IU Simon Cancer Center seeks high school, college applicants for 2016 Summer Research Program

Dec. 14, 2015

INDIANAPOLIS -- Students interested in gaining hands-on experiences in cancer research are encouraged to apply for the 2016 Summer Research Program at the Indiana University Melvin and Bren Simon Cancer Center.

The annual Summer Research Program, held in partnership with the Indiana University-Purdue University Indianapolis Center for Research and Learning, places students with a mentor physician or researcher for nine weeks, June 6 – July 29. Students work with faculty who are conducting studies in the most progressive areas of cancer research.

The program's primary goal is to increase the number of underrepresented populations engaged in basic, clinical and prevention and control cancer research by providing positive and meaningful first-hand exposure to those fields.

Each student receives a stipend of $3,200. Students are responsible for their own housing and transportation arrangements.

The Summer Research Program provides students an opportunity to:

- Interact with any of the cancer center's research programs, shared facilities and more than 100 world-renowned investigators.
- Gain exposure to a wide range of basic science, translational and clinical research activities.
- Continually interact with and learn from other students, clinical and postdoctoral fellows, and faculty.
- Attend weekly career development workshops related to gaining admission to graduate and professional programs of study.

Students are selected based on interest in biomedical or behavioral science, academic performance and personal interviews. High school students who participate must have completed at least their junior year and have maintained a grade-point average of at least 3.0 on a 4.0 scale. Undergraduates in the program must have completed 24 hours of college credit, be majoring in a biomedical or behavioral science, and have maintained a grade-point average of at least 3.2.

Additional information and an online application are available at www.cancer.iu.edu/srp. For more information, contact the IUPUI Center for Research and Learning at crlstaff@iupui.edu.

The application deadline is Feb. 26, 2016. Those students selected as finalists will be invited to campus for an interview in April 2016.

Media Contacts

Michael Schug

Indianapolis

Office 317-278-0953

maschug@iupui.edu

Shared Facilities

Multiplex Analysis Core

Shared Facilities

The Multiplex Analysis Core (MAC) offers microplate-based bioassay systems that can perform multiplex analysis of multiple different analytes in a single sample. Multiplex systems are faster, more efficient, and use less sample volume than other technologies such as ELISA and Western Blot. Off-the-shelf kits are available to detect analytes such as chemokines, cytokines, hormones, cell signaling molecules, phosphoproteins, or nucleic acids in areas such as inflammation, metabolism, cardiovascular disease, oncology, immunology, etc. Custom kits designed by the investigator are also a possibility.

The MAC uses a Bio-Plex 200 bead-based suspension system (Luminex platform) for analyte quantitation in the picogram level. Immunoassay kits are commercially available for human, mouse, bovine, canine, porcine, rat, and primate samples.

The MAC is located at R3-C335 (Walther Hall), 980 W. Walnut St., Indianapolis, IN 46202.

Bio-Plex 200 System

The Bio-Plex 200 Multiplex System with High Throughput Fluidics (HTF) is a suspension bead-based bioassay system that uses microscopic beads dyed with different ratios of two fluorochromes that emit a color spectrum unique to that fluorochrome ratio. Each bead is also tagged with an antibody specific to a certain target. Up to 100 differentially dyed beads can be used in a single multiplex assay, each conjugated to a different antibody. These bead-antibody conjugates are incubated with the target sample, washed, and then incubated with biotin-labeled detection antibodies (BIOT/Ab) specific for secondary epitopes on the target. Samples are washed and then incubated with a phycoerythrin (PE) labeled streptavidin reporter (SA/PE), washed, and resuspended for analysis. The fluorescence of the bead-antibody-target-BIOT/Ab-SA/PE complex is then read on the Bio-Plex by a red laser that identifies the specific bead by its fluorescent signature and a green laser that excites the PE dye, with the intensity of PE fluorescence signal indicating the level of target bound.