MUBA’s How to Spend Your Summer Panel on February 12th was a success! Freshmen enjoyed Insomnia Cookies while listening to Nikhil Buduma ’17, Connor Duffy ’17, Ishwar Kohale ’16, Harun Sugio ’16, and Justin Yuan ’16 share their experience and advice about summer opportunities with UROP, MISTI, and industry internships.

On March 14th, MUBA members helped elementary school students at Fletcher Maynard Academy in Cambridge conduct a series of fun, hands-on science experiments. The students created vinegar-baking soda volcanos, constructed lava lamps, and made oobleck, learning the science behind each experiment along the way.

Jointly with the MIT Premedical Society and The Princeton Review, MUBA hosted two more MCAT 2015 Biochemistry Strategy Sessions on March 4th and April 15th. Students heard from The Princeton Review about the new MCAT format and its biochemistry focus in addition to insights on the MCAT’s importance to medical school admissions. Check out “Upcoming MUBA Dates & Events” below for information about the MUBA/Princeton Review MCAT Scholarship with application deadline this Saturday, May 2nd!!

On March 19th, MUBA hosted a Majors Panel to help freshmen who are choosing from among Courses 5, 6-7, 7, 9, 10B, and 20. Over delicious Thai food, freshmen heard from Connor Duffy ’17, Annie Felhofer ’15, Sophia Liu ’17, and Meghan Torrence ’15 about their major and coursework choices and general MIT life advice.

At the CPW Activities Midway on April 18th, MUBA handed out candy, snacks, and snazzy business cards to prefrosh while telling them all about MUBA and biochemistry opportunities at MIT!

Feel free to contact the MUBA Executive Board at any time at muba-exec@mit.edu.

Saturday, May 2nd: Due Date: MUBA/Princeton Review MCAT Scholarship Application

Win a scholarship for free enrollment in the Princeton Review MCAT 2015 Ultimate Course, a $2,500 value! Refer to Justin Yuan’s April 18th email for more information and application materials. Contact Justin Yuan (jcyuan16@mit.edu) with questions or to be re-sent the application materials.

Thursday, May 7th, at 7 p.m. in 1-134: MUBA General Body Meeting & Elections

If you’d like to run for MUBA president, vice president, treasurer, secretary, publicity chair, community outreach chair, or course representative, come to the general body meeting to throw your hat in the ring! Free food will be provided. If you’d like to run for a position, please email muba-exec@mit.edu to express your interest, and be prepared to present a brief platform at the meeting.

Of Interest


Abstract: Cancer metastasis requires that primary tumour cells evolve the capacity to intravasate into the lymphatic system or vasculature, and extravasate into and colonize secondary sites. Others have demonstrated that individual cells within complex populations show heterogeneity in their capacity to form secondary lesions. Here we develop a polyclonal mouse model of breast tumour heterogeneity, and show that distinct clones within a mixed population display specialization, for example, dominating the primary tumour, contributing to metastatic populations, or showing tropism for entering the lymphatic or vasculature systems. We correlate these stable properties to distinct gene expression profiles. Those clones that efficiently enter the vasculature express two secreted proteins, Serpine2 and Slpi, which were necessary and sufficient to program these cells for vascular mimicry. Our data indicate that these proteins not only drive the formation of extravascular networks but also ensure their perfusion by acting as anticoagulants. We propose that vascular mimicry drives the ability of some breast tumour cells to contribute to distant metastases while simultaneously satisfying a critical need of the primary tumour to be fed by the vasculature. Enforced expression of SERPINE2 and SLPI in human breast cancer cell lines also programmed them for vascular mimicry, and SERPINE2 and SLPI were overexpressed preferentially in human patients that had lung metastatic relapse. Thus, these two secreted proteins, and the phenotype they promote, may be broadly relevant as drivers of metastatic progression in human cancer.