SGX-CAT

Structural GenomiX CAT

Overview

Structural GenomiX CAT (SGX-CAT) is designed for high-throughput crystallography in support of a proprietary research program in structural genomics. Funded entirely by Structural GenomiX (SGX), a San Diego-based biotechnology company, SGX-CAT is the first beamline facility at the Advanced Photon Source to be owned and operated by a single commercial entity. SGX is in the business of translating genome sequence information into protein structures for use in medicine, agriculture, and bioprocessing. The company will employ SGX-CAT to solve thousands of protein structures for use in drug and compound design by its customers. The SGX-CAT facility will include two undulator beamlines and a bending magnet beamline.

Research Focus

The research focus of SGX-CAT is macromolecular crystallography. Structural GenomiX concentrates on proteins of interest to pharmaceutical, agricultural, and industrial enzyme customers, and it uses a structural genomics approach to achieve high throughput. Protein structures solved using SGX-CAT will be used to facilitate drug and compound design for Structural GenomiX customers. The SGX-CAT beamlines are designed to accommodate the high-throughput goals of Structural GenomiX. In particular, they will be optimized for rapid multiwavelength anomalous diffraction (MAD) experiments on small (~50 micron) selenomethionyl protein crystals.

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