



A Third Century Where Discovery
Transforms Medicine

Molecular Profile

A Newsletter of Molecular Diagnostics & Molecular Pathology

Volume 5, September 2012

The 8th Annual DMP Symposium will be held October 2nd, 2012

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Translational Genomics, Biopharmaceuticals and Personalized Medicine

Tuesday, October 2, 2012

MSTF Auditorium

685 W Baltimore Street, Baltimore, MD 21201

9:00am to 4:00pm

Keynote Lecture: Peter Agre, MD



Dr. Peter Agre, M.D. is a University Professor and Director at the Johns Hopkins Malaria Research Institute Department of Molecular Microbiology and Immunology. Dr. Agre shared the 2003 Nobel Prize in Chemistry for discovering the aquaporins, a family of water channel proteins found throughout nature and underlying numerous physiological processes and clinical disorders. Agre is also deeply involved in multiple global issues. He currently

directs the Johns Hopkins Malaria Research Institute, leading field research in Zambia and Zimbabwe. As Chair of the Committee on Human Rights of the National Academies, Agre led efforts on behalf of imprisoned scientists, engineers, and health professionals worldwide. He is also the Past President of American Association for the Advancement of Sciences (AAAS).

Other invited speakers include Dr. Suzanne Cheng, Roche, Dr. Paul Meltzer,

NCI, Dr. Mridula Iyer, Qiagen, Dr. James Uzgiris, Siemens Healthcare, Dr. Euan Ashley, Stanford Univ., Dr. Laura Richman of MedImmune and Dr. Richard Bendis of BHI. To register, email to: mtillman@som.umaryland.edu.

This symposium is co-organized by the Chinese Biopharmaceutical Association (CBA-USA), Program in Personalized Medicine and Genomic Medicine and The Institute of Genome Sciences.

Translational Genomics Laboratory Is Open for Business

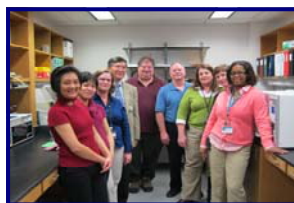
The goal of the Translational Genomics Laboratory (TGL) is to provide translational genomic services to support clinical studies and trials to the UMB community and beyond. These services includes, but not limited, to helping investigators to test novel identified biomarkers for clinical diagnosis of specific diseases; to assisting researchers in carrying out individual molecular-based genetic testing for personalized medicine study; or to providing laboratory support for clinical trials that are required to test various clinical samples. Currently, the TGL offers a CYP2C19 genotyping test to support the PAPI-2 pharmacogenomic clinical trial led by Dr. Alan

Shuldiner. Please note that TGL does not provide routine diagnostic services for regular patient care.

The TGL is a CLIA-certified lab (ID#: 21D2027356) that is in compliance with both state and federal regulations. Current services provided by the TGL include genotyping, gene expression analysis, DNA sequencing and development of customized genomic assays:

DNA Sequencing using 3730XL 96 capillary; Gene Expression Micro-Arrays using both Affymetrix Gene Chip and Illumina iScan (RNA, DNA methylation and Drug Metabolism studies—DMET chips); TaqMan Genotyping using 7900 RT PCR; and next generation sequencing (Iron AmpliSeq Cancer Panel) using Iron Torrent PGM sequencers.

Laboratory Contact Information:
Laboratory Director: Richard Zhao, PhD
Program Manager: Danielle Sewell
UMSDM Howard Hall, Room 560-564
Phone: 410-706-3339

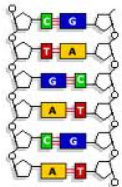


2012 DMP Travel Award Winner

Tarah Ranke M(ASCP), Research Assistant from Pathology Department of UMSOM won the 2012 DMP Travel Award for her presentation at the 2012 ASM meeting entitled "PCR-based identification of VanA and VanB genes for the detection of VRE from rectal samples in a long term rehabilitation hospital", which was held in San Francisco, CA on June 16, 19, 2012.



Striving to meet the translational genomic and molecular diagnostic needs of UMSOM scientists and physicians for their effort to translate new discoveries from bench-side to bed-side and for our ultimate goal to improve patient care at the UMMC community



Division of Molecular Pathology (DMP) Faculty and Staff News

Dean Mann, MD, professor, received a one-year \$263,212 Maryland Industrial Partnerships award for validating a prototype, large-scale, hollow-fiber bioreactor system for use in manufacturing in the biotechnology industry.



Feng Jiang, MD, PhD, associate professor, was awarded a three-year \$955,535 National Cancer Institute R01 grant for "Non-Invasive Biomarker Panels for Early Detection of Lung Squamous Cell Carcinoma."



Richard Zhao, PhD, professor and division head, received a one-year \$100,000 Maryland Industrial Partnerships award for "Clinical Study on Processing Cancer Tissues". Dr. Olga Ioffe is a co-principle investigator.



Record Attendance at The 7th Annual DMP Symposium

Over 400 people representing more than twenty-four different universities, biotech companies and government agencies from the State of Maryland and 6 neighboring states attended the 2011 Seventh Annual Symposium on Translational Research in Molecular Pathology. The theme of the symposium was "Translational Genomes to Personalized Medicine".

Held at MSTF Auditorium, the symposium presented the most recent advances in molecular biology and how these advances could be applied to personalizing health care. Sanford A. Stass, MD, Chair of the Department of Pathology at the University of Maryland School of Medicine and E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland John Z. and Akiko K. Bowers Distinguished Professor and Dean of School of Medicine delivered the opening remarks. Following these, Dr. Mirkin A. Chad, PhD, a member of National

Academy of Sciences, Engineering and Institute of Medicine, gave the keynote lecture on "Spherical and Other Three Dimensional Forms of Nucleic Acids: A New Gene Regulation Platform". Six other internationally renowned scientists, Drs. Ji Luo, Christopher O'Donnell, Peter Qiu, Michael Cerney, Richard Zhao and Kenneth W. Kinzler, presented various topics ranging from personalizing oncology to developing a test panel for the detection of mutations. This symposium was co-organized by the Program in Personalized Medicine and Genomic Medicine and The Translational Genomics Laboratory.



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Molecular Diagnostic Services at the University of Maryland Medical Center

The Molecular Diagnostics Laboratory (MDL) at the University of Maryland Medical Center (UMMC) offers a wide variety of molecular diagnostic testing for patient cares in all area of molecular pathology, including infectious diseases, genetic disorders and cancer detections. MDL is certified by Clinical Laboratory Improvement Amendments (CLIA ID#: 2100923512), the College of American Pathologists (CAP ID#: 1351414) and the Maryland Department of Health and Mental Hygiene (Permit Number 837).

Testing of infectious diseases include HIV-1 viral load measurement, HIV-1 drug resistant genotyping and virtual pheno-

typing; HCV qualitative PCR (HCV viral load measurement is coming soon) and HCV genotyping; HSV1/2 qualitative PCR; CMV quantitative PCR, BK quantitative PCR and Toxoplasma gondii qualitative PCR. Tests for genetic and familiar diseases include Factor I and Factor V (Leiden) mutational analyses.

MDL also offer hematologic and oncologic tests including T-cell receptor (TCR) gene arrangement and B-cell immunoglobulin gene arrangement by PCR, short tandem repeat (STR) assay for bone marrow transplant and k-RAS mutational analysis for personalized treatment of cancers.

MDL is located in University of Maryland Medical Center, Rm P2G01H (nearby Shock Trauma), 22 South Greene Street, Baltimore, MD 21201

To request a clinical diagnostic test, please contact Cynthia Hildenbrand, Lab Supervisor (8-8539) or Dr. Richard Y. Zhao at 8-0054.

