



Undergraduate Medical Education Newsletter

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Dean's Message

By Kenneth Kaushansky, M.D., M.A.C.P.

Senior Vice President, Health Sciences; Dean, School of Medicine

It is Spring, which in dean-world means it's graduation season. This year, we have much to give thanks, not only for the end of a horrific winter, weather-wise, but because Stony Brook Medicine continues its march towards achieving excellence in all we do. So it gives me great pleasure to update you on that march forward.

In late May we will usher 121 new physicians into the community of medicine, having successfully completing the rigorous Stony Brook School of Medicine curriculum. The Class of 2015, our 41st graduating class, is an outstanding and

diverse group of nascent internists, surgeons, emergency medicine physicians, anesthesiologists, pediatricians and psychiatrists. Just under half of them will stay in New York for their residency training, many of whom will remain at Stony Brook, but members of the Class will also populate Mt. Sinai, Einstein, Cornell and Columbia, amongst others. Our new physicians will also spread all over the country, taking on impressive addresses, at Duke, Penn, Yale, Harvard, Pittsburgh, Johns Hopkins, and my alma mater, UCLA. By all estimates, the Class of 2015 residency match is our most successful yet.



In dean-world, all commencement ceremonies are special, but this year will be even more so, as our commencement speaker will be Dr. Eugene Braunwald, a legend in American Medicine. Two years ago a biography was published, entitled "Eugene Braunwald and the Rise of Modern Medicine" which chronicles his life from an escape



Another Year To Remember!

By Latha Chandran, M.D., M.P.H.

Vice Dean for Undergraduate Medical Education

Founding Director, Academy of Clinical and Educational Scholars

Professor of Pediatrics

Yet another class is graduating from Stony Brook School of Medicine. We have had a very successful and impressive Match Day this year when our students found out where they matched to for the next phase of their training. There were lots of joyous moments! We also had our annual Scholarly Concentrations Program Research Day which showcased some of the outstanding work and creativity

of our students who participated in the program for the last four years in one of the following tracks: Basic, Clinical or Translational Research, Medical Education, Global Health, and Medical Humanities. Our global health program just received a large grant from the Spatz Foundation to support the travel and research work of our students interested in global

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from Nazi Europe, to publication of more than 1200 scholarly works in the fields of internal medicine and cardiology. As you will hear, that lofty title is not mere hyperbole.

On another educational front I am proud to announce that Stony Brook Medicine is about to “birth” a new School, one that will be closely related to the School of Medicine. In March, the SUNY Board of Trustees voted unanimously to approve the formation of a new School of Pharmacy and Pharmaceutical Sciences (SPPS) at Stony Brook University. As envisioned, the SPPS will be designed to train specialty pharmacists, in hospital and population care, that work at the “top of their license”. The training of the students will be rigorous, with interprofessional learning between the Schools of Medicine and Pharmacy the norm. And while the initial home of the School will be the health sciences complex and the new classrooms of the Medicine and Research Translation (MART) building, currently under construction, we have high hopes to build a new building on campus to house the SPPS,

the Department of Pharmacology, and startup biotech and Pharma companies, an incredibly rich “incubator” for great ideas in novel therapies for our patients.

In the research realm Stony Brook Medicine continues to excel, again, on all levels. Our faculty have been very successful of late, securing highly competitive research grants from the national Institutes of Health and other funding agencies. For example, Dr. Joel Saltz, Chair of our new Department of Biomedical Informatics, secured a \$3.2M per year grant to study “big data” in cancer patients and pathological patient samples, and Dr. Clint Rubin, Chair of our Department of Biomedical Engineering, received one of three grants nation-wide to establish a research hub that will turn biomedical discoveries into commercial patient products. And the 18 students who are part of the Scholarly Concentration program recently presented their findings at our Annual Research Day, on April 29th. Amongst the many mentored topics studied are included assessment of flap survival in plastic surgery patients, modeling patient

survival following myocardial infarction, a computer aided system to identify the nature of pulmonary nodules during lung cancer screening, and many other scientifically and educationally fascinating topics.

Finally, work continues on the physical expansion of Stony Brook Medicine, with ~500,000 sf of new space under construction. Despite a very cold winter, that saw construction delays accumulate, we are now back at work, nearing completion of the PET tracer synthesis laboratory and high level biological containment laboratory in the northwest corner of the health sciences complex, hanging the glass curtain walls from the MART superstructure, and completing the “high steel” work on the University and Children's Hospital bed tower project.

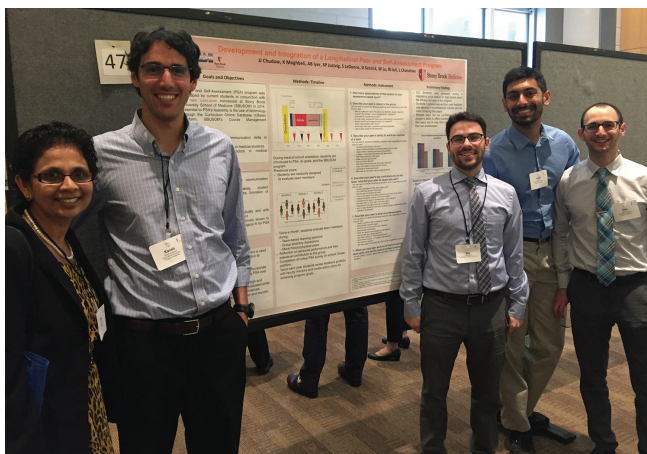
So all in all, a great Spring, that continues to witness the rise at Stony Brook Medicine. I wish each and every member of Stony Brook Medicine a spectacular summer!

Another Year To Remember (continued from page 1)

health. This foundation has also supported five large scholarships this year for our clinical students and will continue their support again for the upcoming year. I was happy to see several of our students discuss their work at the North Eastern Group on Educational Affairs Annual Meeting at Worcester, MA this spring.

We embarked on a brand new curriculum called LEARN this academic year. LEARN represents a curriculum that is learning centered, experiential, active, rigorous and novel. We are excited as we look forward to the upcoming year. Our new Medical and Research Translation Building expected to open in 2016 will have a large auditorium as well as flexible educational space for some of the new educational strategies we have introduced into our medical school curriculum such as Team Based Learning. Students are working in longitudinal learning communities forging peer and mentor relationships. We have introduced truly integrated block courses with interdisciplinary content and faculty teaching. And we are now seriously discussing enhancing student learning with iPads and portable ultrasounds moving our education to the possibilities that new technology can offer us.

With the new School of Pharmacy on the horizon, as well as the new Biomedical Informatics Masters and PhD programs being created, Stony Brook School of Medicine is poised to develop exciting inter-professional educational, clinical and research activities that are truly cutting edge and cross disciplinary. The future appears as bright and exciting as ever!



Dr. Latha Chandran with students presenting at the North Eastern Group on Educational Affairs Annual Meeting at Worcester, MA

By Students, For Students: Peer and Self-Assessment in LEARN

By Richard J (Rick) Iuli, PhD



In 2012 Subgroup 3 of the then Curriculum Evaluation Working Group set about to explore the use of peer feedback in what was to become the School of Medicine's new **LEARN** curriculum. Subgroup 3, whose members were mostly medical students, was co-chaired by two Class of 2015 students, Arjun Iyer and Kaveh Moghbeli. This student-led group proposed to the SOM's Curriculum Committee a longitudinal peer and self-assessment (PSA) program with the intended goals of 1) developing constructive feedback and communication skills for the physicians we graduate, 2) developing a culture of open, constructive communication within the School of Medicine, 3) encouraging continuous improvement of self-reflective practice skills, and 4) evolving as needed with stakeholder input. The SOM Curriculum Committee approved the PSA proposal and the program debuted with the launch of the new **LEARN** curriculum in August 2014.

What motivated this student-led group to develop and integrate a peer and self-assessment system into **LEARN**? In their exploration of research-based student-driven learning practices they found that peer and self-assessment improve self-awareness and communication abilities in medical students, engender peer accountability and student motivation, and encourage the formation of professional behaviors. The abilities to provide peers with constructive feedback and to self-evaluate performance within health care teams are life-long skills that require cultivation and practice. These skills are foundations of the AAMC's 8 domains of general physician competencies and Core Entrustable Professional Activities. Significantly, these skills ultimately impact patient safety and care.

The regular peer and self-assessments integrated throughout the **LEARN** curriculum are designed to encourage self-reflection and promote personal and professional growth and development. Students provide anonymous feedback to an assigned peer each month and complete a self-assessment every two months, both within the context of team-based or small-group learning activities. A PSA Questionnaire guides students in giving feedback to peers. These guiding questions include 1) describe your peer's role(s) in the group, 2) describe your peer's ability to work effectively as a member of a team, 3) describe your peer's key contributions to the team, 4) describe your peer's level of professionalism, 5) what does your peer do particularly well, and 6) what can your peer work on to improve her/his team skills?

A component of the PSA program is faculty mentoring. Each student meets periodically with one of her/his Longitudinal Learning Community faculty facilitators to discuss feedback the student has given and received, as well as the student's own reflections on that feedback. During these meetings, the faculty facilitator and student together synthesize the overall message of the feedback the student has received in the interim, the progress she/he has made considering prior feedback, plans for addressing current feedback, improvements for giving feedback to peers, and the concordance of her/his self-reflections with received feedback. Responsible, effective feedback is SMART – Specific, Measurable, Achievable, Relevant, and Timely – and the SMART framework is used to ground discussions of the quality of the student's feedback and to establish future goals that promote continued growth and development as a medical professional.

On April 17, 2015 Arjun and Kaveh, along with Class of 2016 students Jay Chudow and Dan Satnick and Class of 2017 students Sarah Justvig and Samantha LeDonne, presented a poster titled, *Development and Integration of a Longitudinal Peer and Self-Assessment Program*, at the AAMC's Northeast Group on Educational Affairs meeting at the University of Massachusetts Medical School in Worcester, MA. (see photo accompanying "Another Year to Remember.") The poster was very well received by meeting participants, including by officials of the AAMC. The students' next steps include continuing to gather and analyze data on the PSA program for ongoing quality improvement.

Stony Brook School of Medicine's Peer and Self-Assessment program – by students, for students!

Scholarly Concentrations Program / Annual Research Day — Class of 2015



This year's SCP Annual Research Day was held on Wednesday, April 29, 2015 in the Health Sciences Center. This annual event kicked off with the oral presentations followed by the poster session in the Galleria. Congratulations to the following students on completion of their Scholarly Concentrations research projects:

Student	Project
Brendan Carr Research	<i>"Long-Term Post-CABG Survival: Performance of Clinical Risk Models versus Actuarial Predictions"</i> Mentor: Laurie Shroyer
Yevheniy Lider Research	<i>"Prediction of Optimal Proximal Interphalangeal Joint Fusion angle Using Simulated Joint Arthrodesis"</i> Mentor: Alexander Dagum
Esther Kwak Humanities	<i>"Musical Mnemonics for Anatomy"</i> Mentor: Stephen Post
Samantha Palmaccio Research	<i>"Digital Image speck Correlation (DISC) Analysis for Targeted Cosmetic Treatment & Effect Quantification of Botulinum Toxin Type A"</i> Mentor: Alexander Dagum
Janiper Chae Humanities	<i>"A Test of Medical Professionalism: Maintaining Empathic Care and Compassion When Interacting With "Difficult" Patients"</i> Mentor: Stephen Post
Xuxin Chen Research	<i>"Optical Stimulation and Control of Cardiac Tissue"</i> Mentor: Dr. Emilia Entcheva
Marie Cushmore Humanities	<i>"Post-Traumatic Growth and Primary Care: How Primary Care Physicians Can Help Afghanistan & Iraq Veterans Suffering from PTSD"</i> Mentor: Dr. Stephen Post
Alexandra Filippi Research	<i>"A Prospective Cohort Study of Post-Operative Recovery for Patients Undergoing Gynecological Oncology Surgery"</i> Mentor: Dr. Michael Pearl
Edward Forsyth Research	<i>"Genetic Basis of Chronic Obstructive Pulmonary Disease and Idiopathic Pulmonary Fibrosis: The Role of NFAT"</i> Mentor: Dr. Anthony Szema
Geri Galotti Humanities	<i>"Incorporating Gender Studies into the Medical Curriculum: Development and Implementation of an MCS2 Selective"</i> Mentor: Drs. Maria Basile & Stephen Post
Matthew D Grunwald Research	<i>"A Novel Computer-Aided Detection System for Pulmonary Nodule Identification in CT Images"</i> Mentor: Dr. William Moore
Arjun Iyer Medical Education	<i>"Implementation and Evaluation of Peer Feedback Instrument Within Stony Brook University SOM's New LEARN Curriculum."</i> Mentor: Dr. Latha Chandran
Pavel Mazirka Research	<i>"Effect of Coenzyme Q10 Supplementation in Patients with Statin-Related Myalgia"</i> Mentor: Giuseppe Caso
Kaveh Moghbeli Research	<i>"Determinants of Spindle Pole Body Age in Saccharomyces Cerevisiae"</i> Mentor: Dr. Aaron Neiman
Avanish Reddy Research	<i>"The Role of Necroptosis in Burn Injury Progression in a Rat Comb Burn Model"</i> Mentor: Dr. Adam Singer
Andrew Rivara Research	<i>"Comparison of Laser Doppler and Laser-Assisted Indocyanine Green Angiography Prediction of Flap Survival in a Novel Modification of the McFarlane Flap"</i> Mentor: Dr. Alexander Dagum
Elliot Schottland Medical Education	<i>"Appraisal of a Patient Safety Module for a Doctoring Course"</i> Mentor: Dr. Iris Granek
Jennifer Urban Research	<i>"Current Knowledge Of and Willingness to Perform Hands-Only™ CPR in Laypersons"</i> Mentor: Dr. Adam Singer



Scholarly Concentrations Program Reflection

By Kaveh Moghbeli, Class of 2015

Cell division drives the creation of a new-born baby from a fertilized ovum as well as the malignant growth of cancer. Within cells are organelles – the machinery that allows it to live and carry out various functions. One such organelle, the centrosome, is fundamental to the process of cell division. Anytime a cell divides, it needs to take its centrosome and duplicate it – a brand new carbon copy from the older original one. The two, old and new, working together, literally pull the cell apart into two new cells. Amazingly, cells are able to determine which centrosome is older and which is younger, and they use this information to their advantage in various situations. However, we still do not understand exactly how cells perform this fundamental differentiation. As part of my Scholarly Concentrations Project in Dr. Aaron Neiman's lab, I was able to investigate how this might happen.

Towards the end of my first semester of medical school, I approached Dr. Schechter, our beloved biochemistry professor, for recommendations for a research mentor to work on a basic cellular biology project. I had always been fascinated by basic science research and wanted to better learn the standard tools it utilized and develop as a scientist. Stony Brook's tremendous breadth and depth in scientific research was a huge draw for me in that regard. In short order, Dr. Schechter introduced me to his colleague Dr. Aaron Neiman, professor in the Department of Biochemistry and Cell Biology, whom he felt would be an excellent mentor to develop my basic science research skills and acumen.

Dr. Neiman was immediately receptive to having me work in his lab. We met and he explained how his lab used yeast as a model to study signal transduction, cytokinesis, vesicle trafficking, and cellular differentiation (among other things). I was immediately drawn to the idea of studying cellular differentiation and together we developed a project that we felt would be doable in the time I had available.

Throughout my project, Dr. Neiman and his lab of postdocs, PhD students, and lab techs were immensely helpful in teaching me the skills and protocols fundamental to basic science research – including genetic purification, PCR, gel electrophoresis, genetic transformation, plasmid cloning, restriction digestion, and microscopy. Their patient assistance was fundamental to my success and allowed me to work with increasing independence over time.

While Dr. Neiman and I had hoped to advance the project to a point where I would be able to collect some data during that first summer, I quickly learned that basic science research rarely goes as smoothly as one would hope. To study the mechanism of centrosome differentiation, we had to construct special strains of yeast. This involved many different steps, and in my case often did not work out as expected. I often joked with my lab mates that when things went wrong, it felt that my workload doubled or tripled to figure out why. It was challenging and time-consuming, but also incredibly rewarding. As I became more experienced, and with the help of the lab,

I was able to iron out the kinks in my protocols and success came more frequently and predictably. By the end of that first summer, I had successfully made the strains I needed to collect data on how the yeast cells might differentiate the older vs. newer centrosomes.

The demands of medical school would not afford me the time I needed to collect data until 4th year, when the more flexible schedule was a boon to spending time in the lab. Analyzing my cells under the microscope was time-consuming, but energizing. I will never forget one evening, while at the microscope examining my cells, and discovering that an enzyme we were investigating may have affected the ability of my cells to differentiate their older vs. newer centrosomes.

The more data I collected, the more excited I became to share my findings. On the day of the poster session, it was so rewarding to share my project not only with Stony Brook's faculty, but also with my classmates, and to have them share their amazing work with me. I was incredibly impressed with the work that my classmates had done and felt our work in the SCP program was a sound testament to the surfeit of experiences that Stony Brook offered its students.

I would like to thank Dr. Neiman first and foremost for his incredible patience, guidance, and receptiveness to having me in his lab. He and his team – particularly Jaesook Park, Coney Lin, Esma Akkaya, Chien Lam, and Leor Needleman – were selflessly helpful every time I needed it. Thank you as well to Dr. Schechter and the SCP program committee for their support.



My Match Day Experience

By Heather Levites, Class of 2015

The morning of match day, I was armed with a gold brooch left to me by my great-grandmother, one grandmother's gold necklace, and the other's beautiful sea blue aquamarine ring. Getting ready, although I was by myself, I knew I was not facing this day alone. I've been blessed to be surrounded by strong role models, both female and male, all of my life. I've been particularly fortunate to have a mother and grandmother whose accomplishments both academically and professionally never lead me to believe that a young woman couldn't do exactly what she set her mind to, and have a family one day too. Fourth year of medical school makes you think quite a bit about where you've been, where you are, and where you hope to be in the future.

The idea of not finding happiness has always been my greatest fear. And from an early age I realized that I was the happiest when I was engaged in what I was doing—emotionally, intellectually and physically. As difficult as medical school became, and as much as I doubted myself, I knew I had found the perfect field that would serve as a conduit for providing all of those qualities exactly. While the first half of fourth year was the most sleep deprived, hungry, sick and burnt out I've been since my undergrad years at MIT, having the privilege to spend month long blocks at three other hospitals was invaluable. Learning from and networking with some of the most prominent plastic surgeons in our small field was an experience I'll never forget. However, it was right here at Stony Brook where I found myself in the presence of some of the most inspiring teachers I could have ever hoped for. I will be forever grateful to the plastic surgery attendings at Stony Brook who are not only technically gifted, but also dedicated to furthering the field of plastic surgery through research and mentorship. I am honored to now be able to call this group of men (and woman!) my colleagues.

While on the Monday before Match Day, most members of our class celebrate matching into their chosen fields, I was left with thinking “well, I'm a surgeon – not sure if that means a general, plastic, or orthopedic surgeon, but a surgeon none the less”. I wanted to feel a sense of relief, but my level of anxiety just seemed to increase at an exponential rate. The night before Match Day, I was greeted with the calmest, most soothing influence I know – my best friend, my dad. He had come out Stony Brook to visit me, without me even needing to ask, to provide a shoulder to cry on. He was even a good enough sport to take me to the movies to see Cinderella. In that moment, before the most important day of my life, I couldn't help but think what a lucky girl I was. Here I was with my dad, the night before what would turn out to be my very own Cinderella moment.

I don't remember a word I spoke that morning. My best friend, and the only person that has ever really understood me without an explanation—the ambition, the inability to accept complacency, and the desire to better everyone around me—was by my side and no words were needed. Every success is preceded by countless failures, and it is accepting the bad with the good that makes life wonderful and worth living. No one can succeed to this extent, possessing the drive and the level of passion that it takes to persevere to the point we find ourselves in now, without knowing that. My failures and successes at Stony Brook will shape the clinician I am to become, and I am confident that my time here has shaped us all into physicians destined to impact our chosen fields in a profound way.

Alpha Omega Alpha Honor Medical Society and the Gold Foundation Humanism Honor Society Induction Dinner

This year's AOA/GHHS Induction dinner was held on Tuesday, May 5, 2015 at the Old Field Club. This annual event was hosted by Dr. Kenneth Kaushansky and Dr. Jack Fuhrer, and the guest speaker for the evening was Dr. John M. Carethers, who is the John G. Searle Professor and Chair in the Department of Internal Medicine at the University of Michigan. A big congratulations to all our inductees!

AOA Honor Medical Society

Dov Bechhofer**	Michelle Mo**
Christopher Chandler	Kaveh Moghbeli
Don Codipilly	Muntazim Mukit**
James Connolly	Christopher Razavi
Michael Coulter**	Joan Rosario Garcia
Robert Diep	Amy Rumack
Courtney Ensslin	Evan Shreck**
Arjun Iyer	Nicholas Trasolini
Jeffrey Jiang**	Merilyn Varghese
Brendan LoGiurato	Keith Willner
Joseph Miccio**	Catherine Zhu**

* Jr. AOA inductees

Gold Foundation Humanism Honor Society

Cassidy Alexandre	Michael Locher
Andrew Bennett	Sergio Marte
Brendan Carr	Stephanie Miller
Christopher Chandler	Kaveh Moghbeli
Peiwen Chen	Brian Persaud
Marie Cushmore	Margo Sheck
Robert Diep	Walter Wilson, Jr.
Rachel Feder	Valerie Wong
Mary Gallo	Richard Zheng
Dong Joo Kim	

Faculty Inductees

Dr. Adeeb Yacoub, *Department of Psychiatry, Stony Brook Medicine*

Dr. Ralph Della Ratta, *Department of Internal Medicine, Winthrop University Hospital*

Research Fellowship Award Recipient

Pierce Janssen

House Staff Inductees

Dr. Siddharth Dave, *Department of Anesthesiology, Stony Brook Medicine*

Dr. Christine Garcia, *Department of Internal Medicine, Stony Brook Medicine*

Dr. Joshua Harris, *Department of Internal Medicine, Winthrop University Hospital*



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Match Day Celebration 2015

This year's Match Day Celebration was held on Friday, March 20, 2015 in the HSC Galleria. We had another successful Match this year with 99% of the class matching to a residency program. 32% of students matched to Primary Care residencies (Medicine, Pediatrics, Family Medicine), while others matched in specialties such as: vascular surgery, plastic surgery, orthopedic surgery, radiation oncology, dermatology, anesthesiology, emergency medicine, neurology, Ob/Gyn, ophthalmology, otolaryngology, pathology, psychiatry, radiology, surgery, and urology. Students matched to residency programs such as Stony Brook, Duke, Weil Cornell, Columbia, Yale, Johns Hopkins, UCLA, and others.



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