



West Virginia University®

C. EUGENE BENNETT

DEPARTMENT OF CHEMISTRY

Structure and function of transporters in synaptic vesicles

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The aim of my research is to elucidate the molecular function, architecture, and high-affinity drug binding sites of the synaptic vesicle protein 2 family (SV2) and of the vesicular monoamine transporter 2 (VMAT2). SV2s are targeted by therapeutic drugs and are predicted by sequence to be transporters but their biological function remains obscure. VMAT2 is the only transporter in synaptic vesicles that transports serotonin, dopamine, and other monoamines in the central nervous system. My lab studies SV2 and VMAT2 function using biochemical techniques and by determining structures using single particle cryo-EM. We are particularly interested in understanding the conformational changes and the mechanisms associated with transport and inhibition.



Students, meet the speaker after the seminar in a student/postdoc session from 4:45-5:15 pm

Date: Mon, April 7, 2025

Time: 3:30-4:30 pm

Location: Clark Hall 312