

IMSD View

INITIATIVE TO MAXIMIZE STUDENT DEVELOPMENT

VOLUME 6 ISSUE 2



Message from the Director

Listening to Trainees

Efforts to broaden STEM participation are important as they relate to diversifying the workforce. Much of the work in building STEM participation is focused on increasing recruitment and stimulating career interest among prospective trainees. These efforts can and do work. However, in order to sustain participation, more consideration should be given to the needs and desires of current trainees from all groups – under-represented and otherwise. Many trainers and program directors work with the assumption that their past needs and experiences as trainees transfer directly as the needs and experiences of today's trainees. As scientists we do an excellent job 'replicating' ourselves. However, career options have broadened, and students entering today's STEM pipeline must prepare for careers that are in high demand, that serve society and that preserve the academy in ways that may not have existed as options for us when we were trainees. Training modalities and expectations must change. This is clear as increasing numbers of STEM trainees exit the traditional pipeline to pursue work for which they were never formally trained. While we have little shared training experiences with today's trainees, we can begin to listen. In the Winter 2014 issue of [CBE-Life Sciences Education](#) trainee recommendations bring into view issues that matter to them in terms of STEM career pursuit and persistence. Some of these issues are familiar to us and affirm current training practices. Others are not - and these offer a glimpse into what we can do differently. At [NEST 2015](#) we will again have an opportunity to listen to trainees and to gain a better understanding regarding their vision of science and the STEM careers they hope to make a reality.

Andrew G. Campbell, PhD
Associate Professor of Medical Science
Brown IMSD Program Director and Co-PI

IMSD/iBSHS Seminar Examines Racial Health Disparities



Photo Credit: Laura Joyce

L to R: Guest speaker Dr. Stephen Thomas with Professors Akilah Dulin Keita & Chris Kahler

The Brown IMSD Program, in partnership with the [Department of Behavioral and Social Sciences' i-BSHS \(Innovations in Behavioral and Social Health Sciences\)](#) lecture series, presented a guest seminar with Stephen B. Thomas, Professor of Health Services Administration at University of Maryland's School of Public Health, on October 24th. Dr. Thomas's research focuses on translation of evidence-based science on chronic disease into community-based interventions designed to eliminate racial and ethnic disparities in health care. His talk, entitled "Toward a 4th Generation of Disparities Research to Achieve Health Equity" examined how social context shapes attitudes and behaviors of toward participation in health promotion and disease prevention activities. The IMSD program also hosted a lunch for students and faculty to continue the conversation with the Dr. Thomas following his talk. [Listen to the Lecture](#) - KZB

Save the Dates!

Training Modules:

Essential Laboratory Calculations. March 2, 9 & 16
Designing and Delivering Scientific Presentations . . . March 23, 25 & 27
Resources, Tools & Techniques in BioMed Research. Wed: April 22 – May 13

Events:

National Diversity Summit 2015 at Brown. March 6-8
IMSD/iBSHS Seminar with Dr. Herman Taylor. April 24 (Morehouse School of Medicine)
TWD Program Directors Meeting Chantilly, VA June 3-5

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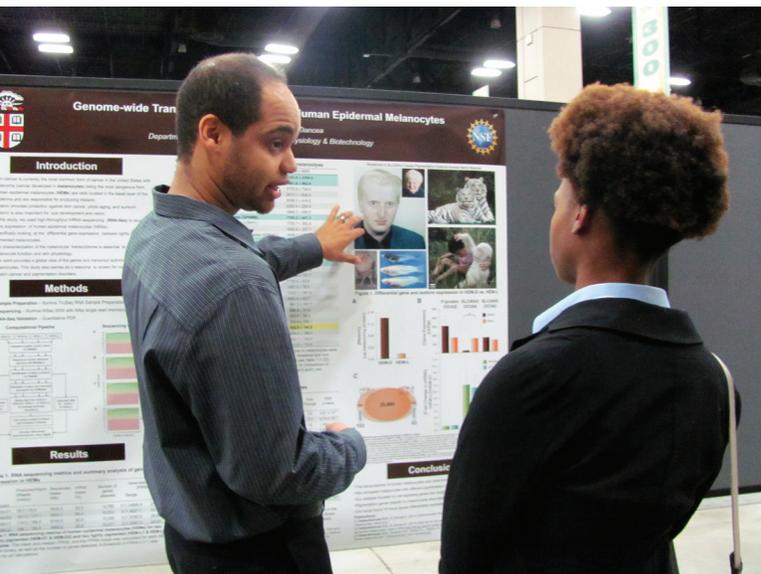
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Excellence

Congratulations

Hawasatu Dumbuya received an IMSD trainee travel award to present her research at the ABRCMS conference in San Antonio, TX in November. Hawa's poster presentation entitled "Identifying the molecular mechanisms of UVA-induced oxidative damage" discussed research she conducted in the lab of her faculty advisor, Professor Elena Oancea.

Kirk Haltaufderhyde received an IMSD trainee travel award to present a poster of his research at the 2014 ABRCMS Conference. Kirk's research focused on "Genome-wide Transcriptome Analysis of Human Epidermal Melanocytes" and was conducted in the lab of his faculty mentor, Professor Elena Oancea.



Kirk Haltaufderhyde presents poster at 2014 ABRCMS Conference

Eric James, IMSD trainee and doctoral candidate in Neuroscience, was selected to participate in the NextProf 2014 Workshop sponsored by the College of Engineering at the University of Michigan in Ann Arbor. The NextProf Workshop is designed to encourage talented individuals with demonstrated commitment to diversity in engineering and science to consider careers in academia.

Fellowships, Awards & Achievements

Hawasatu Dumbuya was selected as the Brown University Pharmacology Pre-doctoral Fellow for FY14. The designation of a meritorious student is made by the Associate Dean for Graduate and Postdoctoral Studies in consultation with Graduate Program Directors.

Hawasatu Dumbuya was selected by the Pacific Northwest National Laboratory to receive a National Graduate Education for Minority (GEM) fellowship. The GEM fellowship includes \$16,000 stipend applied to one academic year and an internship with the GEM employer.

Trainee & Program Publications:

Haltaufderhyde KD and Oancea E. 2014. [Genome-wide transcriptome analysis of human epidermal melanocytes](#). Genomics. doi:10.1016/j.ygeno.2014.09.010

Cyr NE, Steger JS, **Toorie AM**, Yang JZ, Stuart R, Nillni EA. [Central Sirt1 regulates body weight and energy expenditure along with the POMC-derived peptide \$\alpha\$ -MSH and the processing enzyme CPE production in Diet-induced obese male rats](#). Endocrinology. 2014 Dec 30;en20141970. [Epub ahead of print] PubMed PMID: 25549049.

Alumni Spotlight

Teresa Ramirez, former Brown IMSD trainee and current Post-doctoral Fellow at the National Institute on Alcohol Abuse and Alcoholism, NIH, was a featured keynote panel discussant on "[Pathways to Success: Real-Life Adventures of SACNAS Scientists](#)" at the 2014 SACNAS conference in Los Angeles, CA. Dr. Ramirez, who is a life time member of SACNAS and the founder of the Brown University SACNAS chapter, reflected on her experience noting, "It was such an honor because this was my first SACNAS as a PhD and I was invited from SACNAS to be part of keynote panels. It was in my hometown of Los Angeles and the best part was that my parents attended their first SACNAS. It was a very special one." - KZB



Brown IMSD alumna Dr. Teresa Ramirez at the 2014 National SACNAS Conference VIP Reception

Meet Hilary Nicholson – Science Cheerleader!

Hilary Nicholson, IMSD trainee and PhD candidate in Molecular Pharmacology and Physiology, is part of the organization Science Cheerleaders that works to promote women in science and playfully challenge stereotypes about female scientists (and cheerleaders!). Hilary, a former college cheerleader, was recently profiled on their website <http://www.sciencecheerleader.com/2015/01/meet-the-real-brains-of-the-nfls-patriots-ravens-game/>. - KZB

Community

IMSD Trainee Starts Science Career Program at Medford HS



Hawa Dumbuya (front row, pink sweater) with Medford High School Students, in MA, in December

IMSD Trainee **Hawasatu Dumbuya**, a 2nd year PhD student in Brown's Molecular Pharmacology and Physiology Program, developed a Science Career Program at her alma mater Medford High School to encourage students to pursue higher education and careers in Science, Technology, Engineering and Mathematics (STEM) fields. Hawa shared these reflections about the program with the View:

During my senior year of college, I participated as a panelist in the Skills Workshops for College and High School Students, organized by the Biomedical Science Career Program (BSCP), where I had the opportunity to interact with students, who attended public high schools in the Boston area. I was disappointed to not meet any students from my former high school, Medford High School (MHS), at that event.

I reflected on my path and how I got the chance to be where I am today. I honestly believe that I would not be here, if I had not the constant support of my family, teachers and mentors. I wanted to create a place where students at MHS could obtain reliable information on how to pursue a higher education and be successful after high school. I also wanted this program to have two components. First, I wanted this program to be opened to everyone, but geared towards English Language Learners (ELL) students because many are discouraged regarding their future for many reasons, which may include language barriers, gaps in former education, lack of knowledge regarding various paths to pursuing higher education,

the cost of college, and passing standardized tests, etc. And secondly, I wanted this program to have a science component, because most high school students (especially minority and ELL students) have no concept of what futures exist in science beyond those with which they have had contact in their lives - that is: medicine, pharmacy, and high school science teaching. While these are all great careers, I wanted to expand their horizons to see the many more opportunities that exist in science.

After coordinating meetings with current teachers and students in the ELL program, and the MHS administration, I was kindly offered support and guidance to start up the program. Fortunately, they all welcomed and supported the idea. With the ELL teachers support and assistance, I implemented the first Science Career Program (SCP) at MHS, a volunteer-based mentoring program whose missions are to encourage these high school students' pursuits of a higher education and offer a view of various STEM careers. SCP involves monthly presentations and workshops provided by volunteers in various professions to provide information, support and mentoring related to STEM fields for the current ELL students. - HD



Hawa Dumbuya talks science with student at Medford HS

York College Seminar Series Features Brown Faculty and Students

York College/CUNY's Fall 2014 Seminar Series, presented numerous opportunities for York students and faculty to engage with Brown graduate students and faculty and learn about their research. Featured guest speakers included Professor Wayne Bowen, Chair of Brown's Department of Molecular Pharmacology, Physiology and Biotechnology, who presented a seminar on "Sigma-2 Receptor-Mediated Apoptosis in Cancer Cells" and Professor Jason Sello of Brown's Chemistry Department, who discussed his research on "New Targets in Antibacterial Drug Development".

Two Brown PhD candidates in Pathobiology were also invited to present research talks as part of York's Alumni Seminar Series. **Anika Toorie** discussed how "Hypothalamic Sirt I regulates energy balance via augmentation of the HPT and HPA axes". **Adeola Adebayo** presented a talk on "Characterizing resistance mechanisms to mTOR inhibition in progenitor-derived HCC".

In addition, IMSD Program Director, Elizabeth Harrington visited in November and met with several York students and faculty from the science departments as well as the dean of arts and sciences (Dr. Donna Chirico), and provost (Dr. Panayiotis Meleties).

Thanks to Dr. Laura Beaton for her role in organizing these events. We look forward to continuing these types of exchanges with York as well as our other IMSD partner institutions. - KZB

Collaboration

Funding and Training Opportunities

Predoctoral Individual Fellowships

F31 Predoctoral Individual National Research Service Award (NRSA)

Annual Diversity Deadlines: Apr. 13, Aug. 13, Dec. 13
AIDS-related applications: May 7, Sept. 7, Jan. 7

Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellowships (F31) provide support for promising doctoral candidates who will be performing dissertation research and training in scientific health-related fields relevant to the missions of the participating NIH Institutes and Centers. Individual opportunities may have different deadlines, please check the sites:

http://grants.nih.gov/training/F_files_nrsa.htm

Pharmaceutical Research and Manufacturers of America Foundation - Health Outcomes Pre Doctoral Fellowships provide up to two years of stipend funding to support full-time advanced students who will have completed most of their pre-thesis requirements and be engaged in thesis research as Ph.D. candidates by the time the award is activated. Application Deadline: February 1, 2015.

http://www.phrmafoundation.org/index.php?option=com_award&task=sdetail&id=3

Conference Travel Awards:

ASCB MAC, FASEB MARC, Keystone Symposia

The Federation of American Societies for Experimental Biology (FASEB) provides information on their web site about science training and education awards made available through FASEB's member societies for students, trainees and science mentors. A complete list of upcoming eligible national meetings for travel awards can be found at:

<http://www.faseb.org/MARC-and-Professional-Development/Travel-Awards/Eligible-Meetings---Conferences.aspx>

Keystone Symposia on Molecular and Cellular Biology is offering a variety of conferences in 2015, spanning the range of the life sciences. Scholarships are available for Students and Postdoctoral Fellows from underrepresented backgrounds. For information about upcoming meetings, scholarships and travel awards, visit: <http://keystonesymposia.org/>.

Eligible National Meetings	Mtg. Location	Mtg. Dates	Adv. Reg. Deadlines	MARC Deadlines
Experimental Biology 2015	Boston MA	March 28 – April 1, 2015	2/2/15	2/13/15
IMMUNOLOGY 2015™: Annual Meeting of The American Association of Immunologists	New Orleans LA	May 8– December 15, 2015	3/23/15	5/27/15
ASM 2015 - 115th American Society for Microbiology General Meeting (restrictions apply – see MARC application)	New Orleans LA	May 30 – June 2, 2015	3/23/15	Mar 27, 2015
SRC: Molecular Mechanisms and Physiological Consequences of Protein Aggregation	Palm Beach FL	Jun 21- 26, 2015	5/10/15	May 8, 2015
SRC: Mechanism and Regulation of Prokaryotic Transcription	Saxtons River VT	Jun 21- 26, 2015	5/10/15	May 8, 2015
GSA: 20th International C. elegans Conference	Los Angeles CA	Jun 24-28, 2015	5/21/15	May 8, 2015
ASBMB: Evolution and Core Processes in Gene Regulation	St. Louis MO	Jun 25-28, 2015		May 08, 2015



Registration for the 2nd Annual Northeast Scientific Training Programs Retreat (NEST 2015) is now open!

This retreat was established to foster programmatic cross-talk and interactions between program directors/faculty and trainees at all levels of training. The unique retreat format creates a venue for open discussions intended to catalyze transformative, long-term changes in scientific training and program practices that begin at

the early undergraduate level through to the advanced postdoctoral level.

The theme for NEST 2015 will center on the thoughts and perspectives of post-baccalaureate (especially PREP) trainees and the views of past and prospective post-baccalaureate trainees. Insight gained at this meeting will help to establish guiding principles that refine intervention practices leading to improved career access, pursuit, persistence, and success for trainees in the biomedical sciences and public health. Participants include faculty, undergraduates, post bacc students, graduate students, postdoctoral fellows, and guest faculty who function as facilitators for small group discussions.

To register, please visit <http://www.mbl.edu/conferences/>. Attendance is capped at 100 participants, with preference given to trainees on a trajectory towards graduate and post graduate careers in the life, biomedical, and public health fields and to academic faculty committed to scientific training and program development. For more information, please visit the NEST Website at <http://biomed.brown.edu/imsd/next/>. Inquiries may be sent to R13NEST@Brown.edu.

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Karen Ball

IMSD Program Coordinator

PARTNER INSTITUTIONS

St. John's University, New York, NY

York College of the City University of New York

North Carolina A&T State University

The College of Mount Saint Vincent



Brown University's Initiative to Maximize Student Development (IMSD) is a predoctoral research training initiative that aspires to significantly increase the number of PhDs from groups underrepresented in biomedical and behavioral research. The program is funded by a five-year continuation grant (R25 GM083270) by the National Institute of General Medical Sciences, National Institutes of Health (NIGMS/NIH).



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