Industry Contact Point
Digital Transformation

Industry Contact Point
Industry 4.0

Industry Contact Point
Medical Technologies and Health

PPTF
Polish Technological Platform on Photonics

Ministry of Science and Higher Education
Republic of Poland

Horizon4Photonics

Brokerage event

Who we are?

Prof. Fiona Lyng
Centre Manager, RESC
Physical to Life Sciences Research Hub
Technological University Dublin (TU Dublin), IRELAND
(academic institution, public)

- 25 years research experience
- >150 peer-reviewed papers
- h-index 52
- >8000 citations
- ~€6M research funding

https://www.linkedin.com/in/fiona-lyng/

www.tudublin.ie/resc

Institutional Strength

- Expertise in vibrational spectroscopy (Raman, IR, surface-enhanced Raman spectroscopy (SERS) technologies for clinical diagnostics
- Strong translational focus
- Minimally invasive samples – biofluids, exfoliated cells
- Collaborations with clinical partners

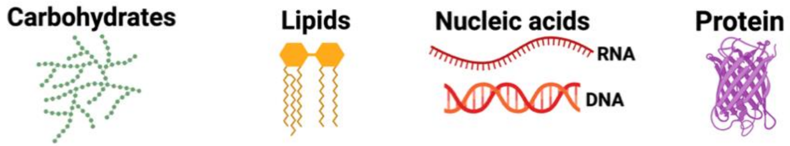
Role Sought

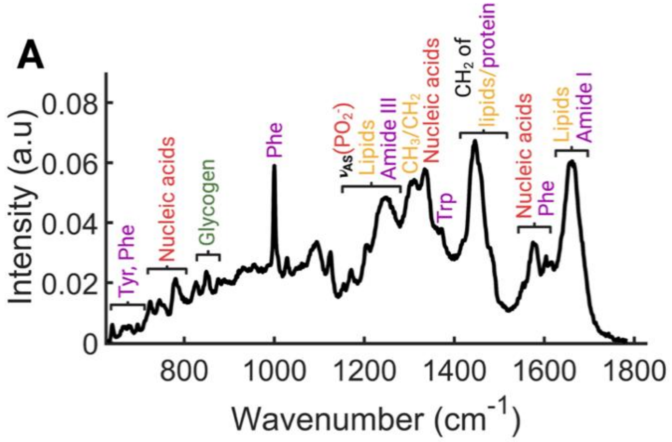
✓ Partner
✓ Work Package Lead

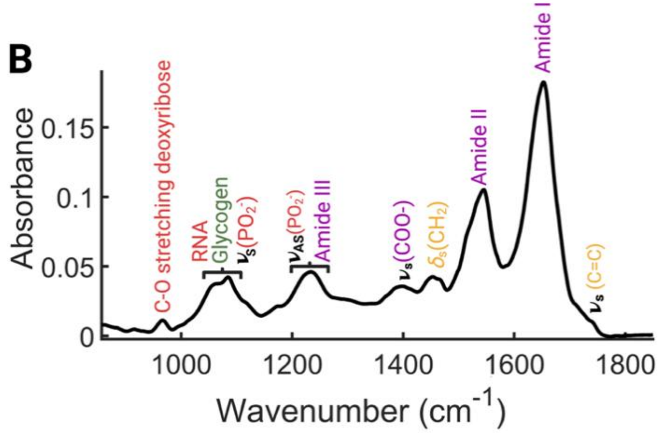
RESC PURE profile

Prostate cancer / radiotherapy / blood
https://doi.org/10.1016/j.saa.2026.127529
Oral cancer / exfoliated cells / saliva
https://doi.org/10.1016/j.saa.2025.125721
Cervical cancer / exfoliated cells
https://doi.org/10.3390/cancers14071836
Raman cytopathology protocol
https://doi.org/10.1038/s41596-021-00559-5

What we can do?





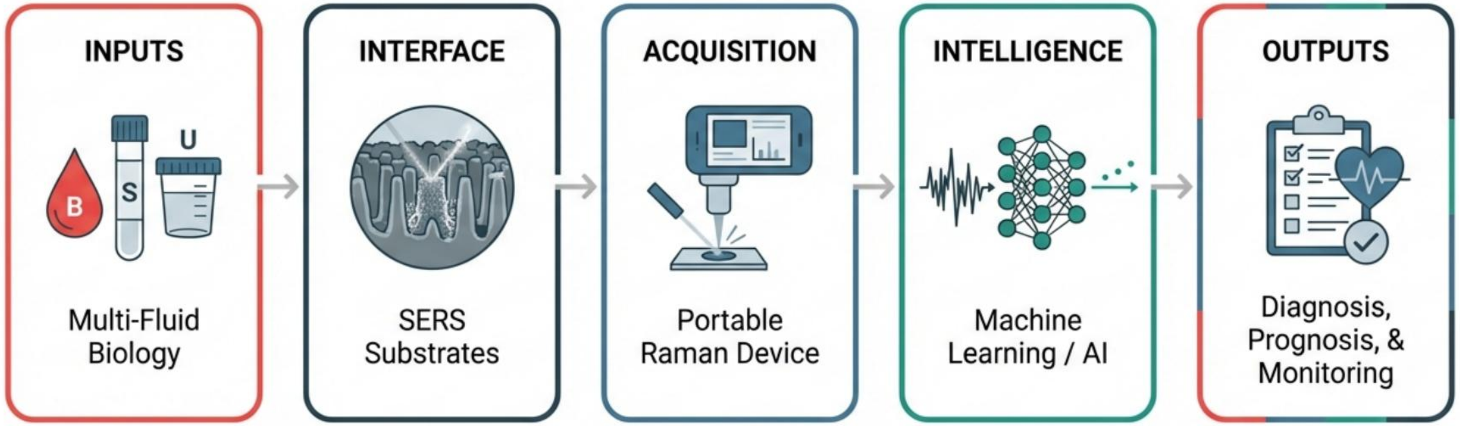


Fast

- Minimal sample preparation
- Non-destructive
- Label-free
- Minimally invasive

Point-of-Care (POC)

- Decentralised testing and monitoring
- Other applications



Topics

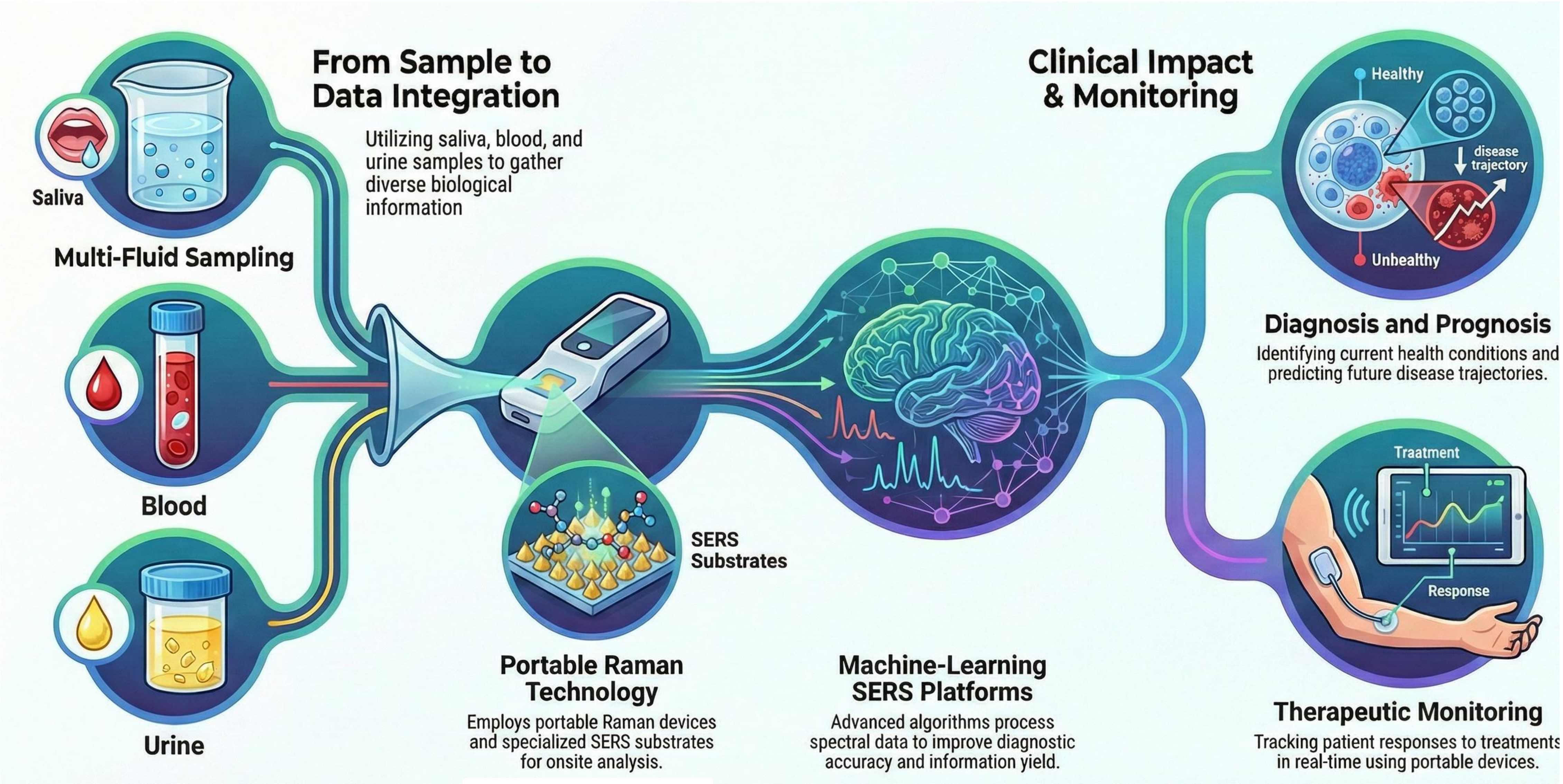
- HORIZON-HLTH-2027-02-IND-02-two-stage: Portable and versatile Point-of-care Diagnostics
- HORIZON-HLTH-2027-02-TOOL-01-two-stage: Development of predictive biomarkers of disease progression and treatment response by using AI methodologies for chronic non-communicable diseases
- HORIZON-CL4-2026-05-MAT-PROD-25: New or enhanced Innovative Advanced Materials (IAM) enabled sensing functionality (RIA)
- HORIZON-CL4-2026-01-MAT-PROD-01: Advanced manufacturing for key products (IA) (Made in Europe partnership)
- HORIZON-CL4-2026-04-DIGITAL-EMERGING-14: Networking and Future Photonics Strategy (CSA) (Photonics Partnership)

Our role

Expertise in Raman, IR, SERS technologies for clinical diagnostics

Profile of partners

Engineers, agentic AI, microfluidics/3D printing, biomarker validation, clinicians (hospitals), SMEs



Raman and IR

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Thank you

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