

Dr. Mark D. Lynch

Single Cell Genomics - Application Specialist
Fluidigm Europe B.V.

“Exploring Single-Cell Genomics with the C1™ Single-Cell Auto Prep System”

30 July 2013, 11:00 (s.t.)

Venue: 2nd Floor Seminar Room
Institute of Molecular Biology (IMB)
Johannes Gutenberg University Campus Mainz

All are welcome to attend

Abstract:

Single-cell gene expression profiling has recently emerged as a powerful method to uncover heterogeneity in cell populations. In response to this, Fluidigm has developed a streamlined and automated workflow based on microfluidic technology for capturing and analyzing single cells. This workflow includes the C1 Single-Cell Auto Prep System and the BioMark HD System for real-time PCR. The C1 System, based on innovative microfluidic technology from Fluidigm, enables a researcher to isolate and process individual cells rapidly and reliably for genomic analysis. For the first time, a researcher can isolate cells, extract RNA, and then reverse transcribe and preamplify mRNA transcripts automatically to enable detection and analysis of cell activity. In this format, our single-cell workflow enables the measurement of the expression of hundreds of genes in just a few hours compared to experiments that would normally take days using traditional systems. With this new system, unique attributes of individual cells can be rapidly explored without the technical variability of a standard gene expression workflow. Our suite of single-cell genomic applications, including single-cell mRNA sequencing, provides a streamlined workflow for generating large volumes of data in cellular subpopulations.