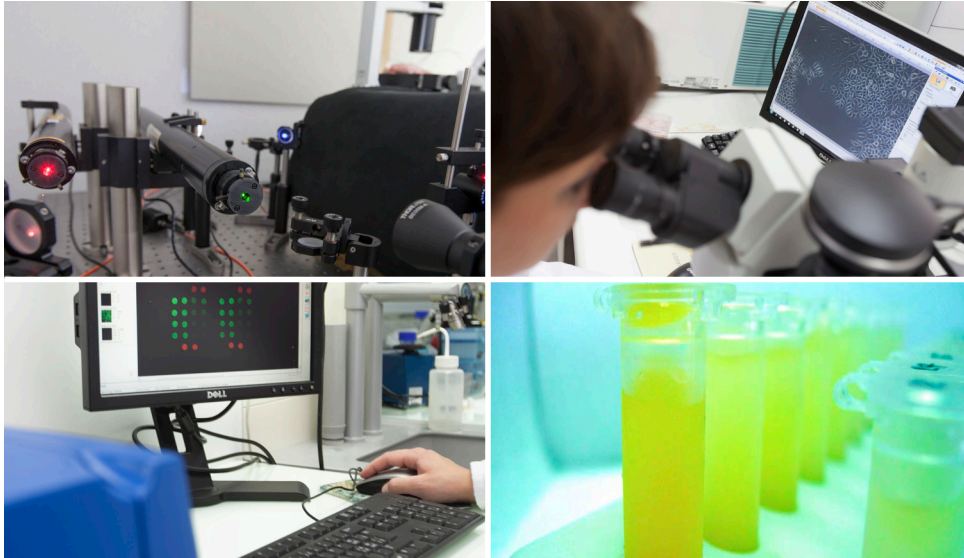


INSTITUTE OF LIFE TECHNOLOGIES

Diagnostic Systems

Research Group



The Diagnostic Systems group consolidates in-depth theoretical and practical know-how ranging from areas such as immuno-, molecular and cellular diagnostics to instrumental analytics and bio-sensor development, including compound and phyto extract activity screening. Together with the Institute of Systems Engineering and the Institute of Information Systems, our research group conceptualizes, designs and develops innovative automation and miniaturization solutions to bio-analytical challenges.

RESEARCH AREAS

Point-of-care (POC) diagnostics

- Point-of-care (POC) diagnostics and lab-on-a-chip devices
- Miniaturized, portable or wearable sensor systems
- Efficient sampling and functionality integration
- Sophisticated capture molecules and detection systems
- Remote access and data management

Cellular systems

- Bioavailability (e.g. intestinal transport)
- Bioactivity (e.g. anti-inflammatory, anti-infectious)
- Biocompatibility (e.g. biopolymers)
- 3D models (e.g. cell-scaffold interactions)
- Microfluidics (e.g. cellular analytics)

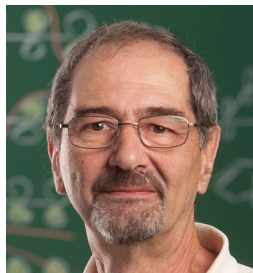
Molecular diagnostics

- PCR or other amplification/detection methods
- Gene expression and epigenetics
- Pathogen identification and typing
- Immunoassays (e.g. fluorescence, ECL-based)
- Multivariate, multiplex (e.g. microarrays, DNA-chips)

Phyto-actives

- Skin therapeutics (e.g. inflammation, infections)
- Reliable cellular assays
- Active ingredient transport
- Cosmetic (and pharma) market
- Pilot scale facilities at PhytoArk

SENIOR RESEARCHERS



Alain-François Grogg, PhD
Chemistry,
Phytochemistry,
Bioactivity screening



Marc E. Pfeifer, PhD
In-vitro diagnostics (IVD),
Molecular diagnostics,
POC diagnostics



Jean-Manuel Segura, PhD
POC diagnostics,
Assay development,
Detection systems



Bruno Schnyder, PhD
Biochemistry,
Immunology,
Cellular systems

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