

Abstract Submitted
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Accumulation of BSA in Packed-bed Microfluidics¹ SAMANTHA SUMMERS, The Pennsylvania State University, CHUNTIAN HU, RYAN HARTMAN, University of Alabama — Alzheimers and Parkinsons are two diseases that are associated with protein deposition in the brain, causing loss of either cognitive or muscle functioning. Protein deposition diseases are considered progressive diseases since the continual aggregation of protein causes the patient's symptoms to slowly worsen over time. There are currently no known means of treatment for protein deposition diseases. Our goal is to understand the potential for packed-bed microfluidics to study protein accumulation. Measurement of the resistance to flow through micro-scale packed-beds is critical to understanding the process of protein accumulation. Aggregation in bulk is fundamentally different from accumulation on surfaces. Our study attempts to distinguish between either mechanism. The results from our experiments involving protein injection through a microfluidic system will be presented and discussed.

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