

THE SDS PAGE

Check it out on line!
<http://www.oumedicine.com/departement-of-biochemistry-and-molecular-biology/general-program-info/newsletter>

Publications

Lauer, M.E., Glant, T.T., Mikecz, K., **DeAngelis, P.L.**, Haller, F.M., Husni, M.E., Hascall, V.C., Calabro, A. (2013) Irreversible Heavy Chain Transfer to Hyaluronan Oligosaccharides by Tumor Necrosis Factor-stimulated Gene-6. *J. Biol. Chem.* **288**:205-214.

Siiskonen, H., Rilla, K., Kärnä, R., Bart, G., **Jing, W.**, Haller, F.M., **DeAngelis, P.L.**, Tammi, R.H., Tammi, M.I. (2013) Hyaluronan in cytosol - Microinjection-based probing of its existence and suggested functions. *Glycobiology.* **23**:222-231.

Walther T, Karamanska R, Chan RW, Chan MC, Jia N, **Air G**, Hopton C, Wong MP, Dell A, Malik Peiris JS, Haslam SM, Nicholls JM. Glycomic analysis of human respiratory tract tissues and correlation with influenza virus infection. *PLoS Pathog.* **2013**;9(3):e1003223. Epub 2013/03/22.

Kager LM, Wiersinga WJ, Roelofs JJ, Meijers JC, Zeerleder SS, **Esmon CT**, van 't Veer C, van der Poll T: Endogenous protein C has a protective role during Gram-negative pneumosepsis (melioidosis). *J Thromb Haemost.*, **11**(2):282-292, 2013.

Bock F, Shahzad K, Wang H, Stoyanov S, Wolter J, Pelicci PG, Wei D, Kashif M, Schmidt S, Ritzel R, Schwenger V, Reymann K, **Esmon CT**, Madhusudhan T, Nawroth PP, Isermann B: Activated protein C ameliorates diabetic nephropathy by epigenetically inhibiting the redox enzyme p66Shc. *Proc Natl Acad Sci (USA)*, **110**(2):648-653, 2013.

Borissoff JI, Otten JJT, Heeneman S, Leenders P, van Oerle R, Soehnlein O, Loubele STBG, Hamulyák K, Hackeng TM, Daemen MJAP, Degen JL, Weiler H, **Esmon CT**, van Ryn J, Biessen EAL, Spronk HMH, ten Cate H: Genetic and pharmacological modifications of thrombin formation in apolipoprotein E-deficient mice determine atherosclerosis severity and atherothrombosis onset in a neutrophil-dependent manner. *PLoS ONE* **8**(2):e55784, 2013.

Nayak RC, Keshava S, **Esmon CT**, Pendurthi UR, Rao LVM . Rab GTPases Regulate Endothelial Cell Protein C Receptor-Mediated Endocytosis and Trafficking of Factor VIIa. *PLoS ONE* **8**(3): e59304, 2013.

Schaffner F, Yokota N, Carneiro-Lobo T, Kitano M, Schaffner M, Anderson GM, Mueller BM, **Esmon CT**, Ruf W: Endothelial protein C receptor function in murine and human breast cancer development. *PLoS ONE* **8**(4): e61071, 2013.

Kandice L. Tessneer,¹ Satish Pasula,¹ Xiaofeng Cai,¹ Yunzhou Dong,¹ **Xiaolei Liu**,^{1,2} Lili Yu,¹ Scott Hahn,¹ John McManus,¹ Yiyuan Chen,¹ Baojun Chang,¹ and **Hong Chen**^{1,2} Endocytic Adaptor Protein Epsin Is Elevated in Prostate Cancer and Required for Cancer Progression. *ISRN Oncology*. Volume 2013 (2013)

GREAT Symposium

The Department of Biochemistry & Molecular Biology walked away with 8 awards at the GREAT symposium this year.

Winners of the COM Graduate Student Association awards (\$1000 travel award) were **Andy Long** and **Clair Crewe**

Winners of the GREAT Awards for Scientific Achievement (\$1000 travel award) were **Claire Crew, Xiaolei Liu, Brett Herzog, Zhaoyu Liu, and Jolyn Fernandes**

Winner of the GREAT Award for Outstanding Research (\$1500 travel award) was **Yao Fu**

Congratulations on a job well done!

The Oklahoma Magazine, April 2013 Issue

[The Cell Hunter](#)

An OU researcher and his team are attempting to exterminate a deadly blood disease.

BY PAUL FAIRCHILD

" Longtime OU professor, Dr. [Robert] Broyles, is a hunter...."

In the News
In the News

Special Recognition

Sanjay Bidichandani was invited to present the annual Henry Turner Lecture by the department of Internal Medicine (OUHSC), entitled "Development of Targeted Therapies for Genetic & other Rare Diseases: *The New Brave New World*" [2/13/2013]

Invited to serve on the Program Planning Committee for the annual MDA scientific conference on neuromuscular disease-
Sanjay Bidichandani

Chair of session on "Genetic Modifiers" at the annual MDA scientific conference on neuromuscular disease [Washington DC, April 21-24, 2013]-**Sanjay Bidichandani**

O. Ray Kling Award for Outstanding Graduate Student Leadership

Brett Herzog

Department of Biochemistry and Molecular Biology

Mentor: **Lijun Xia, PhD**

Funded Grants

“Synthetic Heparan Sulfate: Probing Biosynthesis to Prepare Defined Drugs”, NIH R01 2013-2016 \$277,760—**DeAngelis**



New employees

Anais Chavaroche is a new postdoc in the **DeAngelis** lab. Dr. Chavaroche got her PhD from the Wageningen University, The Netherlands; BS, La Rochelle University, France.

Chutake Y.K. and Bidichandani S.I. Transcriptional deficiency in Friedreich ataxia is associated with spread of repressive chromatin upstream of the expanded GAA trinucleotide repeat mutation. Keystone Symposium on RNA Silencing, Whistler, British Columbia, Canada [March 19-24, 2013].

Chris West presented a poster at the 2013 Glycobiology Gordon Conference: ‘Substrate targeting mechanism of the Skp1 alpha-galactosyltransferase of *Dictyostelium* involved in oxygen-signaling’

Posters presented at the Fifth Congress of the International BioIron Society (IBIS), Biennial World Meeting, (BioIron 2013), April 14-18, 2013, University College London, London, United Kingdom—**Broyles**

NUCLEAR FERRITIN: FROM DISCOVERY TO PROMISING TREATMENTS TO STOP SICKLE CELL DISEASE AND MALARIA. Visits from the Three Princes of Serendip and Recent Progress DISEASE AND MALARIA

Austin Roth, BA^{1,2}, **Visar Belegu**, PhD³, Emily Curry, BS^{1,2}, Marie Trudel, DSc⁴, **Robert Floyd**, PhD^{1,2,5}, Sunil Joshi, PhD, DVM^{1,6}, and **Robert Broyles**, PhD^{1,2,7}

¹Sickle Cell Cure Foundation; ²EpimedX, ³Kennedy Krieger Institute, Johns Hopkins Univ., ⁴IRCM, ⁵Experimental Therapeutics, Oklahoma Medical Research Foundation, ⁶Microbiology & Immunology, University of Oklahoma Health Sciences Center, and ⁷Biochemistry & Molecular Biology, University of Oklahoma Health Sciences Center

EDX-17, A SAFE PHYTOHORMONE THAT PROMISES A PHENOTYPIC CURE FOR SICKLE CELL DISEASE AND A BLOCKING TREATMENT FOR MALARIA: IN VIVO PROOF OF PRINCIPLE IN ANIMALS

Robert Broyles, PhD¹, Austin Roth, BA², Carol Curtis, PhD², **Robert Floyd**, PhD², and Sunil Joshi, PhD, DVM¹ ¹Sickle Cell Cure Foundation; ²EpimedX

Xiaofeng Cai from **Dr. Hong Chen’s** lab gave a poster presentation entitled: Upregulation of epsin in breast cancer and critical role of epsin in promoting cancer growth and metastasis. The 104th Annual Meeting of the American Association for Cancer Research; 2013 April 6-10; Washington, DC.

Session Chair

Chris West chaired the ‘Parasite & Microbial Glycobiology’ session at the 2013 Glycobiology Gordon Conference

Chris West served as co-chair at the Membrane Biology and Protein Processing NIH Study section meeting Feb. 14-15 in Washington DC.

Study sections/Review Panels

Served on NIH study section “Genetics in Health & Disease” [Feb 25-26, 2013]-**Bidichandani**

Served on grant review panel for the King Abdulaziz City for Science and Technology (KACST, Saudi Arabia) conducted by the American Association for the Advancement of Science (AAAS) [3/6/2013]-**Bidichandani**

Conducted online grant reviews for Ataxia UK [2/19/2013]-**Bidichandani**

Served on grant review panel for MDA translational research “Bridge-to-Industry” postdoctoral fellowships [4/10/2013]-**Bidichandani**

Site visit team member: FDA/CBER laboratory of DNA viruses, Bethesda, MD February 22-**Air**

NIH-CSR study section April 3-**Air**

Dr. Hong Chen served as an ad hoc reviewer for NHLBI “Atherosclerosis and Inflammation in Cardiovascular System Study Section” in February, 2013.

National Service

Served as a judge for the national high-school “DNA Day” essay competition on Human Genomics conducted by the American Society of Human Genetics [3/27/2013]-**Bidichandani**

In the News

Gillian M. Air, PhD, George Lynn Cross Professor & Vice Chair in the Department Biochemistry & Molecular Biology has been elected Secretary of Medical Sciences Section N of the *American Association for the Advancement of Science*



<http://www.aaas.org/aboutaaas/organization/sections/med.shtml>

This is a tremendous honor and distinction, and a very significant academic service responsibility with the largest general science in the world.

Paul H. Weigel, Ph.D.

Congratulations Dr. Air!

Chris West presented a seminar at the University of Nebraska Biotechnology/Life Sciences Seminar Series on Wednesday, March 27, 2013: “Ancient Role of Prolyl Hydroxylation in Protist O₂-Sensing is Modulated by Glycosylation and Targets a Ubiquitin Ligase”

Presented Grand Rounds in the department of Pediatrics (OUHSC), entitled “Trends in Development of Targeted Therapies for Genetic Diseases” [4/10/2013]-**Bidichandani**

University of Kansas, Lawrence, KS 2/19/13; “*Heparosan-Based Drug Delivery Systems: using a stealthy microbial polymer to improve therapeutics*”-**DeAngelis**

Cleveland Clinic Foundation, Cleveland, OH 3/25/13-***Visiting Scholar**: “*Heparosan-Based Drug Delivery Systems: using a stealthy microbial polymer to improve therapeutics*” -**DeAngelis**

M. Osman Sheikh presented an invited talk at the Gordon-Merck Research Seminar preceding the Glycobiology Gordon Conference, on March 2-3, 2013: "Hydroxylation and Glycosylation of Skp1 Affects Cytoplasmic F-box Protein Complex Assembly in the Social Amoeba *Dictyostelium*". Osman was compensated by waiver of his conference fee.

“*Histones and nucleosomes link disease processes and trauma to inflammation and thrombosis.*” Cardiovascular Biology Seminar Series, Thrombosis and Atherosclerosis Research Institute, McMaster University, Hamilton, Ontario, Canada, February 6, 2013.-**Esmon**

“*Histones and nucleosomes in innate immunity and organ failure/injury.*” 11th Winter Meeting on Coagulation, Bormio, Italy, April 14-20, 2013.-**Esmon**

“EPCR involvement in cancer and inflammatory injury.” 11th Winter Meeting on Coagulation, Bormio, Italy, April 14-20, 2013.-**Esmon**

“EPCR involvement in cancer and inflammatory injury.” 11th Winter Meeting on Coagulation, Bormio, Italy, April 14-20, 2013.-**Esmon**

Dr, Hong Chen gave an invited talk at the Maine Medical Center Research Institute, Portland, ME, April 2013. Title: The Role of Endocytic Adaptor and Ubiquitin-Binding Protein Epsin in Vascular Development and Tumor Angiogenesis.

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Workshop participation

Tina McKay and **Chiedza Kanyumbu** of the Mooers Lab participated in the Biological Small Angle X-ray Scattering Workshop at the Stanford Synchrotron Light Source of the Stanford Linear Accelerator Center of Menlo Park, California March 18-20.

Dr. Blaine Mooers participated in the 2013 X9A Workbench on Small Angle X-ray Scattering at beam line X9A of the National Synchrotron Light Source at the Brookhaven National Laboratory in Upton, NY April 18-21.

Evening of Excellence



Along with Dr. Hildebrand from Microbiology, these were our Department's attendees at this year's Evening of Excellence.

Augie Pioszak was the College of Medicine Research Scholar speaker. Dr. Pioszak spoke about how the COMAA seed grant funding helped him start his lab and enabled them to generate preliminary data that was used to obtain NIH R01 funding.

Accolades



The Pasarow Foundation Board of Directors has selected **Dr. Charles Esmon** as one of three recipients of this year's *Robert J. and Claire Pasarow Foundation Award in Cardiovascular Research*. The other two recipients are Drs. Hal Dietz of Johns Hopkins, and Helen Hobbs of the University of Texas Southwestern Medical Center. Since 1987, the Foundation has established annual medical prizes for distinguished accomplishment in three major areas of research in order to increase public awareness of vital areas of investigation. The prizes are given for extraordinary basic and/or clinical and translational research in cancer research, cardiovascular disease, and neuropsychiatry. The recipients will each receive a check for \$20,000 to be presented at an awards luncheon in Los Angeles on May 10, 2013.