

W0183

SECSG Crystallomics: A Test Bed for the Application of SECSG Technologies in Meeting the Production/Cost Requirements of PSI-2. Z.J. Liu^{1,2}, I. Kataeva^{1,2}, H. Xu^{1,2}, P. Horanyi^{1,2}, J. Habel^{1,2}, H. Yang^{1,2}, J. Chang^{1,2}, S.H. Chang, M. Zhao^{1,2}, L.R. Chen^{1,2}, W. Zhou^{1,2}, D. Lee^{1,2}, D. Lin^{1,2}, W. Tempel^{1,2}, L. Ljungdahl^{1,2}, J. Ng^{1,3}, M. Luo^{1,4}, C.H. Luan^{1,4}, J. Zhou⁵, J. Rose^{1,2}, B.C. Wang^{1,2}¹Southeast Collaboratory for Structural Genomics; ²Univ. of Georgia, Athens, GA, ³Univ. of Alabama in Huntsville, Huntsville, AL, ⁴Univ. of Alabama at Birmingham, Birmingham, AL, ⁵Oak Ridge National Lab., Oak Ridge, TN.

Over the past 18 months, the Southeast Collaboratory for Structural Genomics (SECSG) has developed a pilot project in “Crystallomics” (crystal-driven, production-oriented protein production) aimed at applying current SECSG technologies towards meeting the production/cost requirements for the next phase of the NIH Protein Structure Initiative (PSI-2). The project includes several new salvaging pathways at the gene, protein purification and crystallization levels

During a recent one-year period, using a limited budget, the Crystallomics project cloned over 700 genes, purified 160 proteins and produced 23 new structures with an average total cost per structure of about \$83,000. The Crystallomics project and the salvaging pathways used will be discussed.

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