October 28, 2020

Name

Department

Address

East Lansing, MI 48824

Dear Dr. ,

We are delighted to collaborate with you through the MSU Assay Development and Drug Repurposing Core (ADDRC) on your Grant Information grant entitled “Grant Title”.

We have assembled a full set of resources and expertise to assist faculty in high-throughput assay development, library screening, and more general drug development projects. The equipment, chemical libraries, and other capabilities are outlined in the appendix below.

The ADDRC was created with support of multiple units at MSU to assist researchers with bridging the drug discovery gap that often exists between their basic research and preclinical drug development. The primary mission of the ADDRC is to exist as a campus-wide resource, providing MSU investigators with expert consultation on the design and development of HTS-compatible assays and to generate screening data with the goal of providing chemical probes to further interrogate a particular biological process or as potential leads for drug development. Along with performing HTS projects and analyzing the screening results, we will assist in designing appropriate orthogonal and counter screens to separate false positives from informative hits as well as provide advice for both *in vitro* and *in vivo* efficacy models.

We have substantial expertise in development and implementation of both biochemical and cell-based high-throughput methods. These include simple plate-based optical readouts to high-content image-based and kinetic plate reader approaches.

For your project, we will assist in Project Details

We wish you luck with your application and we look forward to a very productive collaboration.

Sincerely,

Joseph Nichols, Ph.D.

Project Manager – MSU Drug Discovery

Interim Manager - Assay Development and Drug Repurposing Core

Michigan State University

Richard R. Neubig, M.D., Ph.D.

Director – MSU Drug Discovery

Chair & Professor

Pharmacology & Toxicology

Michigan State University

**MSU Assay Development and Drug Repurposing Core (ADDRC) Resources**

*Equipment and screening technologies supported*

* Biomek FX Liquid Handling Robot
* Biotek Synergy Neo Multi-mode reader with 30 plate automated stacker
* Cytation 3 Cell Imaging Multi-Mode Reader
* Hamamatsu Functional Drug Screening System FDSS/μCELL
* GE Healthcare MicroCal VP-ITC Isothermal Titration Calorimeter
* Pall ForteBio Pioneer Surface Plasmon Resonance System

*Compound Libraries (~35,000 compounds)*

* LOPAC (1,280) – Library of pharmacological active compounds
* Prestwick Chemical Library (1,280) – 100% approved drugs (FDA, EMA and other agencies)
* MicroSource Spectrum Collection (2,320) – FDA-approved drugs, bioactives, and natural products
* PKIS Kinase Inhibitor Set (558) – >30 kinase inhibitor chemotypes annotated for protein kinase family activity
* NCI/DTP Approved Oncology Drugs (114), Diversity Set (1,596), and Mechanistic Set (816)
* NCATS Mechanism Interrogation PlatE (MIPE) (1,900)
* Maybridge Diversity Collection (~25,000)
* MSU Department of Chemsitry Library (~500)

*Computational Resources*

* GreenScreen – Secure, web-enabled, compound and HTS data management resource
* Scifinder – Compound and patent search (site license)
* ICM Chemist – Chemical properties and structure clustering
* Data Warrior – Cheminformatics program for data visualization and analysis