

UAB SCHOOL OF MEDICINE

Department of Microbiology

UAB Microbiology vs Cancer

Compiled by Ella Robinson

UAB and the [Comprehensive Cancer Center \(CCC\)](#) are well known for innovative basic and translational cancer research. The programs use a highly collaborative and interdisciplinary approach to research that cuts across essentially all departmental boundaries.

The Department of Microbiology maintains a strong presence in this area with a number of faculty and researchers who are focusing on the basic mechanisms of cancer pathogenesis involving both liquid tumors like lymphomas and leukemias, and solid tumors like pancreatic cancer and hepatocellular carcinoma, which are two of the most lethal human cancer types.

[Christopher A. Klug, Ph.D.](#), and his lab are exploring the initiation and progression of acute myeloid leukemia (AML) and pancreatic ductal adenocarcinoma (PDAC). Dr. Klug is the leader of the signature program in Myeloid Leukemia that is supported by the newly created Personalized Medicine Institute. This initiative will integrate information obtained from deep sequencing of all myeloid leukemia patient samples with comprehensive cell signaling analysis and a large-scale drug sensitivity test to rapidly identify optimal treatment approaches for enhancing survival

of all myeloid leukemia patients at UAB. The lab is also working to identify serum protein and lipid biomarkers that are representative of an early, organ-confined stage of pancreatic cancer that will allow for early detection of cancer at a stage that is surgically resectable, which is the only curative approach for treatment of pancreatic cancer.

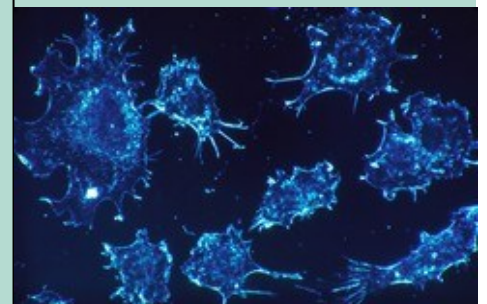
[Frances Lund, Ph.D.](#), and her researchers are evaluating whether drugs that modulate the cellular redox rate can be used to treat lymphoid tumors. "In our project we evaluate whether CD38, a NAD (P)-consuming ecto-enzyme expressed by many B cell malignancies, promotes the survival or growth of B cell tumors with the long-term goal of identifying new types of chemotherapy to treat B cell malignancies like multiple myeloma and chronic lymphocytic leukemia," says Lund.

[Guangxiang G. Luo, M.D.](#), is studying Hepatocellular carcinoma (HCC), the most commonly diagnosed malignancy of the liver. He and his researchers are experimentally examining the hepatic cancer stem cells (CSCs) to determine the role and underlying molecular mechanisms of virus-induced hepatic CSCs, and ultimately to identify targets for de-

velopment of safe and efficacious therapeutic agents for treatment of HCC.

[Hui Hu, Ph.D.](#), and his researchers are identifying regulatory genes and pathways that actively restrain T cell activation, and defining the roles of such negative regulatory pathways in controlling T cell quiescence, effector responses, memory maintenance, and tumor immunology. "We have demonstrated that cell-intrinsic signaling pathways are required to maintain mature T cells in a quiescent state. If these pathways are disrupted, resting T cells become aberrantly activated even in the absence of antigen challenge," says Hu.

[Jan Novak, Ph.D.](#), is interested in the relationship of glycoimmunobiology and glycoimmunopathology to the structure and function of antibodies and other glycoproteins in cancer, such as multiple myeloma and different types of adenocarcinoma (*e.g.*, breast can-



cer). Glycosylation abnormalities of various glycoproteins have been observed in autoimmune diseases and cancer. In a recent review paper (*Cell. Mol. Life Sci.* 70, 829–839, 2013), Dr. Novak and colleagues compared mechanisms of aberrant O-glycosylation on MUC1 in breast cancer, and on IgA1 in an autoimmune disease, IgA nephropathy. These aberrant glycoproteins are recognized by antibodies, although with different consequences. In breast cancer, elevated levels of antibodies recognizing aberrant MUC1 are associated with better outcome, whereas in IgA nephropathy, the antibodies recognizing aberrant IgA1 are part of the pathogenetic process. Better understanding of the characteristics of antibodies

in both types of diseases that target these neo-glycoproteins will have implications for development of diagnostic, prognostic, and therapeutic approaches.

Jamil S. Saad, Ph.D., and his lab are investigating apoptosis, a strictly regulated process by which abnormal cells are removed from the body without altering the immune system or generating an inflammatory response. “Inappropriate apoptosis (enhanced or diminished) is linked to many human diseases including neurodegenerative and autoimmune disorders, AIDS, and many types of cancers,” Saad explains. “Our lab is interested in understanding the molecular and structural determinants of Fas-

mediated apoptosis and mechanisms of inhibition. These studies will likely lead to developing new strategies to develop inhibitors of these interactions and thus to cancer treatment.”

Scott Swindle, Ph.D., is researching the mechanisms regulating hematopoietic stem cell self-renewal in order to facilitate development of technologies to expand human HSC *ex vivo*, which has applications for bone marrow transplantation and gene therapy. His work has also focused on defining the optimal deep sequencing approach for comprehensive analysis of myeloid leukemia samples in collaborative efforts with HudsonAlpha Institute for Biotechnology.

Department Events

Tuesday, April 7

- Faculty Candidate Seminar - Todd Green " N,P and L: Understanding the key players in negative strand virus replication, one letter at a time" (Noon BBRB 170)
- Primary Faculty Meeting (1:15 pm - 2:15 pm BBRB 263)

Tuesday, April 14, 2015

Gino Cingolani, Ph.D. Department of Biochemistry & Molecular Biology, Thomas Jefferson University, "A novel class of Nuclear Localization Signals (NLSs) targeting Membrane Proteins to the Inner Nuclear Membrane" (Noon BBRB 170)

Tuesday, April 21, 2015

Gabriel Victora, Ph.D. "Cellular and clonal dynamics in germinal centers" (Noon BBRB 170)

Tuesday, April 28, 2015

J. Jeffrey Morris, Ph.D. Assistant Professor of Biology, UAB "The Invisible Hand of the Black Queen: Helpers and Beneficiaries in the Ocean and Elsewhere" (Noon BBRB 170)

Wednesday, April 29, 2015

Microbiology Faculty Candidate Seminar - Eric Lazear, Ph.D. (4pm BBRB 170)

Tuesday, May 5, 2015

- Stephanie Eisenbarth, M.D., Ph.D. School of Medicine, Yale University (Noon BBRB 170)
- Primary Faculty Meeting (1:15 pm - 2:15 pm BBRB 263)

Tuesday, May 12, 2015

Dan Gorelick, Ph.D. Department of Pharmacology and Toxicology, UAB (Noon BBRB 170)

Friday, May 15, 2015

Faculty Retreat

Tuesday, May 19, 2015

Shahid Mukhtar, Ph.D. Department of Biology, UAB (Noon BBRB 170)

Tuesday, May 26, 2015

Barbara Kee, Ph.D. Molecular Biosciences, University of Chicago (Noon BBRB 170)

Tuesday, June 2, 2015

- Eric Sorscher, M.D. Division of Hematology/Oncology, UAB (Noon BBRB 170)
- Primary Faculty Meeting 1:15 pm - 2:15 pm (BBRB263)

Save the Date
24th Annual Microbiology
Research Retreat
November 13-15, 2015

Julie Decker

February Employee of the Month

by Ella Robinson



In 2013, Julie Decker walked through the doors of the Bevill Biomedical Research Building, not as a researcher but as a program manager. She spent more than 20 years honing her skills researching HIV before making a job change beyond her expectation.

After earning her undergraduate degree in molecular biology and mathematics at Vanderbilt University in Tennessee, Decker moved to Alabama to do HIV research at Southern Research Institute. In 1993, she moved across the street to UAB and the labs of George Shaw, Ph.D., and Beatrice Hahn, Ph.D., both former professors of medicine.

When Shaw and Hahn moved to Pennsylvania, Decker remained in Alabama, swapping benchwork for deskwork. The microbiology department was searching for an employee who knew the needs of researchers and who could also coordinate the intricate details of building renovation. Decker had the qualifications for both. Not only does she have extensive research experience, she also has a master's degree in Business Administration, which she received here at UAB.

Frances Lund, chair of the microbiology department, explains Decker's job. "She coordinates every element of the building renovation, working closely with building employees, the dean's office, the Animal Resource Program and the contractors who are carrying out the renovations. She set up temporary lab facilities so the faculty and staff can continue to work while their labs are being renovated or when various utilities are temporarily shut down in parts of the building."

Decker's colleagues appreciate her exceptional capabilities as program manager for the department. "What I value most is her willingness to take on difficult projects and see them to successful completion. I feel very fortunate to have her as a part of our team," says Kristina Sinclair, administrator for the department.

Then, Decker has another trait that endears her to everyone she contacts. According to Dr. Michael Saag, Infectious Diseases, "She makes every visitor feel special and pays extraordinary attention to detail." And microbiology professor Chuck Turnbough says, "She has been one of the most agreeable, pleasant, and cooperative colleagues I have ever worked with."

Clearly, Decker enjoys her work, although it is different from what she had been doing for 20+ years. "I'm on the other side of the bench as a program manager, and I have a whole lot more appreciation for what goes on this side to make the research happen," Decker said. "It was quite a switch at first, and I felt like a fish out of water, but everyone was really encouraging and helped show me the ropes. The best part of my job is getting to interact with a variety of people. The people distinguish the department and it is a real pleasure to be a part of the microbiology department."

Away from UAB, Decker is a busy wife and mother of two teenagers, Trent—a freshman at Thompson High School, and Kristen—who will be attending UAB in the fall. Both children are avid musicians, active in the high school band.



We're on the web:

<http://www.uab.edu/microbiology>



**Microbiology
Assistant Professor
Named Among the
First Pittman Scholars**

Beatriz Leon, Ph.D., is one of the five Pittman Scholars for

2015. As a Pittman Scholar, Leon is appointed as an endowed scholar for five years. She will receive additional funding to support her research-related activities or scholarly enrichment.

The Pittman Scholars Program was created to “support the recruitment and retention of up to five highly competitive junior faculty members each year either to basic science or clinical departments,” explains Selwyn Vickers, M.D., Senior VP & Dean in the School of Medicine. “The purpose of the Pittman Scholars program is to identify and nurture tomorrow’s best physicians and scientists, and to reward their efforts with additional resources that support their goals.”

Eligibility for this highly competitive award is restricted to NIH-funded early career scientists who are within five years of their initial appointment to assistant professor position (tenure or non-tenure earning).

Other 2015 Pittman Scholars are:

- ◆ Andre Ballesteros-Tato, Ph.D., Division Clinical Immunology and Rheumatology, Department of Medicine
- ◆ Lizhong Wang, Ph.D., Department of Genetics
- ◆ Michael Wells, M.D., Division of Pulmonary, Allergy and Clinical Care Medicine, Department of Medicine
- ◆ Adam Wende, Ph.D., Department of Pathology

“I’m glad to see the microbiology department represented in this group and hope that we will be in the running every year,” says Frances Lund, Ph.D., Chair, UAB Microbiology Department.



**Congratulations to our 2015 PostDoc
Research Day award winners:**

- Davide Botta (Lund lab) — 1st place in session 6
- Shannon Kahan (Zajac lab) — 1st place in session 5
- Venkata Yeramilli (Kearney lab) — 3rd place in session 5

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*Submit information for the newsletter via email to Ella Robinson at erobnson@uab.edu.



Theresa Ramos UAB's First "Corporate Post- doctoral Fellow"

Theresa Ramos, Ph.D., (left) and her mentor, Scott Barnum, Ph.D. (right) have partnered with a start-up biotech company, Kypha Inc., on the development of a rapid diagnostic device for meningitis and other conditions. Ramos is UAB's first "corporate postdoctoral fellow" and holds the title of Postdoctoral Entrepreneur at Kypha. She also manages Kypha's beta testing site at UAB, encompassing other potential projects with UAB's Institute Innovation and Entrepreneurship.



Padgett to Receive AAI- Thermo Fisher Trainee Achievement Award

Trainee Lindsey Padgett (Tse lab) will receive a 2015 AAI-Thermo Fisher Trainee Achievement Award at the [AAI Annual Meeting -- IMMUNOLOGY 2015](#) in New Orleans in May. She is one of six trainees nationwide who will be presented with the awards this year. This award will enable Padgett to attend the annual meeting where she will give a presentation about her current research.

Hiramoto Travel Awards Enable Trainees to Attend Scientific Events

by Ella Robinson

Ray Hiramoto, Ph.D., was a noted immunologist and faculty member in the UAB Department of Microbiology from 1966 until his death in 2002. Born in Honolulu, Hawaii, Hiramoto attended the University of Michigan, Ann Arbor, where he received a B.A., M.S. and Ph.D. He worked at Roswell Park Memorial Institute in Buffalo, New York, and St. Jude Children's Research Hospital in Memphis, Tennessee, before coming to UAB. While here he served as a senior scientist with the Diabetes Research and Training Center and the Comprehensive Cancer Center, as well as serving as professor of microbiology. Hiramoto's research focused on quantitative models for evaluating tumor cell numbers in vivo; chemotherapy and immunotherapy of neoplastic diseases; cellular immune responses and mechanisms of aging;

[The Hiramoto Travel Award](#) honors the memory of Dr. Hiramoto and provides travel assistance for graduate students to attend meetings, workshops and advanced courses offered by scientific societies and other organizations such as the Cold Spring Harbor Laboratory.

All Microbiology graduate students (defined as Ph.D. students with a *primary* Microbiology faculty member as a dissertation mentor) in good standing are eligible to apply for a Hiramoto Travel Award.



Dr. and Mrs. Ray Hiramoto

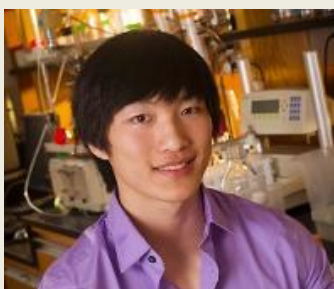
Current Hiramoto Travel Award recipients are:

Constance Agamasu, Experimental Biology 2015 Scientific Meeting, March 28-April 1, 2015, Boston
 Greg Bedwell, XXIV Biennial Conference on Phage/Virus Assembly, June 7-12, 2015, Les Diablerets, Switzerland
 Rosie Hill, ASM Annual Meeting, May 30-June 2, 2015, New Orleans
 Yuan Tian, AAI Annual Meeting, May 8-12, 2015, New Orleans
 Art VanValkenburg, AAI Advanced Course in Immunology, August 2-7, 2015, Seaport World Trade Center, Boston



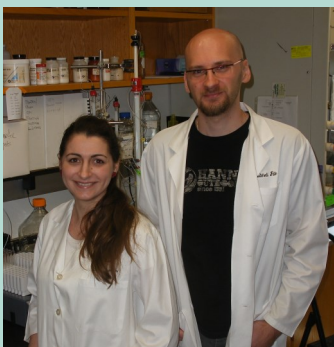
Congratulations to our 2015 Graduate Student Research Day award winners:

Beth Walters (Thompson lab) — 1st Place
 Arthur VanValkenburg (Justement Lab) — 2nd Place



Bliss Chang Receives Two High Honors

Bliss Chang, an undergraduate student in Dr. Jamil Saad’s lab, has recently received two notable awards. He was selected for a 2015-16 Fulbright US Student Award to Germany, and he received the College of Arts and Sciences 2015 Dean’s Award. As a Fulbright scholar, he will represent the US as a cultural ambassador while overseas, helping to enhance mutual understanding between Americans and the people in Germany. [Read more on the department website.](#)



Novak Lab Welcomes New Members

Lucia Barkocziowa, MSc, (left) is a volunteer and visiting Ph.D. student in microbiology. Her research is focused on expression of recombinant envelope glycoproteins of HIV-1. Lucia is from Palacky University in Olomouc, Czech Republic.

Petr Kosztyu, Ph.D., (right) is a volunteer and visiting scientist in microbiology. He studies several aspects of IgA nephropathy and O-glycosylation of IgA1. He is from Palacky University in Olomouc, Czech Republic.

Public Defenses

Shane Kelley

“Autophagy is regulated by the 5’ 3” mrna decay pathway in *saccharomyces cerevisiae*”

February 6, 2015

Mentor: David M. Bedwell

Committee: Kevin Kirk, Ph.D.; Sunnie Thompson, Ph.D.; Catherine Fuller, Ph.D.; Scott Wilson, Ph.D.

Michael Rowse

“The mechanism of small molecule viral fusion inhibitors”

March 9, 2015

Mentor: Ming Luo

Committee: Terje Dokland, Ph.D.; Donald Muccio, Ph.D.; Kirill Popov, Ph.D.; Peter Prevelige, Jr.

IMAGINE What Micro Employees Can Do

by Ella Robinson

April is benevolent fund campaign month for the UAB School of Medicine. This year's goal of \$1,910,000 will support health-care screenings, safe harbor for survivors of domestic violence, nutritious meals for the hungry, cutting edge medical research and assistance for our co-workers in times of need.

The Benevolent Fund, established and governed by UAB employees, recognizes the importance of supporting our community through partnerships with more than 120 local nonprofit agencies and by supporting our fellow employees through the Employee Emergency Assistance Program. The Benevolent Fund makes giving easy through payroll deductions. Your tax deductible gift, combined with other employee gifts, transforms our community in incredible ways.



In addition to our regular contribution to the UAB Benevolent Fund, this year the Department of Microbiology is also focusing on giving our support to building a Habitat for Humanity house. It costs \$50,000 to sponsor a Habitat for Humanity house—that's a donation of \$2.50 from every UAB employee.

Now, IMAGINE if every microbiology department faculty, student and staff member gave \$2.50, we wouldn't have enough to build a whole house, but we could certainly make a huge contribution.

As you are considering your donation to the UAB Benevolent Fund, consider donating an additional \$2.50 toward sponsoring a Habitat for Humanity house. You can bring cash or check to Ella Robinson (BBRB 260) or make a donation online [here](#). Use code 581 to designate your donation to UAB's Habitat House—and let Ella know so she can add your name to the list.

As you are considering your donation to the UAB Benevolent Fund, consider donating an additional \$2.50 toward sponsoring a Habitat for Humanity house. You can bring cash or check to Ella Robinson (BBRB 260) or make a donation online [here](#). Use code 581 to designate your donation to UAB's Habitat House—and let Ella know so she can add your name to the list.

To learn more about the Benevolent Fund and the agencies we support, please visit www.uab.edu/benefund. The agency designation list on the menu provides links to the websites of all the agencies to which you can direct your contribution. Click the "donate now" button and pledge electronically using your Blazer ID and password. If you have questions about the Benevolent Fund, please contact Ella Robinson at 934-3049 or erobnson@uab.edu or the Benevolent Fund office at 934-1581 or benevolentfund@uab.edu



Turn imagination into reality
Make your pledge online [here](#).



The celebration begins!

Micro Celebrates Renovation Milestone

by Ella Robinson

On April 6, at precisely 3pm, loud cheers and applause echoed throughout BBRB 6th floor as Department Chair Frances Lund, Ph.D., cut the “ribbon” for the grand opening of the newly renovated 6th floor restrooms. The 6th floor restrooms officially go online for use April 7th.



Dr. Lund cutting the ribbon.



Come in and check it out!



The mirrors make your hair look great!



The men's room provides maximum privacy.



Look, magic sinks!

A great big THANK YOU goes out to the wonderful team who made it all happen—Kevin Bell, Dr. Frances Lund, Heath Nichols, Ian White, and Julie Decker.



Welcome

Lucia Barkocziova – Visiting Scientist (Novak Lab)
Petr Kosztyu – Visiting Scientist (Novak Lab)
Lauren Kuntz – Student Assistant (Zajac Lab)
Xuerui Luo – Visiting Scientist (Hu Lab)
Linh Phan – Workstudy (Bedwell Lab)
Ali Zamani – Postdoc (Luo Lab)
Di Liu – Research Associate (moved to Bedwell Lab)

Farewell

Raymond Bailey – Research Assistant (Lund Lab)
Kanu Gupta – Postdoc (Yother Lab)
Sahar Hajitaheri – Lab Assistant (Niederweis Lab)
Aliza Steyn – Research Tech (Steyn Lab)
Savannah Thompson – Student Assistant (Bedwell Lab)
Quynh-Mai Trinh – Research Assistant (Thompson Lab)
Yimin Wang – Research Associate (Bedwell Lab)
Dewey Brook – Research Assistant (Prevelige Lab)
Xiuhui Yang – Visiting Scientist (Luo Lab)

Grant and Contract Awards | January 1 - March 31, 2015

Briles

Genocea Biosciences, Inc., *Passive Protection Studies for Genocea (Flano) 2015*

Green

National Institute of Allergy and Infectious Diseases/NIH/DHHS, *Transcription and Replication in Nonsegmented Negative-Strand RNA Viruses*

Jiang

PML Consortium, *Mechanisms of JC Polyomavirus Penetration of the Blood-Brain Barrier*

Kearney

American Heart Association (Southeast Affiliate), *Role of Aryl Hydrocarbon Receptor in B Cells*

Leon-Ruiz

National Institute of Allergy and Infectious Diseases/NIH/DHHS, *Regulation of T Cell Responses to Allergens and Environmental Microbes*

Walter

Lupus Research Institute, Inc., *Single-Cell Detection of IFN's in Lupus Patients*

Zajac

National Institute of Allergy and Infectious Diseases/NIH/DHHS, *Regulation of T Cell Activity during Chronic Infections*

Useful Links

Annual Retreat
Employee Site
Faculty Directory

Conference Rooms Schedule
Microbiology Newsfeed
Giving Opportunities

Trainee Career Opportunities
Microbiology Seminar Series
Department Calendar

Publications | January 1 - March 31, 2015

Adams MJ, **Hendrickson RC**, **Dempsey DM**, **Lefkowitz EJ**. [Tracking the changes in virus taxonomy](#). Arch Virol. 2015 Feb. PMID: 25708839

Aldred KJ, Schwanz HA, Li G, Williamson BH, **McPherson SA**, **Turnbough CL Jr**, Kerns RJ, Osheroff N. [Activity of Quinolone CP-115,955 Against Bacterial and Human Type II Topoisomerases Is Mediated by Different Interactions](#). Biochemistry. 2015 Feb;54(5):1278-86. Epub 2015 Jan

Atasheva S, Kim DY, **Frolova EI**, **Frolov I**. [Venezuelan equine encephalitis virus variants lacking transcription inhibitory functions demonstrate highly attenuated phenotype](#). J Virol. 2015 Jan;89(1):71-82. Epub 2014 Oct 15

Barnum SR. [C4a: An Anaphylatoxin in Name Only](#). J Innate Immun. 2015 Feb 6. [Epub ahead of print] PMID:25659340

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Bone RN, Gai Y, Magriotti V, Kokotou MG, Ali T, Lei X, **Tse HM**, Kokotos G, Ramanadham S. [Inhibition of Ca²⁺-independent phospholipase A2 \$\beta\$ \(iPLA2 \$\beta\$ \) ameliorates islet infiltration and incidence of diabetes in NOD mice](#). Diabetes. 2015 Feb;64(2):541-54. Epub 2014 Sep. PMID: 25213337

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Fukuyama Y, Ikeda Y, Ohori J, Sugita G, Aso K, Fujihashi K, **Briles DE**, McGhee JR, Fujihashi K. [A molecular mucosal adjuvant to enhance immunity against pneumococcal infection in the elderly](#). Immune Netw. 2015 Feb;15(1):9-15. Epub 2015 Feb. Review. PMID: 25713504

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Guedes AG, Jude JA, Paulin J, Rivero-Nava L, Kita H, **Lund FE**, Kannan MS. [Airway responsiveness in CD38-deficient mice in allergic airway disease: studies with bone marrow chimeras](#). *Am J Physiol Lung Cell Mol Physiol*. 2015 Mar 1;308(5):L485-93. Epub 2015 Jan

Honjo K, Kubagawa Y, **Kearney JF**, Kubagawa H. [Unique Ligand-Binding Property of the Human IgM Fc Receptor](#). *J Immunol*. 2015 Feb 15;194(4):1975-82. *jimmunol*.1401866. Epub 2015 Jan. PMID: 2560192

Imperiale MJ, **Jiang M**. [What DNA Viral Genomic Rearrangements Tell Us about Persistence](#). *J Virol*. 2015 Feb;89(4):1948-1950. Epub 2014 Dec. Review. PMID: 25473048

Kahan SM, Wherry EJ, **Zajac AJ**. [T cell exhaustion during persistent viral infections](#). *Virology*. 2015 Jan. *j.virol*.2014.12.033. [Epub ahead of print]

Kearney JF, **Patel P**, **Stefanov EK**, **King RG**. [Natural Antibody Repertoires: Development and Functional Role in Inhibiting Allergic Airway Disease](#). *Annu Rev Immunol*. 2015 Jan. [Epub ahead of print] PMID: 25622195

Kothari N, Kothari S, Choi YJ, Dey A, **Briles DE**, Rhee DK, Carbis R. [A bivalent conjugate vaccine containing PspA families 1 and 2 has the potential to protect against a wide range of Streptococcus pneumoniae strains and Salmonella Typhi](#). *Vaccine*. 2015 Feb;33(6):783-8. Epub 2014 Dec. PMID: 25545593

Lopez EF, **Kabarowski JH**, Ingle KA, Kain V, Barnes S, Crossman DK, Lindsey ML, Halade GV. [Obesity superimposed on aging magnifies inflammation and delays the resolving response after myocardial infarction](#). *Am J Physiol Heart Circ Physiol*. 2015 Feb;308(4):H269-80. Epub 2014 Dec

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Miyaji EN, Vadesilho CF, Oliveira ML, Zelanis A, **Briles DE**, Ho PL. [Evaluation of a Vaccine Formulation against Streptococcus pneumoniae Based on Choline-Binding Proteins](#). *Clin Vaccine Immunol*. 2015 Feb;22(2):213-20. PMID: 25520146

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[lay type 1 diabetes](#). *Diabetes*. 2015 Mar;64(3):937-46. Epub 2014 Oct. PMID: 25288672

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Ren Q, Li C, Yuan P, Cai C, Zhang L, **Luo GG**, Wei W. [A Dual-Reporter System for Real-Time Monitoring and High-throughput CRISPR/Cas9 Library Screening of the Hepatitis C Virus](#). *Sci Rep*. 2015 Mar;5:8865. PMID: 25746010

Silva-Sanchez A, Liu CR, Vale AM, Khass M, Kapoor P, Elgavish A, Ivanov II, Ippolito GC, Schelonka RL, Schoeb TR, **Burrows PD**, Schroeder HW Jr. [Violation of an Evolutionarily Conserved Immunoglobulin Diversity Gene Sequence Preference Promotes Production of dsDNA-Specific IgG Antibodies](#). *Violation of an Evolutionarily Conserved Immunoglobulin Diversity Gene Sequence Preference Promotes Production of dsDNA-Specific IgG Antibodies*. *PLoS ONE*. 2015 Feb;10(2): e0118171

Stuchlova HM., Vrablikova A, Stewart TJ., Takahashi K, Czernekova L, Yamada K, Suzuki H, Julian BA, Renfrow MB, **Novak J**, Raska M. [N-acetylgalactosaminide \$\alpha\$ 2,6-sialyltransferase II is a candidate enzyme for sialylation of galactose-deficient IgA1, the key autoantigen in IgA nephropathy](#). *Nephrol. Dial. Transplant*. 2015 Feb;30:234-238.

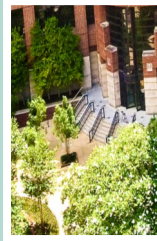
Uchida M, LaFrance B, Broomell CC, **Prevelige PE Jr**, Douglas T. [Higher Order Assembly of Virus-like Particles \(VLPs\) Mediated by Multi-valent Protein Linkers](#). *Small*. 2015 Jan. [Epub ahead of print] PMID: 25641768

Verhalen B, **Justice JL**, Imperiale MJ, **Jiang M**. [Viral DNA replication-dependent DNA damage response activation during BK polyomavirus infection](#). *J Virol*. 2015 Feb. [Epub ahead of print] PMID: 25694603

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Xu Y, Martinez P, Séron K, **Luo G**, Allain F, Dubuisson J, Belouzard S. [Characterization of hepatitis C virus interaction with heparan sulfate proteoglycans](#). *J Virol*. 2015 Apr 1;89(7):3846-58. Epub 2015 Jan. PMID: 25609801

Zhou Z, **Bedwell GJ**, **Li R**, Bao N, **Prevelige PE Jr**, Gupta A. [P22 virus-like particles constructed Au/CdS plasmonic photocatalytic nanostructures for enhanced photoactivity](#). *Chem Commun (Camb)*. 2015 Jan;51(6):1062-5. PMID: 25435024



University of Alabama at Birmingham
Department of Microbiology

845 19th Street South, BBRB 276-11
Birmingham, Alabama 35294-2170

Around Campus and About Town

The Market at Pepper Place 2015 Kick Off

April 11 | 7:00 am – 12:00 pm
Admission: Free



Mutt Strutt

April 18 | 9:00 am – 12:00 pm
UAB Green
Admission: \$35
Birmingham's premiere dog-friendly 5K and 1 mile fun run is organized by Hand in Paw.

Tails in the Trails

April 24 | 6:30 pm – 10:30 pm
Birmingham Zoo Admission: \$25
Adults 21 and up enjoy live music, appetizers, a cash bar, silent auction and animal encounters. The event will benefit the Barbara Ingalls Shook Black Bear Trail, coming soon to the Birmingham Zoo.

Magic City Art Connection

April 24— April 26
Linn Park
Admission: Free

The 32nd annual contemporary art festival of locally, regionally and nationally recognized talent in visual art, food & wine, dance and music.



Cirque Alys 2 featuring Australia's Sway Poles

April 29 - May 1, 2015

Go to website for times

UAB [Alys Robinson Stephens Performing Arts Center](#)
Sway Poles is a Melbourne-based arts company whose work fuses theatre, dance and circus at an elevated medium. Artists sway from 16-foot-tall poles creating a large-scale visual art installation.

Homestead Hollow

May 8, 9, 10 | 9:00 – 5:00

Springville, AL

Admission: Adults \$7; Children 3-12 \$3; Children under 2 Free

Handmade, crafts; demonstrations of wood carving, blacksmithing, and whiskey making; wagon rides; bungee jump; moonwalk; face painting and more.



Art in the Gardens

June 13, 14 | 9:00 am – 5:00 pm

Aldridge Gardens, Hoover

Admission: \$5.00 for persons over 16

Enjoy arts and crafts from Alabama's finest artists— painters, photographers, jewelry makers, sculptors, woodworkers, metal artists, potters, glass artists and fabric and fiber artists.



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