

W0199

A Laboratory Information Management System For High Throughput Laboratory Environment. Jie Nan^a, Xiao-Dong Su^a; ^aNational Laboratory of Protein Engineering and Plant Genetic Engineering, Peking Univ., Beijing 100871, China.

In the post-genomic era, high throughput (HTP) methods for Structural Genomics (SG) have become indispensable. In the environment of high-performance machines and parallelization techniques, a management system for handling data is crucial to meet the increased amount of information. Thus, we have developed an in-house Laboratory Information Management System (LIMS). Using the Browser/Server mode, the system was built by Linux+Apache+Mysql+Php (LAMP) with a Web-interface. The main part of LIMS is Data Management, which assists data collection and storage in all stages of protein-structure projects. Authentication is added to make sure that all the users could access most information, but only the user who works on a project could change its information. There is a set of in-house developed tools LIMS, such as for primer design and the generation of structural-based multi-alignment graphics.

To avoid user-error and to reduce manual input, we are currently in the process of connecting LIMS to the computer connected equipment in the lab, and right now the LIMS was already integrated with our in-house developed Imaging Robot system. Additional functions like the management of seminars, notes and publications are also included to simplify the lab management.