

9th Annual

Center for Human Immunology Symposium

October 15, 2015 • Blood Research Institute • Milwaukee, WI



BloodCenter and Blood Research Institute: Discovery, Diagnosis, Treatment and Cure

A Brief History

BloodCenter of Wisconsin (BCW) is a private, not-for-profit organization that provides blood, blood products, and specialized transfusion medicine services to hospitals in Wisconsin. In partnering with Heartland Blood Centers, Indiana Blood Center and Michigan Blood, BCW also serves Michigan, northern Illinois, and parts of Indiana. A commitment to pursue research and advance the understanding of blood and blood transfusions was written into the articles of incorporation by visionary members of the board of directors when BCW was founded in 1947. The current mission statement calls for BCW to “advance patient care by providing life-saving solutions grounded in unparalleled medical and scientific expertise.”

The Junior League of Milwaukee founded the Junior League Blood Center in 1947 as a community blood bank with five paid staff and 70 regular volunteers. By 1952, the center was serving 30 regional hospitals. The name was changed to Milwaukee Blood Center in 1954 and an active research focus was initiated in the early 1950s. The first federal grant was received by the Milwaukee Blood Center in 1957. The name of the center was changed to the Blood Center of Southeastern Wisconsin in 1979 and again to BloodCenter of Wisconsin in 2005. With the success of life-saving discoveries, increased research funding and committed scientific staff, BCW built the Blood Research Institute (BRI) on the grounds of the Milwaukee Regional Medical Center in 1991.

Over the years, the contributions of BloodCenter investigators have made a lasting impact on the fields of Transfusion Medicine, Immunology and Vascular Biology. We are proud of the fact that, despite the national lack of NIH funded physician-researchers, nine of our 23 investigators are physicians. Research at BCW extends from basic cellular, molecular and genetic studies, to participation in NIH clinical trial networks such as the Recipient Epidemiology and Donor Evaluation Study (REDS) III, the Transfusion Medicine-Hemostasis (TMH) Clinical Trials Network and the Center for Human Immunology. Research activities are also strengthened by physical proximity of the BRI to the immediately adjacent Medical College of Wisconsin (MCW) and Children's Hospital of Wisconsin (CHW). BRI investigators hold faculty appointments at MCW and participate actively in the teaching, mentoring and research activities.

Center for Human Immunology: Advancing, Accelerating and Promoting

The Center for Human Immunology at the Blood Research Institute (BRI) was formed in 2006 under the leadership of Dr. Jack Gorski, Senior Investigator at BRI. Its mission is to improve human health by advancing the basic understanding of the human immune system by accelerating the transition of discoveries from murine studies to clinical practice, and by promoting interactions between regional immunologists and leading experts.

To promote the interaction between regional immunologists and the leading experts, the Center for Human Immunology has been sponsoring an Annual Symposium on Human Immunology. The first of these was held in 2007. The topics of the symposia are either directly related to analysis of the human immune system or cover important areas of study with direct ramifications for human health and disease.

This year's Symposium on Human Immunology is organized with the generous financial support from the BloodCenter Research Foundation and the Joan and Fred Brengel Family Foundation and other sponsors.



The Impact of the Microbiome on Immunity

Schedule

8:30 - 9:00 AM	Registration	
9:00 - 9:05 AM	Welcome	Bonnie Dittel, PhD Immunology Symposium Co-Chair
9:05 - 9:10 AM	Opening Remarks	Renren Wen, PhD, Immunology Symposium Co-Chair
9:10 - 9:55 AM	Speaker Introduction by Alex Abel Graduate Student, MCW	Alexander Chervonsky, MD, PhD Professor, Department of Pathology, The University of Chicago Autoimmunity and microbiota
9:55 - 10:10 AM	Coffee Break	Visit our sponsors
10:10 - 10:55 AM	Speaker Introduction by David Schauder Graduate Student, MCW	Duane Wesemann, MD, PhD Assistant Professor, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School Insights into the establishment and function of the primary immunoglobulin repertoire
10:55 - 11:40 AM	Speaker Introduction by Rajrupa Chakraborty Graduate Student, MCW	Cathryn Nagler, PhD Bunning Food Allergy Professor, Department of Pathology, Medicine and the College, The University of Chicago Innate immune regulation of sensitization to dietary antigens by commensal bacteria
11:40 AM - 1:00 PM	Lunch	Vendor Workshops presented by Perkin Elmer and Stem Cell Technologies (*occur simultaneously)
1:00 - 1:45 PM	Speaker Introduction by Erin Wesley Graduate Student, MCW	Veena Taneja, PhD Associate Professor, Department of Immunology, Mayo Clinic Gut Microbes – Friendly residents or the enemy within
1:45 - 2:00 PM	Break	Visit our Sponsors
2:00 - 2:45 PM	Speaker Introduction by Jonathan Jeschke Graduate Student, MCW	Christian Jobin, PhD Professor, College of Medicine, Department of Medicine, Division of Gastroenterology, University of Florida How inflammation influences colorectal cancer: It is all about bugs
2:45 - 3:30 PM	Speaker Introduction by Allison Reeme Graduate Student, MCW	Nita Salzman, MD, PhD Professor, Children's Research Institute, Medical College of Wisconsin Two sides to intestinal homeostasis: roles for both host and microbial antimicrobial peptides



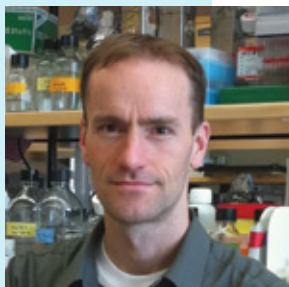
Featured Speakers 2015



Alexander Chervonsky, MD, PhD

Professor, Department of Pathology, The University of Chicago

Alexander Chervonsky received his M.D. from First Moscow State Medical Institute and his Ph.D. from the Cancer Research Center in Moscow and received post-doctoral training at The University of Chicago and Yale University. He was a Staff Scientist at The Jackson Laboratory before joining the University of Chicago in 2005 where he is now a Professor in the Department of Pathology. Dr. Chervonsky's research focuses on adaptive immune mechanisms in autoimmunity with a specific interest in how the microbiota through innate signaling influences the development type I diabetes. In addition, he studies mechanisms whereby the host maintains symbiotic relationships with the intestinal microbiota during sickness. Dr. Chervonsky has published over 72 papers (*Immunity, Nature, Science*) and has presented his work both nationally and internationally. His research is supported by numerous funding agencies including the NIH and the JDRF.



Duane Wesemann, MD, PhD

Assistant Professor, Department of Medicine

Brigham and Women's Hospital, Harvard Medical School

Duane Wesemann earned his M.D. and Ph.D degrees at the University of Alabama in Birmingham, AL. He completed internal medicine residency and allergy immunology fellowship training at the Brigham and Women's Hospital in Boston, MA., and a postdoctoral fellowship with Dr. Frederick Alt at the Boston Children's Hospital in Boston, MA. Dr. Wesemann is currently an Assistant Professor of Medicine at Harvard Medical School and a principal investigator in the Division of Rheumatology, Immunology and Allergy at the Brigham and Women's Hospital. Dr. Wesemann has made significant contributions in the area of host:microbe interactions and its impact of early B cell development and primary antibody repertoire diversification. Duane's work is the first to demonstrate that commensal microbes influence early B cell development and that developing B cells undergo primary diversification of their immunoglobulin genes in the gut itself. In this context, commensal microbes influence the burgeoning primary immunoglobulin repertoire and this may influence downstream antibody responses. Dr. Wesemann has also developed research programs investigating the role of IgE on B cells in regulating allergic responses. In addition, Dr. Wesemann continues to see patients, directs a course in the Harvard Immunology Graduate Program, and attends on the Allergy/Immunology consult and internal medicine services.

Featured Speakers 2015

Cathryn Nagler, PhD

Bunning Food Allergy Professor, Professor of Pathology, Medicine and The College
The University of Chicago

Cathryn Nagler graduated with honors from Barnard College, Columbia University, obtained her Ph.D. from the Sackler Institute of Biomedical Science at N.Y.U. School of Medicine and did a postdoctoral fellowship at M.I.T. She was Associate Professor of Pediatrics (Immunology) at Harvard Medical School prior to joining the University of Chicago in 2009. Dr. Nagler has participated in numerous review panels for the Crohn's and Colitis Foundation of America, NIDDK and NIAID, including the Food Allergy Expert Panel. She has served the American Association of Immunologists as Section Editor for the *Journal of Immunology*, Instructor (Mucosal Immunology) for the Introduction to Immunology course and as member of the Program, Clinical Immunology and Publications Committees. She is currently an elected Councilor of the Society for Mucosal Immunology. Dr. Nagler has a long-standing interest in the mechanisms governing tolerance to dietary antigens and the potential immunomodulatory features of this route of antigen administration. Her most recent work examines how intestinal bacteria regulate susceptibility to allergic responses to food. She is applying the insights gained from studying mouse models to the development of novel probiotic interventions for the prevention and treatment of food allergy.



Veena Taneja, PhD

Associate Professor, Department of Immunology, Mayo Clinic

Veena Taneja received her Ph.D. from Delhi University and did post-doctoral work at All-India Institute of Medical Sciences, Leiden Hospital in the Netherlands and the Mayo Clinic. Currently, she is an Associate Professor in the Department of Immunology with a joint appointment in the Division of Rheumatology at Mayo Clinic. Dr. Taneja's research examines how genetic and environmental factors impact humans with an emphasis on rheumatoid arthritis and myocarditis/dilated cardiomyopathy. Her laboratory is investigating the basis for individualized medicine and a need for treatment to be based on the sex of the patient. In addition, her studies focus on how a change in diet and treatment with gut-friendly bacterium can modulate gut immunity and impact autoimmune disease. Her research is funded by NIAID, NIAMS and the DOD. She has published numerous articles (*J. Clin. Invest.*, *Nat. Immunol.*, *J. Immunol.*, *PNAS*) and has received a number of awards for her work (Pfizer Shovell Award, Center for Excellence in Diseases for Connective Tissue Young Investigator Award, Hulda Irene Duggan Arthritis Investigator). She serves on several editorial boards (*Open Rheumatol. J.*, *J. Immunol. Immunotech.*, *Dataset Papers Sci.*) and NIH study sections.



Featured Speakers 2015



Christian Jobin, PhD

Professor, College of Medicine, Department of Medicine,
Division of Gastroenterology, University of Florida

Christian Jobin received his PhD in Immunology/Microbiology from Université Laval in 1994, and completed post-doctoral fellowship at the University of North Carolina Chapel Hill. He is currently a Professor of Medicine and Infectious Diseases & Pathology at the University of Florida Gainesville. Dr. Jobin's research focuses on establishing mechanisms controlling host-bacteria interaction in the intestine. His laboratory is especially interested in the functional impact of bacteria in intestinal injury repair, inflammation and colorectal cancer. Using genetically engineered mice and zebrafish, germ-free and gnotobiotic technology in combination with microbiome analysis, he is studying the role of innate signaling on intestinal homeostasis and disease states. He has published over 120 high impact scientific papers and presented his work at various national and international scientific meetings. His research has led to numerous awards and honours. His research program is supported by numerous funding agencies including three RO1 grants from the National Institute of Health. Dr. Jobin has served and is still serving on several study sections including CCFA Fellowship and Career Awards, NIH Special Emphasis Panel, NIH tumor microenvironment, GMPB and American Cancer Society.



Nita Salzman, MD, PhD

Professor, Children's Research Institute, Medical College of Wisconsin

Nita Salzman is a Professor of Pediatrics in the division of Gastroenterology, and also holds a secondary appointment in the Department of Microbiology and Molecular Genetics at the Medical College of Wisconsin. Dr. Salzman received her M.D. and Ph.D. from New York University School of Medicine. She completed her clinical training (pathology) at the University of Pennsylvania, and postdoctoral research training at Children's Hospital of Philadelphia (genetics) and the University of Pennsylvania School of Medicine (microbiology and immunology). The Salzman laboratory studies innate host defense at mucosal surfaces, focusing on interactions between the mucosal innate immune system, enteric pathogens, and the microbiome, with a dual focus on both basic and translational research.

Topics and Speakers of our Past Symposia

2007 – Human Immunology

Bill Kwok, PhD, Benaroya Research
Institute at Virginia Mason
Martin Hessner, PhD,
Medical College of Wisconsin
Karolina Palucka, MD, PhD,
Baylor University
Jorg Goronzy, MD, PhD,
Emory University School of Medicine
Elena Naumova, PhD,
Tufts University School of Medicine
David D. Eckels, PhD,
University of Utah School of Medicine

2008 – Integrating Hemostasis and Immunity

Charles Esmon, PhD, University of
Oklahoma Health Sciences Center
May Han, MD, Stanford University
Jay L. Degen, PhD, University of Cincinnati
College of Medicine
Hartmut Weiler, PhD,
BloodCenter of Wisconsin

2009 – Immune Memory

Rafi Ahmed, PhD, Emory University
Ignacio Sanz, MD, University of Rochester
Jack Gorski, PhD, BloodCenter of Wisconsin
Anne West, MD, PhD, Duke University
Medical Center

2010 – Systems and Computational Immunology

Tim R. Mosmann, PhD,
University of Rochester
Greg E. Lemke, PhD, Salk Institute
Steven H. Kleinstein, PhD,
Yale University School of Medicine
Elena Naumova, PhD,
Tufts University School of Medicine

2011 – Innate Immunity

David Raulet, PhD, University of
California-Berkeley
Alejandro Aballay, PhD, Duke University
Thirumala-Devi Kanneganti, PhD,
St. Jude Children's Research Hospital
Subramaniam Malarkannan, PhD,
BloodCenter of Wisconsin

Dan Wu, PhD, Yale University,
School of Medicine
Wendy Havran, PhD,
The Scripps Research Institute

2012 – Interactions Between the Immune and Nervous Systems

Keith Kelley, PhD, University of Illinois
Alan Lomax, PhD, Queen's University
Katherine Held, PhD, Allergan
Bonnie Dittel, PhD,
BloodCenter of Wisconsin
Jeannette Marketon, PhD,
The Wexner Medical Center
Cecelia Hillard, PhD,
Medical College of Wisconsin

2013 – Cellular Immunotherapy & Hematopoietic Stem Cells

Stuart Orkin, PhD, Harvard Medical School
Stanley Riddell, MD, University of
Washington School of Medicine
Crystal Mackall, MD,
National Cancer Institute
Linheng Li, PhD, University of Kansas
School of Medicine
Pramod Srivastava, PhD,
University of Connecticut

2014 – Immune Cell: Genome, Transcriptome & Signalsome

Ellen Robey, PhD,
University of California – Berkeley
David Rawlings, MD,
University of Washington
Harvey Lodish, PhD, Massachusetts
Institute of Technology
Anjana Rao, PhD, La Jolla Institute for
Allergy and Immunology
Cornelis Murre, PhD, University of
California – San Diego

2015 Organizing Committee

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Co-Chair, 9th CHIS

Renren Wen, PhD
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Thank you to our sponsors

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BloodCenter Research Foundation***

