Using Protein Crystallography to engage HBCU students in biochemistry

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Since 2018, we have been incorporating Seattle Structural Genomics Center for Infectious Diseases (SSGCID) proteins into biochemistry and research courses at Hampton University. Hampton University is a mainly undergraduate Historically Black College and University (HBCU). During the pandemic, we used these structural studies to COVID-proof research courses and engaged more students in research using these computational biology projects virtually than the wet laboratory projects. By engaging our students in high-level structural biology, biophysics, and biochemistry research, HU students published Acta F. manuscripts while developing critical insights into protein structure and function(Alenazi et al., 2022, Beard, Bristol, Cosby, Davis, Manning, Perry, Snapp, Toy, Wheeler, Young, Staker, Arakaki, Abendroth, Subrahamanian, et al., 2022, Beard, Bristol, Cosby, Davis, Manning, Perry, Snapp, Toy, Wheeler, Young, Staker, Arakaki, Abendroth, Subramanian, et al., 2022, Beard, Subramanian, et al., 2022, Davidson et al., 2022, Maddy et al., 2022, Porter et al., 2022). Furthermore, this research experience is impactful in helping graduates transition to competitive research-intensive doctoral programs after Hampton University.

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