Integrated DNA Technologies Genomics Seminar

Sponsored by the URMC Biological Supply Center

Presenters: Mitch Gore and Bran Bugarija
Field Application Managers, Integrated DNA Technologies

**Date:** October 16, 2018

**Time:** 12:00 pm – 1:30 pm (Lunch will be provided)

**Location:** University of Rochester Medical Center, Room I-9525

Tools for Optimal PCR Performance

While straightforward to perform, the Polymerase Chain Reaction (PCR) is particularly nuanced in that very small differences in primer and probe sequences and amounts as well as differences in template amount and quality can have a major impact on the results. This discussion will explore PCR as it relates to primer and probe design, reporter dye selection, experimental design for relative and quantitative detection, and results troubleshooting. In addition, new PCR chemistries will be introduced that provide solutions for issues like Tm optimization, specificity of amplification, and background fluorescence. The information presented will be particularly useful for those just starting with PCR as well as those that are experienced but have a need for a more detailed knowledge of PCR troubleshooting and the selections open to them for optimizing PCR reactions.

Optimizing CRISPR Ribonucleoproteins to Achieve Potent, Precise Genome Editing

We will review how IDT developed the most potent set of genome editing tools on the market by combining the precision of chemically synthesized guide RNAs with a high performance Cas9 protein. The Alt-R CRISPR system offers powerful, on-target editing; reduced off-target effects compared to traditional systems; is non-toxic; and easy to deliver into a wide array of cells by lipofection or electroporation. This presentation will review applications, including gene disruption and HDR. In addition, we will present a novel high-fidelity Cas9 mutant that has been optimized to further reduce off-target gene editing while maintaining on-target potency.

For planning purposes, please RSVP to Ashley Zaruba / azaruba@idtdna.com

www.idtdna.com