

# Thematic Platform IVD

**Samantha Paoletti & Marc Pfeifer**  
**January 31<sup>st</sup> 2023**



“An accurate diagnosis is the first step to getting effective treatment”

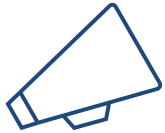
**Tedros Adhanom Ghebreyesus**

Director General at World Health Organization



IVD tests are medical devices used to diagnose, monitor, screen and assess predispositions to diseases from assays in a test tube or in a controlled environment outside an organism, contributing to the available medical information of a patient.

# Mission



**PROMOTE**  
technological  
innovation



**UNITE**  
key stakeholders  
(industry, medicine and  
research organizations)



**ENABLE**  
translational research

molecular biology

bioanalytics

biochemistry

automation

micro-/nanotechnology

data management

regulatory affairs



Chairs: Samantha Paoletti & Marc Pfeifer

Michael Gerspach, Rainer Jäggi, Annalisa Macagno, Adrien Marchand, Dominik Meinel, Daniel Paris, Denis Prim, Daniel Richards, Thomas Stauffer



Swiss TPH



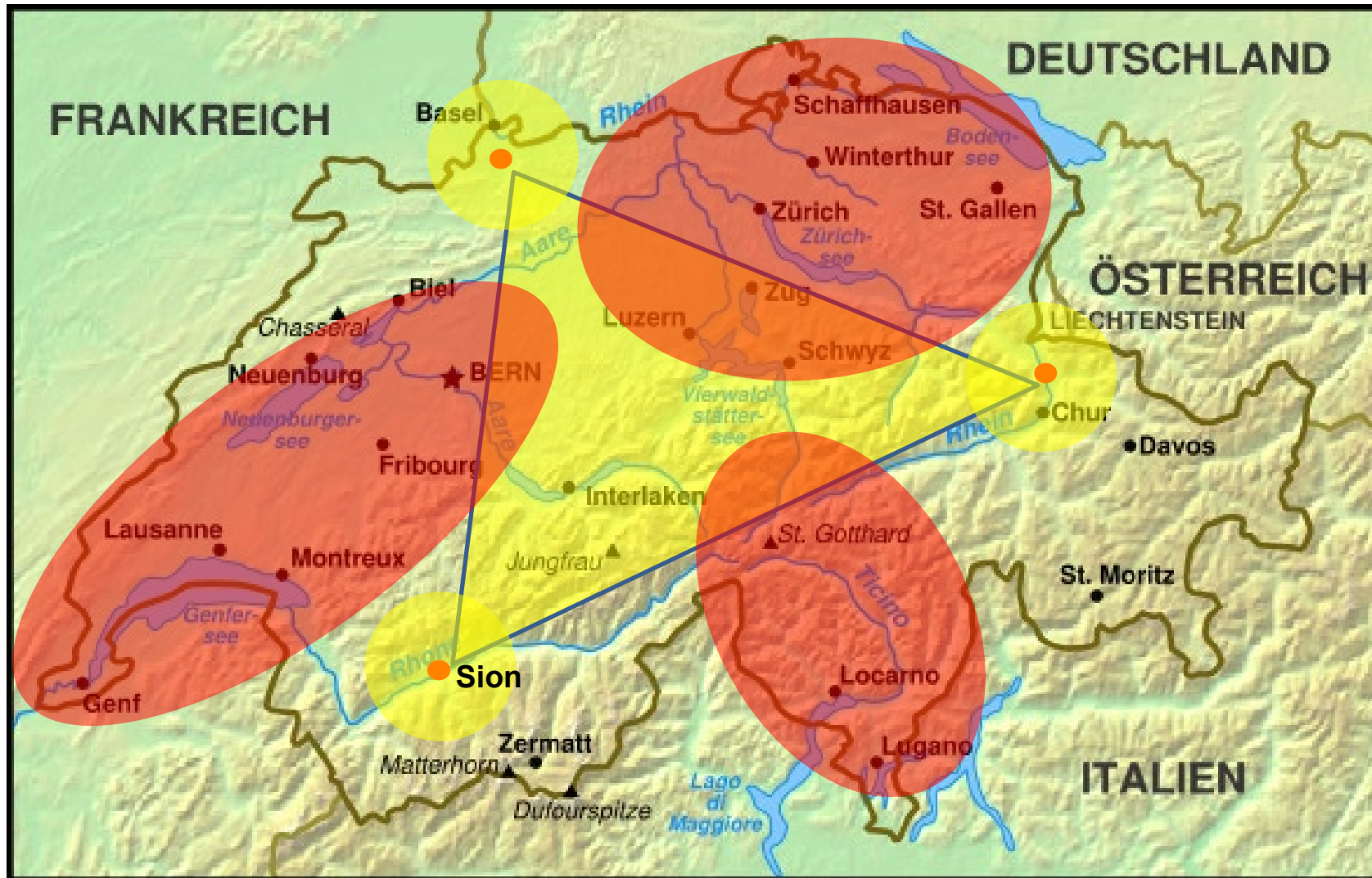
Diagnostics



EFFECTUM MEDICAL  
YOUR START-UP TO MARKET



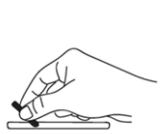
# A Swiss platform! *(as presented in early 2015)*





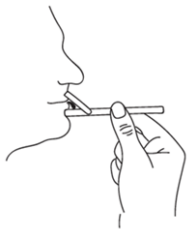
# Enable

# Lateral flow test for SARS-CoV-2



**OPEN**  
Open the flap.

1



**SPIT**  
Bring the device to your lips. Spit into the provided space.

2



**CLOSE**  
Close the flap.

3



**WAIT**  
The test result will be displayed after 10 minutes

4



**PHOTO**  
Photograph the test using the app to learn your result

5



**LEARN**  
Get more information about your test result

6



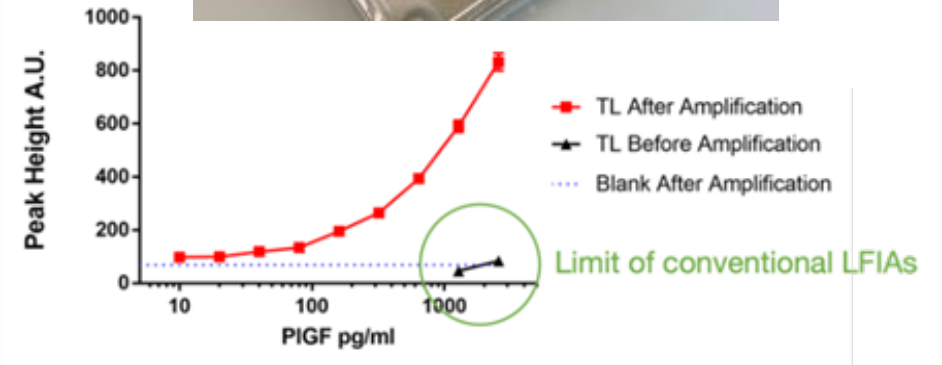
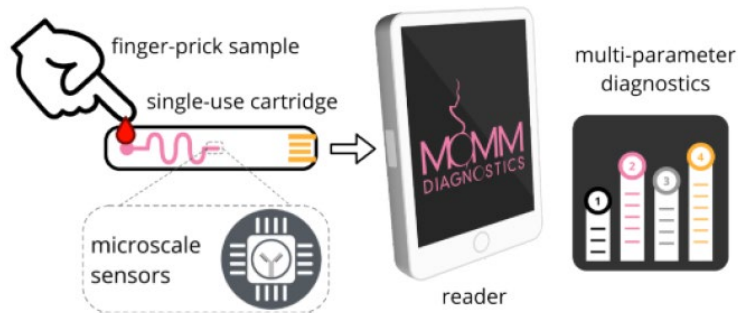


# Preeclampsia test at the point of care

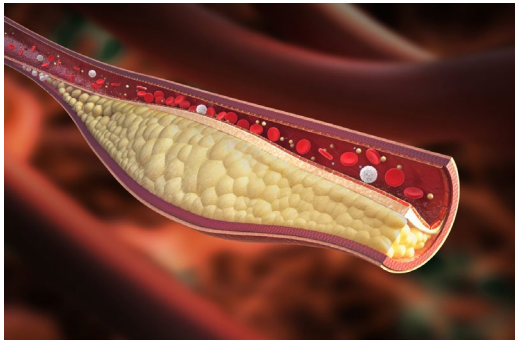
**Digital** lateral flow assay using functionalized printed electrodes

**Simultaneous** detection of multiple biomarkers

**Single-use** “all-in-one” cartridge with user-friendly reader

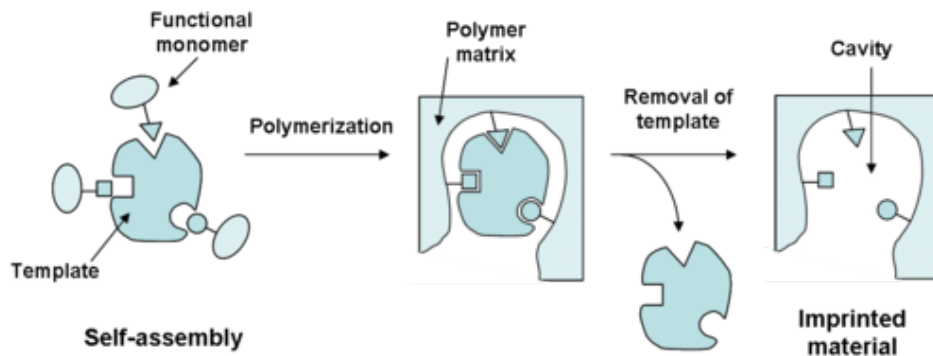


# CholeMIP - A novel rapid point-of-care test for total and “bad” LDL cholesterol based on selective membranes

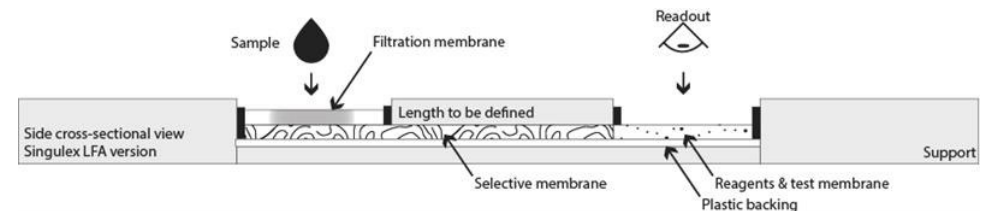


- High levels of LDL cholesterol → Increased risk of coronary disease
- LDL cholesterol levels fundamental to assess risk and define a therapy
- Current state of the art: LDL cholesterol level is calculated:

$$\text{LDL-C} = \text{TC} - \text{HDL-C} - (\text{TG}/5)$$



Molecularly imprinted polymers (MIPs) are highly X-linked polymer-based molecular recognition elements engineered to bind one target compound, here HDL, with high selectivity:



# TBI-Dx - Traumatic Brain Injury Point-of-Care Multiplex in vitro Diagnostic Device



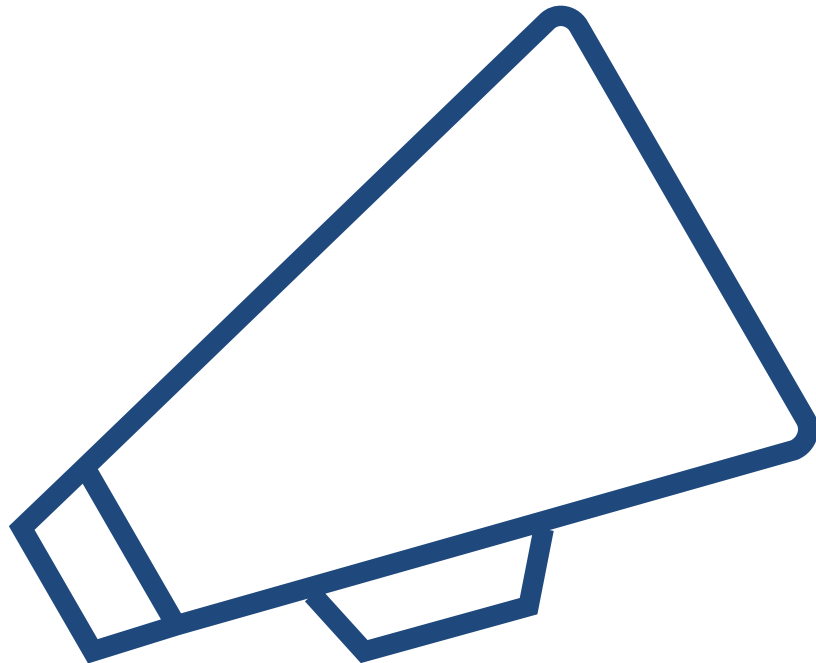
- 70 mio people every year suffer from TBI worldwide; 2.5 mio people in Europe
- 82% of patients with TBI take CT scans but > 90% no evidence of traumatic abnormality
- Especially mild form (mTBI) due to no or non-specific symptoms and absence of a simple test → significantly under-reported
- Solution: Portable device with disposable cartridge and integrated multiplex assay
- Amenable to kinetic measurements



Jović, M. *et al.*  
Biosensors 2022.



Designed by M. Pfeifer,  
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# Promote

# Site Visits & Talks



NEXUS ETHZ,  
CC-PM, WYSS  
Zurich 16.05.2017



Roche Dx Rotkreuz 20.01.2016



Inselspital  
13.11.2015



Medics Labor  
30.04.2018



BÜHLMANN Laboratories  
02.05.2019



# Flagship Event

1

**26 OCTOBER 2017 SWISS SYMPOSIUM IN POINT-OF-CARE DIAGNOSTICS**

Swiss Symposium in **Point-of-Care Diagnostics** 3<sup>rd</sup> announcement

2

Thursday, October 18, 2018

Venue: GKB Auditorium - Chur - Graubünden

Join experts from science, medicine and industry



3

**29 OCTOBER 2020 SWISS SYMPOSIUM IN POINT-OF-CARE DIAGNOSTICS**  
Visp - Switzerland - [www.pocdx.ch](http://www.pocdx.ch)



4

**21 OCTOBER 2021 SWISS SYMPOSIUM IN POINT-OF-CARE DIAGNOSTICS**  
[www.pocdx.ch](http://www.pocdx.ch) - Davos

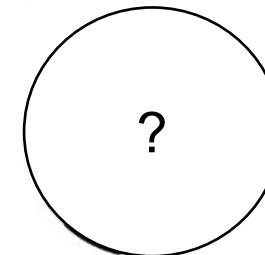
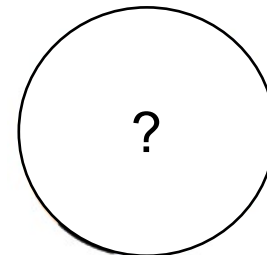
5

**20 OCTOBER 2022 SWISS SYMPOSIUM IN POINT-OF-CARE-DIAGNOSTICS**  
BASEL - SWITZERLAND - [WWW.POCDX.CH](http://WWW.POCDX.CH)



6

**SAVE THE DATE**  
**26 OCTOBER 2023 SWISS SYMPOSIUM IN POINT-OF-CARE DIAGNOSTICS**  
Sion - HES-SO Valais-Wallis - School of Engineering



SAVE THE DATE  
**26 OCTOBER 2023** SWISS SYMPOSIUM IN  
**POINT-OF-CARE DIAGNOSTICS**

Sion - HES-SO Valais-Wallis - School of Engineering



Feel free to contact us!



samantha.paoletti@csem.ch



marc.pfeifer@hevs.ch

[www.pocdx.ch](http://www.pocdx.ch)