Flow Cytometry Bootcamp

Educational Objectives: This two day course will cover the fundamentals of flow cytometry to provide a deeper understanding of the critical concepts in flow cytometry. Through lectures and hands-on activities, students will learn core concepts in experimental design, implementation, staining, compensation, controls, statistical analysis, and troubleshooting. At the end of this course, students will have a better understanding of the complexities of flow cytometry and nuances to consider for their workflow.

Target Audience: Users with basic experience in flow cytometry seeking to expand their skillset for more sophisticated questions – and answers. Learning the fundamentals will ensure that your flow cytometry experiments will yield results the first time, which saves you time and money in the long run.

Day One Agenda

09:00-09:15 Welcome and Course Introduction

09:15-09:30 *Activity 1: Design the experiment*

09:30-10:30 **Cytometry 101** – Reagents and Fluorophores

10:30-10:45 Coffee Break

10:45-11:30 **Cytometry 102** - Introducing the Hardware

11:30-12:00 *Activity 2: Choosing fluorophores*

12:00-13:00 Lunch

13:00-13:30 *Review of activity 2*

13:30-15:00 **How to set up an experiment** - (practical demo with cytometer)

15:00-15:15 Coffee Break

15:15-16:00 **Cytometry 201** – Flow Cytometry Data

16:00-16:45 **Cytometry 202** – Principles of compensation

16:45-17:00 Questions and day 1 wrapup

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Day Two Agenda

09:00-09:45 **Cytometry 203** - Principles of Panel Design

09:45-10:30 *Activity 3: Design a panel*

10:30-10:45 Coffee Break

10:45-11:15 **Cytometry 204** – Controls in Flow Cytometry

11:15-12:00 **Cytometry 301** – Statistics in Flow Cytometry

12:00-13:00 Lunch

13:00-14:00 *Activity 4: Data analysis*

14:15-15:00 **Cytometry 205** – Basics of Cell Cycle Analysis

15:00-15:15 Coffee Break

15:15-16:00 **Cytometry 206** – Basics of Cell Sorting

16:00-16:30 **Cytometry 303** - Troubleshooting

16:30-17:00 Review and final questions

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