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*Active participation in current faculty research inspires student achievement.* Preliminary report.

Recent years have seen an explosion of cutting-edge published research in the field of quantitative biology, work often leading to practical wet-lab and clinical applications. This backdrop serves to powerfully motivate students. For the past 11 summers, George Mason University has hosted an intensive 8-week Aspiring Students Summer Internship Program (ASSIP) for high-school students to participate in ongoing research projects with participating STEM faculty. Admission is highly competitive (< 9%), and most projects yield publications in top journals, presentations at conferences, and patented products. In our department, mentored students receive training in computational mutagenesis of protein structure, cross-disciplinary work incorporating aspects of biology, biophysics, computational geometry, discrete math, statistics, programming, and AI. With an understanding of the consequential nature of the research, our students eagerly welcome this steep initial learning curve. Data generated are subsequently used for training machine learning models to predict potential impacts of protein mutations on stability, activity, drug resistance, or human disease. Students eagerly embrace the opportunity to showcase and communicate their discoveries at a final poster symposium. (Received September 03, 2018)