Visualize Gene Expression & Genetic Variations in Tissues: Applications of RNAscope® and BaseScope™ ISH Technology

Speakers:
Morgane Rouault, PhD
"Visualize Gene Expression and Genetic Variations in Tissues"

Yvan Vachez, PhD
"Implication of D2/D3 dopaminergic receptors in neuropsychiatric symptoms of Parkinson’s Disease"

Alessia Perino, PhD
"Detecting low expressed one exon genes with RNA scope: the story of the bile acid receptor TGR5"

Ossama Khalaf, PhD
"Identification of neuronal subpopulation for remote fear memory extinction in the hippocampus"

Date
Tues 13th June, 2017
14:00-17:00

Location
Auditorium SV1717
School of Life Sciences
École Polytechnique Fédérale de Lausanne, Switzerland

Register
rna.acdbio.com/June13Lausanne

Sample Images

Duplex detection of G protein-coupled receptors in normal mouse brain hippocampus, the RNAscope® Multiplex Fluorescent assay on Fresh Frozen tissue: Cannabinoid Receptor 1 (Cnr1, Green) and Dopaminergic Receptor D1 (Drd1, Red). Cells are counterstained with DAPI. CA = Cornu Ammonis DG = Dentate Gyrus.

Detection of SIV using non-isotopic ISH compared to the RNAscope ISH (red). Data courtesy of Dr. Jacob Estes of NCI.

Identification of the cell populations within the intestinal crypt with RNAscope® technology.

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Applications of RNAscope® and BaseScope™ ISH technology

RNAscope® is a proprietary RNA in situ hybridization (ISH) assay based on ACD patented signal amplification and background suppression technology which advances RNA biomarker analysis in tissues and cells. Unique to this technology, RNAscope® delivers quantitative, sensitive and specific molecular detection of RNA species on a cell-by-cell basis with morphological context in a single assay. This enables researchers to visualize which genes are expressed, localize where they are expressed, and quantify the level of expression.

Key benefits
- Detection of a single RNA molecule requires only three double Z probe pairs to bind to the target RNA molecule. The RNAscope® 20 double Z probe pairs design provides robustness against partial target RNA accessibility or degradation.
- Signal amplification coupled with simultaneous background suppression strategy results in single-RNA-molecule detection even in partially degraded samples. Rigorous double Z probes design eliminates cross hybridization to unintended targets and routinely distinguishes RNA sequences with up to 85% homology.
- Provides cell-specific expression information in intact tissue architecture.
- Works for virtually ANY gene from ANY species in ANY tissue.