

# Needs Assessment of the Roadmap Molecular Libraries Program

## Executive Summary

This report discusses the findings of a needs assessment of the Roadmap Molecular Libraries Program (MLP). The MLP is an integrated set of initiatives, the goal of which is to provide academic researchers high throughput (HTS) screening and chemistry resources to find and develop small molecules that can serve as chemical probes for research. The initiative consists of three main components: (1) a large, shared collection of small molecules, the Small Molecule Repository (SMR); (2) a network of screening and chemistry centers; and (3) a public database of all assay results (PubChem).

The purpose of this needs assessment is to: (1) assess whether the program accomplished its goals during the initial pilot phase (FY2004 to FY2007), and (2) gather feedback from network users and potential users on their level of satisfaction with MLP services. For this assessment, a series of customer satisfaction surveys was administered to current, former or prospective users of the MLP between November 2008 and July 2009.

### *MLP accomplishments*

In general, the SMR, centers and PubChem met their goals for productivity. The SMR grew to 300,000 compounds, PubChem grew to 44,000 users per weekday and the centers produced 68 probes at a decreasing cost.

### *Satisfaction of network users and potential users*

Those surveyed favorably compared the MLP centers to other screening centers. They most commonly listed the compound collection, screening capacity and chemistry support as core features to be maintained or enhanced. They reported that the review process for assay projects and the requirement for assays to be HTS-ready were two main barriers to participation in the program. Many also reported the intellectual property (IP) and data sharing policy as a barrier to participation in the network.

### *Areas for improvement*

Key areas for improvement mentioned were increased support for assay development, a better review process for assay projects and increased chemistry capacity. Users of PubChem suggested improvements in the database to make it more user-friendly. Additional types of outreach were suggested, including a meeting specifically for MLP users and potential users. Some principal investigators (PIs) of non-MLP centers proposed that future funding come from user-fees or grants justified by the production of probes.

Overall, the MLP seems to have met most of its major goals. It received positive feedback from most of those surveyed, although there were some suggestions on how to further increase the effectiveness of the program.