

19<sup>th</sup> of May 2022  
12.00 hrs – 14.00 hrs

# Workshop IN4AHA

## My affiliation:

Cees Otto

University of Twente, Medical Cell BioPhysics, TechMed Institute,  
Founder and CTO/CEO of Hybriscan Technologies B.V.,  
“Company for Raman solutions in Medical applications”



## My education:

BSc.: Chemistry (BSc.), specialization: Phys. Chem.  
MSc.: Phys. Chem. (major), Physics (minor), Mathematics (minor)  
PhD. : Biophysics, engineering Raman solutions, Raman spectroscopy, biomolecules

Professional: New methods in Raman, single cell Raman microscopy, Systems engineering  
Raman, “Better Raman”, Coherent Raman, Development of Hybrid microscopy

CTO/CEO: Listening to the (medical) field, Translation of Technology, Deliver on promises

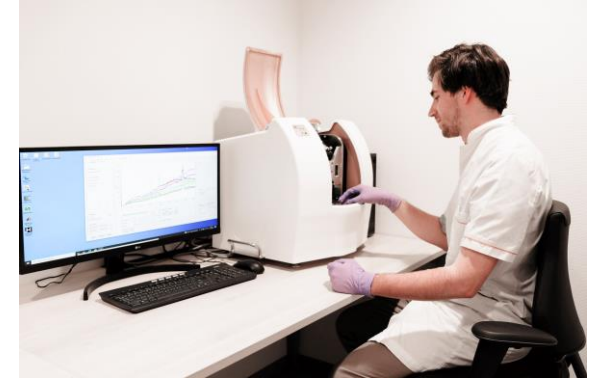
# What is the innovation?

Developed a “prototype” Hybrid Raman microscope to assist diagnosis in the hospital

## Features:

high degree of automation  
easy use (for non-Raman experts), Daylight use, table-top size,  
no special infrastructure

Easy sample mounting  
AI-assisted interpretation



## Goal:

Improved certainty of diagnosis results in more precise therapy choice  
Improved patient care (better treatment, faster recovery to mobility, reduced sick-time)

## Team success

Installation of a functioning prototype in a clinical environment

## Next steps:

- Learning phase, listen to medical doctors, followed by development of prototype to product
- Clinical application and discovery oriented, academic output
- Think about and develop the business plan, collaborate with (new) partners
- Technical validation, clinical validation, comparison with gold standard
- Compliance with MDR, certification process

# Success factors:

- The right technology for the medical question
- A “real” interest from medical doctors, commitment for many years of all parties involved
- Fruitful communication between medical doctors and scientists / technical guys
- Mutual confidence
- Capable technical team with an ability to deliver (SME’s)
- Interest and support of patient society, development **must** address the need of patients
- Involvement of knowledge center(s) (University of Twente)
- Hospital supports ambitions of the MD’s
- Money

