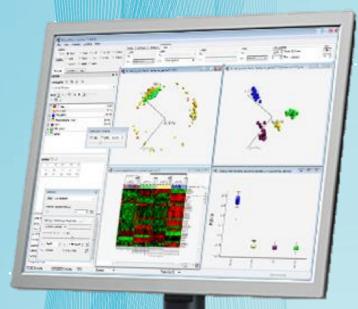
Center for Translational Science Cytometry & Biomarkers UTechS

# Basic training and Extended training on Qlucore Omics Explorer and Qlucore NGS module

# Thursday, March 14<sup>th</sup>

Institut Pasteur, Metchnikoff, meeting room 3rd floor



### 9:30 am–12:30 am BASIC TRAINING

The training includes the following hands-on exercises:

- 1. Import data with Wizard
- 2. User interface
- 3. Heatmap
- 4. ANOVA export variable list
- 5. t-test Synchronized heatmap & PCA plots
- 6. Box plot
- 7. Linear regression test
- 8. Download analyze a dataset from GEO
- 9. Exploratory Data Analysis
- 10. Clustering

## 1:30 pm-5:00 pm EXTENDED TRAINING

Statistical functions and tools in Qlucore Omics Explorer and genome analysis in Qlucore NGS module

#### Hands-on exercises - Qlucore Omics Explorer:

- 1. Data import RNA-seq data (BAM files), cel files, txt files etc
- 2. Examples of experimental design and models use of eliminated factors (like paired t-test and Interaction Effects)
- 3. Biological exploration of data
- a. Variable lists
- b. GO (Gene Ontology) Browser
- c. Gene Set Enrichment Analysis

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4. Compare results between datasets
5. Build and use a Classifier
6. Run test in Extended Mode – using "R" API – (demo)
Hands-on exercises - Olucore NSG module - intro:
1. Set up a project and pre-process RNA-seq data
2. Use Olucore Genome Browser – use filters to find mutations
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