering-Plough- Intervet more recently became Merck Animal Health. Boehringer Ingelheim now includes the former Fort Dodge Animal Health. We continue to look for additional corporate members since their contribution through membership dues is critically important to support the yearly activities of AAVI. If an AAVI member is an employee of any of the above companies, please encourage your company to continue to pay their annual corporate membership dues. If any AAVI members are employed by a company that would like to become a Corporate Member of AAVI please get them to join by contacting me or by sending their corporate dues of \$1,500. If anyone knows of a company that may be interested in joining AAVI, please talk to them directly or have them contact me about joining AAVI.

## AAVI Membership

*By AAVI Officers*

We would like to encourage every member of AAVI to make it his or her goal to recruit one new member to AAVI this year.

## Upcoming Meeting Announcements

### AAVI/AAI-VIC Joint Symposium at Immunology 2014

May 2-6, 2014 in Pittsburgh, Pennsylvania.

<http://www.immunology2014.org>

*By Carol Chitko-McKown*

Immunology 2014, the AAI Annual Meeting will be held May 2-6, 2014 at the David L. Lawrence Convention center in Pittsburgh, Pennsylvania. The topic of this year's Veterinary Immunology Symposium which will be held Saturday, May 3, 12:30-2:30 PM, is *Vaccines for the Modern Era: Implications for Human and Animal Health*.

Chairs:

**Laurel J. Gershwin**, University of California, Davis

**Carol G. Chitko-McKown**, Genetics, Breeding, and Animal Health Research Unit, USDA-ARS, USMARC, Clay Center, NE

Speakers:

**Mark K. Slifka**, Oregon Health and Science University, *Hydrogen peroxide-based vaccines: a new approach to an old problem*

**Tilahun Yilma**, University of California, Davis, *Strategies for enhancing the safety and efficacy of recombinant vaccines*

**Ronald D. Schultz**, University of Wisconsin, *Immunologic memory: what to expect from different types of vaccines!*

**Anna P. Durbin**, Johns Hopkins Bloomberg School of Public Health, *Dengue vaccines: from animal models to human challenge*

This symposium will feature topics on both human and veterinary vaccines, with emphasis on new technologies and new information for more appropriate targeting of the immune response to achieve protective immunity. Advances in understanding immune responses to veterinary and human pathogens and applications of that information to vaccine design illustrate a commonality that supports the current "one health" concept in medicine.

**AAI Annual Meeting**  
May 2 – 6, 2014  
Pittsburgh, PA

**SLB/IEIIS Joint Meeting 2014**  
**Development of Innate Immunity**  
October 23-25, 2014 in Salt Lake City, Utah  
<http://slbieiis2014.org/2014/home.aspx>

**Conference for Research Workers in**  
**Animal Diseases (CRWAD),**  
December 7-9, 2014, Chicago Marriott  
Downtown Magnificent Mile.

**Bovine Respiratory Disease**  
**Symposium 2014**  
**New Approaches to Bovine Respiratory**  
**Diseases Prevention, Management and**  
**Diagnosis**  
July 30-31, 2014, The Renaissance Denver  
Hotel, Denver, Colorado

## AAVI Officers and Board - 2014

**President:** Susan Eicher, USDA-ARS, [Susan.Eicher@ars.usda.gov](mailto:Susan.Eicher@ars.usda.gov)

**President Elect:** Crystal Loving, USDA-ARS, [Crystal.Loving@ars.usda.gov](mailto:Crystal.Loving@ars.usda.gov).

**Vice President:** Laura Miller, USDA-ARS, NADC, [Laura.Miller@ars.usda.gov](mailto:Laura.Miller@ars.usda.gov)

**Past President:** Carol Chitko-McKown, USDA-ARS, [Carol.Chitkomckown@ars.usda.gov](mailto:Carol.Chitkomckown@ars.usda.gov)

**Secretary**

**Treasurer:** Glenn Zhang, Oklahoma State University, [Glenn.Zhang@OKstate.edu](mailto:Glenn.Zhang@OKstate.edu)

### **Members-at-Large:**

Matt Sylte (2014), University of Georgia, [msylte@uga.edu](mailto:msylte@uga.edu)

Laurel Gershwin (2015), UC Davis, [ljgershwin@ucdavis.edu](mailto:ljgershwin@ucdavis.edu)

Philip Griebel (2016), U. of Saskatchewan, Saskatoon, Saskatchewan, Canada, [Philip.griebel@usask.ca](mailto:Philip.griebel@usask.ca)

Radhey Kaushik (2017), South Dakota State University., [radhey.kaushik@sdstate.edu](mailto:radhey.kaushik@sdstate.edu)

Sheela Ramamoorthy (2017), North Dakota State University., [sheela.ramamoorthy@ndsu.edu](mailto:sheela.ramamoorthy@ndsu.edu)

### **Nomination Committee (Elected by membership)**

Andreas Contreras (2014), Michigan State University, [contrera@cvm.msu.edu](mailto:contrera@cvm.msu.edu)

Glenn Zhang (2014), Oklahoma State University, [Glenn.Zhang@OKstate.edu](mailto:Glenn.Zhang@OKstate.edu)

Paige Adams (2015), U. of Texas Medical Branch, Galveston. [apadams@utmb.edu](mailto:apadams@utmb.edu)

Alan Young (2015) South Dakota State University, Brookings, [Alan.Young@sdstate.edu](mailto:Alan.Young@sdstate.edu)

Linda Saif (2016) Ohio State University., [saif.2@osu.edu](mailto:saif.2@osu.edu)

Chris Chase (2016) South Dakota State University, [christopher\\_chase@sdstate.edu](mailto:christopher_chase@sdstate.edu)

### **Fund Raising Committee**

Ron Schultz, *Chairperson*, University of Wisconsin, [schultzr@svm.vetmed.wisc.edu](mailto:schultzr@svm.vetmed.wisc.edu)

Chris Chase, South Dakota State University, [christopher\\_chase@sdstate.edu](mailto:christopher_chase@sdstate.edu)

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### **Student Awards Committee**

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### **Finance Committee**

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