We’re in the middle of our quietest period in the academic calendar: summer. Somehow, for many of us, the pace has slowed only slightly!

For example, Brad has just led the charge to complete a BD2K training supplement. If awarded, it will help us provide comprehensive education and target slots for people interested in data science and informatics. Nancy Lorenzi and a small task force just drafted a set of recommendations to us for events and for a revamped training retreat. I hope we get great attendance. Finally, Josh Peterson and a small team have worked on the MS in Applied Clinical Informatics, which is going to officially accept students in the Fall of 2016, but be recording educational content throughout this year.

This is a sampling of the many ongoing activities that are happening, in addition to enjoying the summer (I hope.) I could probably fill this newsletter with a more comprehensive list; we are all using the summer incredibly productively.

Thank you for your passion for informatics!

New Students in DBMI

Michael Greer received his bachelor’s degree from Vanderbilt University in May 2014. Michael transferred from Quantitative and Chemical Biology and will be working with Bing Zhang’s lab. Michael will pursue a PhD. and be supported by the NLM Training Grants.

Shariden Parr, MD received her medical degree from Creighton University in August 2005. Sharidan has completed a Nephrology Research Fellow. She is a VA Fellow pursuing a Masters Degree.

Jamie Robinson, MD received her medical degree from Vanderbilt University School of Medicine in June 2012. Jamie is a clinical resident in General Surgery. She will pursue a Masters degree and be supported by the NLM Training Grant.

Bryan Steitz received his bachelors degree from Pennsylvania State University in May 2015. Bryan is a summer intern working with Kim Unertl. Bryan will pursue a PhD. and is supported through the NLM Training Grant.
Faculty Spotlight
By Trent Rosenbloom,

Please welcome Dr. Yaa Kuman-Crystal, a new Assistant Professor in the Department of Biomedical Informatics with a secondary appointment in the Department of Pediatrics. Yaa has deep and long ties to Vanderbilt as a clinician and scholar. She first came to Vanderbilt in 2004 from Johns Hopkins University, where she completed both a bachelor’s degree and a master’s degree in biophysics with honors. Since coming to Vanderbilt, Yaa has completed her MD degree in the School of Medicine, and both a residency in Pediatrics and a fellowship in Pediatric Endocrinology at the Monroe Carell, Jr. Children’s Hospital at Vanderbilt. While a resident, Yaa also completed a Master’s in Public Health at Vanderbilt. She is currently a board-certified Pediatrician, is board eligible in Pediatric Endocrinology, and provides clinical care in the Eskind Diabetes Clinic’s Children’s Diabetes Program as a Clinical Instructor. Of special note, Yaa used her clinical background to provide community service by volunteering at a clinic physician at Camp Sugar Falls, a summer camp for children in Tennessee with diabetes. In addition, Yaa has just completed a National Library of Medicine-funded fellowship in Biomedical Informatics at Vanderbilt, and is currently on track to obtain her master’s degree in Biomedical Informatics in the coming year.

From very early in her clinical training, Yaa has had an interest in developing and applying technologies to address quality care delivery. In particular, she has been interested in applying informatics practice and developing technologies to facilitate adherence to diabetes self-management protocols in Type 1 diabetes. For example, while a fellow, Yaa collaborated with Dr. Shalagh Mulvaney’s on a technology-mediated patient-centered project focused on identifying rates and patterns of adolescent technology use. This led to the design and evaluation of a smartphone-based software application intended to collect and track patient reported data. Yaa carved her MPH project out of this to create a set of survey items that would assess the extent to which patients use diabetes technologies to address adherence problem solving. This work has led to a first-authored publication for Yaa in the journal Diabetes, entitled “Technology Use for Diabetes Problem Solving in Adolescents with Type 1 Diabetes: Relationship to Glycemic Control”. Diabetes is among the highest impact journals in the field, having an impact factor of 8.74 in 2014.

Yaa has combined her deep interest in using technology to improve clinical care with her infectious and collegial enthusiasm, and her natural curiosity to become involved in several critical initiatives around Vanderbilt. These personal attributes have allowed Yaa to rise to a leadership role in several areas, and to produce tangible results that have been implemented into clinical settings. Among Yaa’s many successes, she has built and deployed housestaff documentation forms and insulin calculators that are in wide use in the Monroe Carroll Children’s Hospital. In addition, Yaa began an ongoing initiative to create a Diabetes Registry to support clinical research and quality improvement. She has also done work to improve outpatient order management in pediatric endocrinology. Institutional leaders have observed the importance of Yaa’s work. Yaa was instrumental in helping define and drive improvements in tools such as Clinical Summary and Summary of Care, which are critical to Vanderbilt’s ability to attest that it has met requirements for Meaningful Use.

Yaa joined the Department of Biomedical Informatics faculty on July 1 to focus on supporting the informatics operation, and will continue to carry an appointment in the Department of Pediatrics to support her ongoing clinical practice. Yaa’s will serve in HealthIT as a Principle Domain Specialist. In this role, she will work across all clinical systems and be assigned projects based on project priorities, team resource needs, her availability and interests. Given her leadership work to date, Yaa will also be part of the EHR Clinical review group, which will have responsibility to perform internal review on and provide advice about EHR change and integration projects, with the goals of improving workflow and integrating products and process.

Staff Evaluations Due
By: Elizabeth Brown

Staff must have self-evaluations complete by 7/31/15. Please schedule conversations with supervisors in August and have evaluations submitted to HR by 8/31/15. Detailed instructions on the process in Performance Central have been sent to staff and staff supervisors. Please see Belinda or Elizabeth if you have any questions.
This year we are having an ALL DBMI Retreat. The retreat will be on Wednesday, August 12 starting with a continental breakfast (7:45-8:20 am). The retreat will begin at 8:30 am. We will end with an ice cream social starting at 4:30 pm.

The retreat will be held off campus on a lovely spot by the Cumberland River in west Nashville. The location name is: The Green Door and it is located at 7011 River Road Pike, Nashville, TN 37209. [From the Vanderbilt area: River Road is a right turn off of Charlotte Avenue.] http://www.greendoorgourmet.com/

The guiding principles for this retreat include:

- To build community spirit and collegiality among the many members of DBMI.
- To share the excitement about our efforts, so that everyone knows about the interesting things DBMI faculty-staff-students are working on.
- To have the opportunity to work and learn from each other beyond the “work” area.
- To have fun!

This retreat is open to everyone and we hope as many of you as possible will join us.

Recent Publications By DBMI Authors

.Revealing Missing Human Protein Isoforms Based on Ab Initio Prediction, RNA-seq and Proteomics.
Hu Z1, Scott HS2, Qin G3, Zheng G4, Chu X5, Xie L3, Adelson DL6, Ofstedal BE7, Venugopal P8, Babic M9, Hahn CN10, Zhang B11, Wang X11, Li N12, Wei C1.

Abstract

Biological and biomedical research relies on comprehensive understanding of protein-coding transcripts. However, the total number of human proteins is still unknown due to the prevalence of alternative splicing. In this paper, we detected 31,566 novel transcripts with coding potential by filtering our ab initio predictions with 50 RNA-seq datasets from diverse tissues/cell lines. PCR followed by MiSeq sequencing showed that at least 84.1% of these predicted novel splice sites could be validated. In contrast to known transcripts, the expression of these novel transcripts were highly tissue-specific. Based on these novel transcripts, at least 36 novel proteins were detected from shotgun proteomics data of 41 breast samples. We also showed L1 retrotransposons have a more significant impact on the origin of new transcripts/genes than previously thought. Furthermore, we found that alternative splicing is extraordinarily widespread for genes involved in specific biological functions like protein binding, nucleoside binding, neuron projection, membrane organization and cell adhesion. In the end, the total number of human transcripts with protein-coding potential was estimated to be at least 204,950.
Quote of the Month

Happiness is not something ready made. It comes from your own actions.

Dalai Lama

Good News

Dr. Daniel Fabbri was awarded a grant from the National Science Foundation for his project “EAGER Managing Information Risk and Breach Discovery.”

Promotions
Robert Cronin, Research Asst. Professor
Yaa Kumah-Crystal, Assistant Professor
Jing Wang, Research Asst. Professor
You Chen, Research Asst. Professor
Teresa Gillespie, Asst. To The Chair

New Hires and Transfers
Elliott Fielstein, Asst. Professor
Ruth Reeves, Asst. Professor
Zihao (David) Ma, Bioinformatics System Engineer
Jeffery Prato, Health Systems Analyst Programmer I
Suhas Vasaikar, Postdoctoral Research Fellow

Departures
David Tabb
Firas Wehbe
Jonathan Holt

Useful Links

http://www.2525westend.buildinge ngines.com/

This website will give you useful information about building information and procedures.