

Vermont's Academic Medical Center

Pathology & Laboratory Medicine Newsletter

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Debra G. B. Leonard, M.D., Ph.D.

Debra G. B. Leonard, M.D., Ph.D., will be joining us as Professor and Chair of the Department of Pathology at the University of Vermont, College of Medicine, and Physician Leader of Pathology and Laboratory Medicine at Fletcher Allen Health Care as of April 1, 2013. She already is working with the departmental, college, and hospital leadership to assure a smooth transition into her new position.





Microscopic Section of Human Kidney Tissue

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Debra G. B. Leonard, M.D., Ph.D. - New Pathology Chair

A leading expert in molecular pathology for genetics, cancers and infectious diseases, Dr. Leonard is certified by the American Board of Pathology in Anatomic Pathology, and by the American Boards of Pathology and Medical Genetics in Molecular Genetic Pathology. She currently is the College of American Pathologists' representative to the Institute of Medicine Roundtable on Translating Genomic-based Research for Health, and Chair of the Personalized Healthcare Committee of the College of American Pathologists. She previously served as a member of the Advisory Committee on Genetics Health and Society to Secretary of Health and Human Services Michael O. Leavitt, and was Chair of the Stakeholders Group of the CDC Program Evaluating Genomic Applications in Practice and Prevention. She has spoken widely on various molecular pathology testing services, the future of molecular pathology, the impact of gene patents on molecular pathology practice and the role of pathologists in genomic medicine.

Dr. Leonard was a 2003 Fellow at the Executive Leadership in Academic Medicine (ELAM) Program at Drexel University. She is a member of the College of American Pathologists and a founding member of the Association for Molecular Pathology, serving as President in 2000 and receiving their Leadership Award in 2009. She is Editor of two textbooks of molecular pathology and has published over 80 peer-reviewed articles, book chapters and reviews.

After earning a Bachelor's degree in biology from Smith College, Dr. Leonard graduated from the M.D./Ph.D. program at New York University. She went on to complete a residency in Anatomic Pathology, a post-doctoral research fellowship and a Surgical Pathology fellowship, all at New York University Medical Center. She then joined the pathology faculty at Case Western Reserve University School of Medicine and the University Hospitals of Cleveland, where she established a new Molecular Diagnostics Laboratory. She subsequently moved to the University of Pennsylvania School of Medicine, where she was Director of the clinical Molecular Pathology Laboratory at the Hospital of the University of Pennsylvania, and Director of the Molecular Diagnosis and Genotyping Core Facility at the Abramson Cancer Center.

On a personal note, Dr. Leonard will be moving to Burlington with her husband, Greg Merhar, who is a professional photographer. Her three children have completed college and are either working or in graduate school, and also live in the northeastern United States. She is very happy that her Mini Cooper S will have a garage both at home and at work, and will enjoy driving on country roads instead of in city traffic. She and Greg enjoy cooking and gardening, and are looking forward to getting to know their new colleagues and neighbors, and exploring Burlington and the surrounding area.





Wishing You A Wonderful Holiday Season



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Nancy Swords Jenny, Ph.D.

What is your scientific background? I received my Ph.D. in 1990 in Chemistry, with a focus on biophysical methods, from Rensselaer Polytechnic Institute, Troy, NY. I returned to Vermont for postdoctoral training with Kenneth Mann in the Biochemistry Department at the University of Vermont. In 2000, I joined the Laboratory for Clinical Biochemistry Research in the Pathology Department as a Research Associate and switched from basic research in cellular and molecular mechanisms of blood coagulation and fibrinolysis to epidemiologic studies of aging-related diseases. To facilitate this shift in research, I attended the Ten-Day Seminar on the Epidemiology and Prevention of Cardiovascular Disease funded by the American Heart Association, the Summer Institute in Statistical Genetics, University of Washington, Seattle, WA and the Schiermonnikoog International Course on Clinical Epidemiology, Leiden University, The Netherlands.

What are your main areas of research? My research focuses on associations of biomarkers of inflammation and immunity with aging-related diseases such as cardiovascular disease, dementia and kidney disease. The goal is to identify new pathways linking inflammation and immunity with disease and to identify biomarkers that may have clinical utility. My particular interest is pentraxin-3, an inflammatory protein produced and secreted by vascular cells under stress conditions. I am working with a number of researchers to investigate associations of pentraxin-3 with aging-related diseases in several different epidemiologic cohorts.

What might be one possible translational result from your research? One of our goals is to define a panel of biomarkers representing different facets of inflammation such as immune system activation, vascular perturbation, kidney dysfunction, cardiac stress and oxidative stress to improve risk prediction models for aging-related diseases. These panels could be used to identify patients at risk of developing disease to better target prevention strategies.

On the personal side, what do you like to do to relax? I really enjoy spending time with our horses. We ride year-round and my children show their horses at local and state shows in the summer. We also have dogs, cats and ducks on our mini-farm.





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Gladwyn Leiman, MBBCh, FIAC

Congratulations Dr. Leiman for achieving the very high honor of The Maurice Goldblatt Cytology Award 2012!

Dr. Gladwyn Leiman, Director of Cytopathology at Fletcher Allen, and Professor of Pathology at UVM, was notified on November 14, 2012 that she was selected by the Executive Council and Awards Committee of the International Academy of Cytology (IAC), as recipient of "**The Maurice Goldblatt Cytology Award 2012**" in recognition of her life long dedication to the cause of cytology. The award will be presented during the opening ceremony of the 18th International Congress of Cytology in Paris, France on May 26, 2013. The award consists of a gold medal, diploma, and a monetary award funded out of the Goldblatt trust fund. Dr. Leiman will give the Maurice Goldblatt Address on a subject of her own choosing. Dr Leiman spent her professional life at the University of the Witwatersrand in Johannesburg, South Africa, before moving to Vermont in July 2000.



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Left to Right Kristen Lundy, Andrew Goodwin M.D., and Pathology Residents Trish Murdock M.D. and Jamen Bartlett,

Congratulations Dr. Goodwin!

ASCP Poster

Andy Goodwin, M.D. and Kristin Lundy, CLS had a poster accepted at the annual ASCP Conference in Boston, MA last October. The title of their was poster, "The Effect of Ultracentrifugation on von Willebrand Testing- A Common Practice with a Big Impact."

Abstract

Introduction: von Willebrand disease (vWD) is the most common inherited bleeding disorder, and laboratory testing for von Willebrand (vWF) antigen and activity can be affected by lipemia when using an optical-based method. Markedly lipemic specimens are commonly ultracentrifuged to remove interfering lipids. vWF testing is used for both diagnosing vWD and measuring treatment response. Importantly, falsely lowered vWF results can lead to inaccurate diagnoses and incorrect patient management. We hypothesized that due to the large molecular size, vWF multimers are removed during ultracentrifugation leading to falsely lowered results. We compared vWF antigen and activity results pre- and post-ultracentrifugation. Furthermore, due to the relationship of vWF with factor VIII (FVIII), we compared FVIII and activated partial thromboplastin time (aPTT) on a subset of our pre- and post-ultracentrifuged samples.

Methods: Thirty-six consecutive platelet-poor, human, citrated-plasma samples were assayed on the ACLTOP500 for vWF antigen and activity using Instrumentation Laboratory's latex enhanced immunoassays. None of the samples demonstrated marked lipemia. The specimens were then ultracentrifuged in a Beckman Coulter Airfuge for ten minutes at a speed of 90,000 RPM, and vWF testing was repeated. Seventeen of the specimens were assayed for aPTT and FVIII following the same procedure.

Results: Compared to the pre-centrifuged samples, the post-centrifuged vWF antigen results averaged 16.1% (3.8%-39.1%) lower, vWF activity results averaged 28.1% (8.1% to 50.0%) lower, and FVIII levels averaged 20.4% (9.1%-35.1%) lower. The aPTT was only prolonged by an average of 0.4 (-2.0 to 3.0) seconds correlating to an average prolongation of 1.6% (-3.3% to 11.1%).

Conclusions: Ultracentrifugation of plasma samples reduces vWF activity and antigen introducing the potential for inaccurate diagnoses and incorrect treatment decisions. FVIII levels also decreased following ultracentrifugation without significant impact on the aPTT. Due to these findings, our laboratory no longer performs ultracentrifugation on markedly lipemic specimens for these tests. vWF multimer analysis in pre- and post-centrifugation samples is currently under investigation.



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Andrew Goodwin M.D.

Congratulations Dr. Goodwin!

CAP Scholarship

Andy Goodwin, M.D. also received a scholarship from the College of American Pathology to participate in the College's first Engaged Leadership Academy. The Engaged Leadership Academy (ELA) is the advanced next "generation" of the College's highly valued Spokespersons Training Program. The ELA has been designed to provide selected pathologists with dedicated time to practice and hone their skills in presenting pathologists' critical contributions to patient care whose specialty is pathology.

Dr. Goodman is being trained to promote Pathology as a subspecialty in Medicine, to the medical community, to patients, and to government agencies.





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Douglas J. Taatjes, Ph.D.



Congratulations Dr. Taatjes!

Dr. Taatjes publication of <u>Cell Imaging Techniques Methods and Protocols</u> - (Second Edition) - Methods in Molecular Biology 931 - Published by Humana Press 2012.

"Dr. Taatjes is a Research Professor in the Department of Pathology at the University of Vermont, Burlington, VT.

From Dr. Taatjes:

"My main research focus is in the use of a variety of microscopy-based imaging systems in the study of cardiovascular diseases, environmental lung pathology, and cell secretion. These studies include: (1) utilizing atomic force microscopy in the investigation of the etiology of the antiphospholipid syndrome in humans (in collaboration with Dr. Jacob Rand, Albert Einstein College of Medicine); (2) examining the expression of coagulation proteins in human saphenous vein valves, using multiparameter confocal scanning laser microscopy and computer-assisted quantitative analysis (in collaboration with Drs. Arti Shukla and Chris Holmes, University of Vermont); (3) using microscopy-based imaging techniques in the study of environmental lung pathology (in collaboration with members of the Vermont Lung Center); and (4) investigating cell biological mechanisms in cell secretion with Dr. Bhanu Jena, Wayne State University College of Medicine. In addition to these primary research efforts, I have also served as Director of the Microscopy Imaging Center in the College of Medicine at the University of Vermont since 1993."

In addition to these primary research efforts, Dr. Taatjes also serves as Director of the Microscopy Imaging Center in the College of Medicine at the University of Vermont. Moreover, he teaches students in microscopy-based techniques both informally in the laboratory setting and in graduate-level courses offered at the University of Vermont and at The Jackson Laboratories, Bar Harbor, ME."



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Pathology Residents in the News:

Kanayo Tatsumi. M.D. (PGY-2) recently won the Susan P. Baker Public Health Impact Award at the 2012



National Association of Medical Examiners (NAME) conference held in Baltimore, MD for her platform presentation, "Death Certificate

Surveillance: A Component of Death Investigation". This award was established in honor of Susan P. Baker, MPH ScD (Hon), founding director of the Johns Hopkins Center for Injury Research and Policy at the Bloomberg School of Public Health, to recognize the presentation that demonstrates the greatest potential for public health Impact. This was the inaugural year for this award.

Kanayo writes: '...my role was very small compared to the daily efforts of those at

the OCME [Office of the Chief medical Examiner] and the Vermont State Department of Health, and their commitment to public health and safety" and extends deep gratitude to her co-authors Dr. Steven Shapiro and Dr. Elizabeth Bundock of the Vermont OCME for their guidance, support and encouragement. Dr. Shapiro announced her award writing, "She made Vermont very proud."

Also at the NAME meeting were several recent graduates of our residency program, Michael Madsen and Kathleen McCubbin, now medical examiners in Ramsey, MN and New York City, respectively. She reunited with them over drinks and a Maryland-style crab dinner.

Our pathology residents and fellows actively participate in national and international conferences. At the USCAP meeting in Vancouver last spring, there were 6 posters and 2 platform presentations (including one that awarded best platform from a physician in training). Other presentations at meetings in 2012 include: two posters at the American Society of Dermatopathology in Chicago, one poster at the Thrombosis and Hemostasis Summit in Chicago, three posters at CAP in San Diego, one poster at the New England Surgical Society in Rockport, one poster at Association for Molecular Pathology in Long Beach, two posters at the AABB in Boston and three posters at IAP in Cape Town, South Africa. Residents have also been involved in multiple publications this year in areas including endothelial basic sciences, cytopathology, surgical pathology, and hematology.





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Nicholas Heintz, Ph.D.

Congratulations and Recognition to two CMB Members of Dr. Heintz Laboratory

I would like to publicize some recent accomplishments by two CMB members in my lab.

Kheng Newick, a doctoral candidate in the CMB graduate program, recently received a travel award to attend the International Mesothelioma Interest Group (iMIG) meeting in Boston. She previously was awarded a travel fellowship from the Society for Free Radical Biology and Medicine (SFRBM), and has published her first paper in PLoS ONE this spring. Ms. Newick is expected to graduate in the next several months.

Brian Cunniff was awarded an SFRBM Mini-Fellowship to pursue an aspect of his thesis studies in the laboratory of Dr. Michael Murphy at the Mitochondrial Biology Unit of the MRC in Cambridge, England. This is one of the most prominent laboratories in the world that studies mitochondrial physiology in disease. His abstract was accepted for a platform presentation at the Society for Free Radical Research International meeting in London in September, where his presentation won an Young Investigator Award. Brian will be in Cambridge until mid-December, which represents a significant personal commitment since he got married this summer. His wife Laura is a nurse at FAHC, and will meet Brian in England for a brief vacation in Europe before they return to Vermont. Brian also published his first paper in the Journal of Cell Physiology this fall.

Nick





Colleagues:

We are extremely saddened to share the news that **Tom Teel** passed Friday, November 23, 2012. Tom was a wonderful colleague and friend, who was constantly a strong advocate for researchers and did everything within his power to provide support to all of us. If a problem arose, Tom would always try to help and if he could not he would advise as to who could.

Tom served in the Viet Nam war and worked at Boston University prior to joining UVM over 30 years ago. He began his UVM employment in the Department of Pathology as a laboratory technician, and also oversaw laboratory renovations for Pathology researchers. Tom was recruited to the Dean's Office during the design and construction of the Health Science Research Facility. His unique combination of expertise in laboratory technology, passion for laboratory safety and construction knowledge evolved into a permanent critical facilities role in the College.

Tom's work ethic was one to be emulated and his dedication to the College unrelenting. We have lost a true friend will miss him immensely. Our thoughts and prayers are with his wife, Joanne, who also served at the College in the Department of Pa-thology, his children and grandchildren.

View the BFP obituary.

Sue

Sue Wolverton Ligon Assistant Dean for Facilities Administration and Projects University of Vermont College of Medicine