June 17, 2016

Re: Faculty Associate for Undergraduate Theses & Research

Dear Colleagues,

I would like to express my interest in the Faculty Associate for Undergraduate Theses & Research position at the GSU Honors College. Currently, I am a tenure-track Associate Professor at the Department of Chemistry, running a research program in the biophysical chemistry of genetic regulation. My research group, which consists of undergraduate, graduate, and post-graduate researchers, is actively funded by the National Science Foundation and the National Institutes of Health. As detailed in the following, I have a strong interest and track record of success in integrating undergraduates, including Honors College students, into nationally competitive research. I am excited about this opportunity to enhance the impact of my work in undergraduate research participation through the Honors College at GSU.

Since joining the Department of Chemistry at GSU in January 2015 as tenure-track faculty, I have been working closely with Honors undergraduates seeking their first research experience. Within a span of 18 months, I have mentored three Honors students: Noa Erlitzki (chemistry), Hayley Arrowood (neuroscience), and Michelle Orabueze (chemistry). Noa and Michelle both received University Assistantships through the UAP this year. Through intensive and hands-on mentoring, Noa has developed a strong interest and aptitude in research. As a result, she is planning to apply her current project, which she presented at GSURC this year, as the basis of her Honors Thesis next year and proceed to accelerated graduate study in our department's dual degree B.S./M.S. program ("fifth-year M.Sc.") program. On the strength of her research progress in my laboratory, Noa was twice awarded a Molecular Basis of Disease summer research fellowship (2015 and 2016) as well as Trustee Awards for Undergraduate Achievement (including one for research). Notably, Noa also earned an Honorable Mention for the 2016 Goldwater Scholarship, the most prestigious undergraduate scholarship in the U.S., and the first for GSU in over 20 years.
In my previous position in Washington State University as tenure-track Assistant Professor, I have also worked closely with the WSU Honors College. Drawing from my research interest, I developed a new upper-level Honors course entitled “DNA Biotechnology” (UH 390) that integrated research experience directly into the course material. Since the Honors undergraduates cover the full range of disciplines on campus, the research experience was tailored individually to each student’s interest and academic background, from wet laboratory research to computational projects to literature research. Such a level of vertical integration of teaching and research was the first (and to my knowledge, still the only) of its kind at WSU. While UH 390 represented a significant commitment, as the cost for these student experiences were drawn exclusively from my own research funding, the potential for student success was spectacular. As evidence, Miles Linde, who took UH 390 in 2013, used his research experience to earn co-first authorship in a major publication [Wang, S., Linde, M.H., et al. (2014) Mechanistic heterogeneity in DNA site recognition by the structurally homologous ETS-family transcription factors Ets-1 and PU.1. J Biol Chem. 289:21605-16], two presentations at the national Biophysical Society meeting, an Honors thesis which Miles defended with Distinction, a 2014 Goldwater Scholarship nomination, and a current graduate student position in Stanford University.

Honors College undergraduates represent a pool of outstanding research talent whose participation in research benefits both the students in terms of their aspirations for entry into elite graduate and professional programs, as well as their faculty mentors in terms of achieving Broader Impact in their research endeavors. Strategies to realizing a “win-win” outcome for both stakeholders is, in my view, must include hands-on approaches to foster an appropriate ethos for discovery in students and to manage mentors’ expectations for their students in an intensive research environment. The tangible products of student success, such as authorship peer-reviewed publications, presentation in regional and national conferences, and recognition in high-profile awards are immensely valuable to the students, mentors, and GSU’s teaching and research missions. Having successfully competed for national research funding in programs with significant training components (the NSF and the R15 mechanism of the NIH), I am excited to be part of our institutional efforts to increase undergraduate research participation in STEM as well as non-STEM disciplines.

I look for an opportunity to continuing our discussion on enhancing undergraduate research at GSU.

Yours sincerely,

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Gregory Poon