Laura Russo

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- ***Chimica per le Nanotecnologie Biomediche*** (Magistrale Chimica)
- ***Laboratorio di chimica organica*** (Triennale Biotech e Biologia)
- ***Patient-Derived in vitro Glioma Models: from patients to dish to 3D bioprinting technology*** (PhD Neuroscienze)

University of Milano–Bicocca

Biorganic Chemistry Lab

3D Bioprinting and Formulation Lab

University of Galway - Ireland

Department of Chemistry

Cùram - Center of Excellence on Medical Devices

Biocompatibility Innovation

Partner and Advisory Board

BCI BIOCOMPATIBILITY INNOVATION

RESYDE

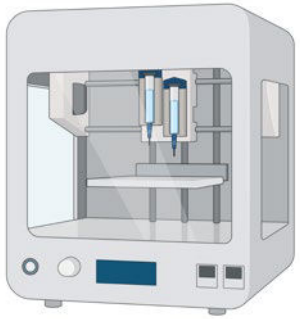
Founder

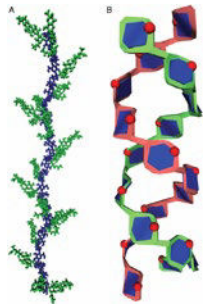
RESYDE

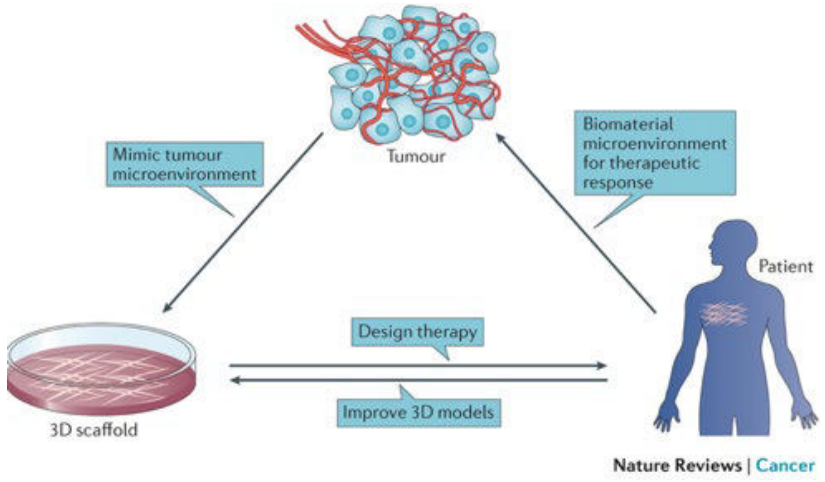
Bioorganic Chemistry in Medicine

Regenerative Medicine

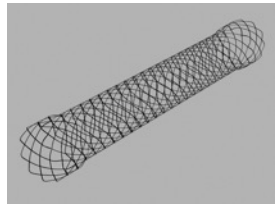
3D in Vitro Models



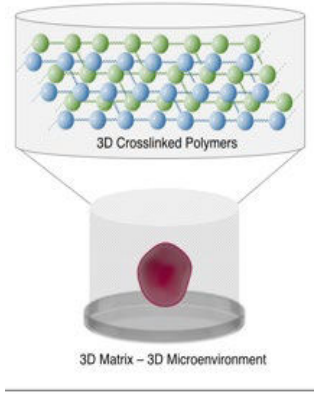




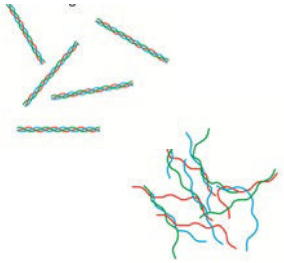
Medical devices and biosensors



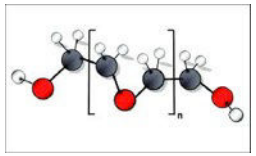
Polymers and Signaling Molecules



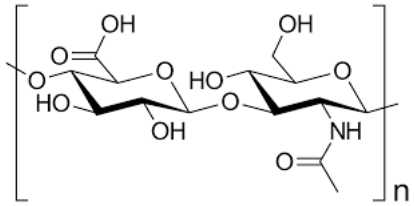
Crosslinking

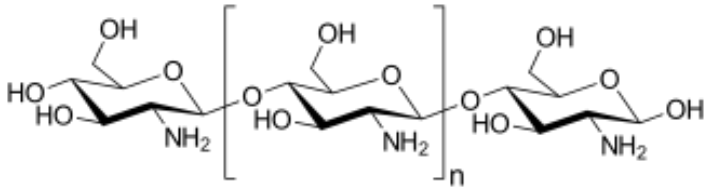


Proteins



Synthetic Polymers

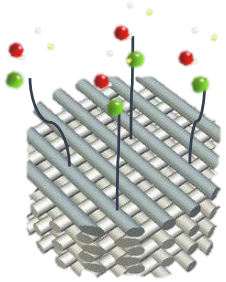




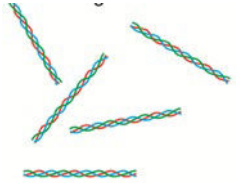
Polysaccharides

Functionalization

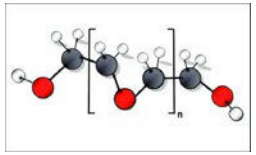
Scaffold



Different substrates

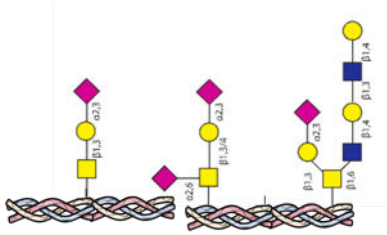


Proteins

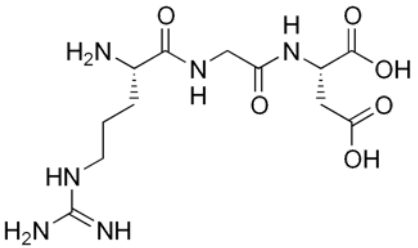


Synthetic Polymers

Bioactive Molecules

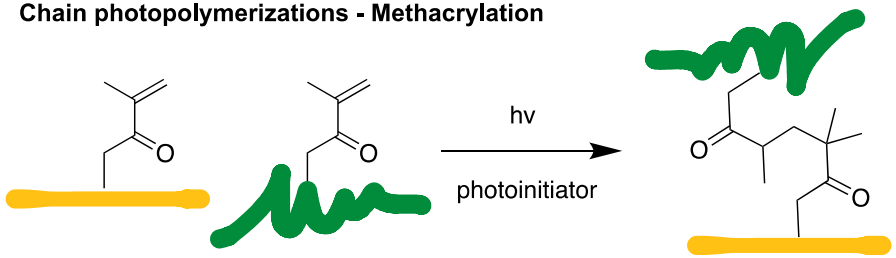


Glycans

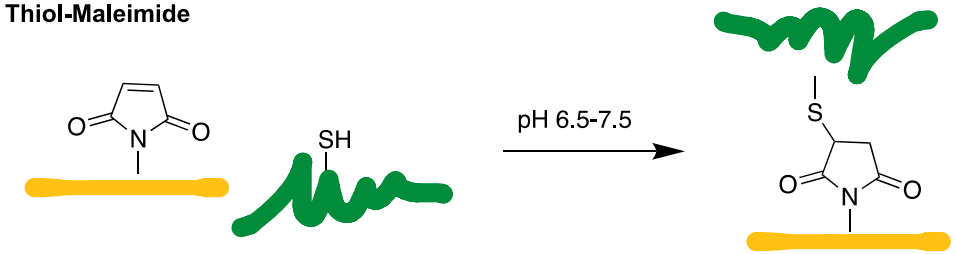


Peptides

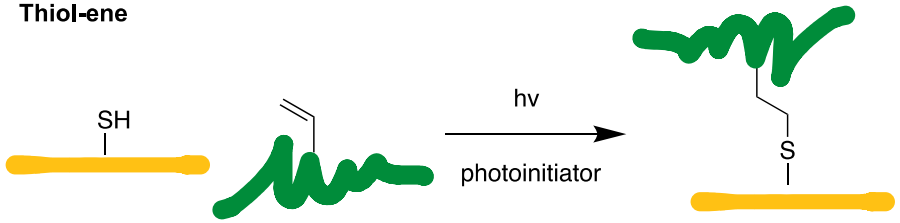
Chain photopolymerizations - Methacrylation



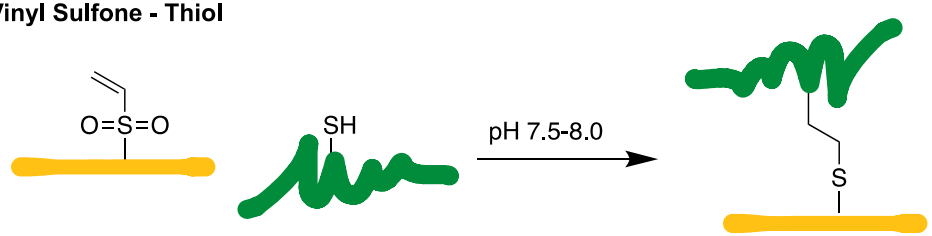
Thiol-Maleimide



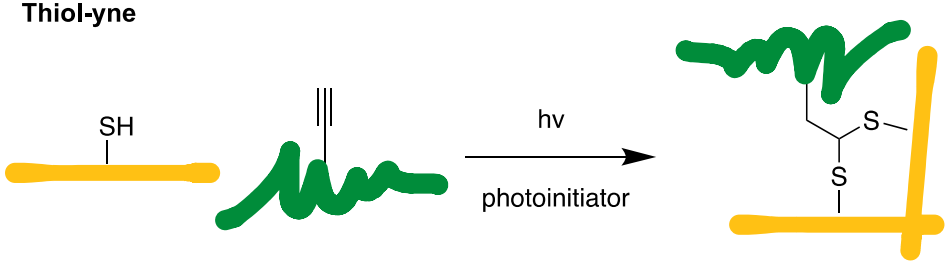
Thiol-ene



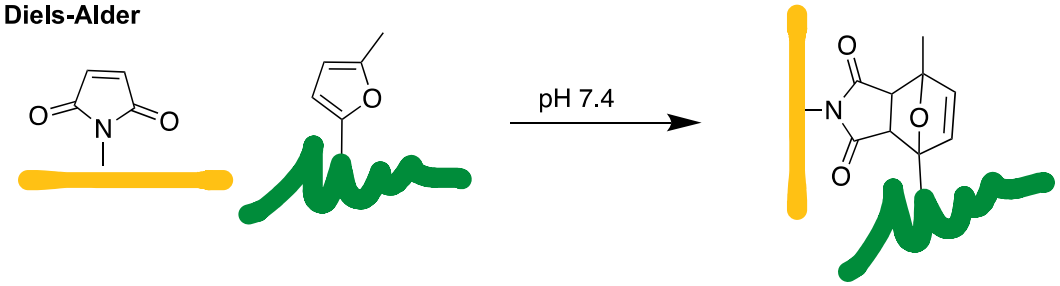
Vinyl Sulfone - Thiol



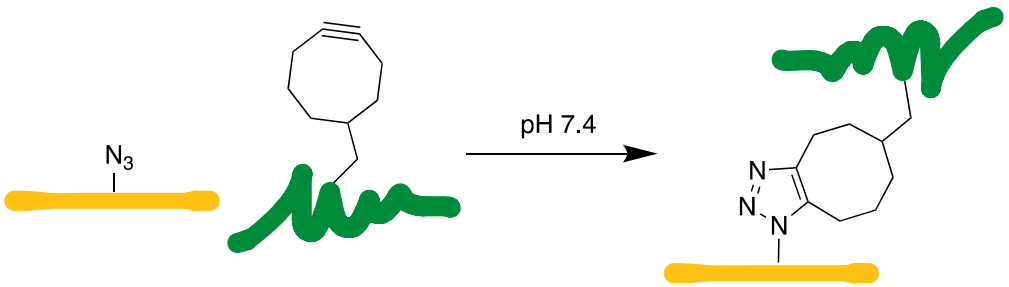
Thiol-yne



Diels-Alder



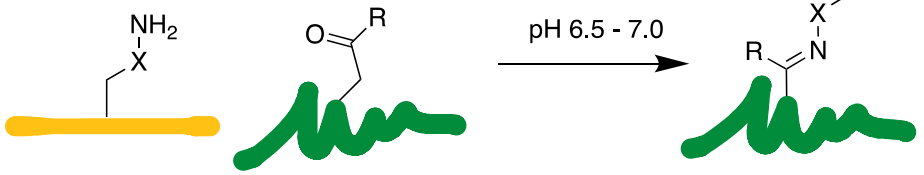
Strain-promoted azide-alkyne cycloaddition (SPAAC)



Oxime and Hydrazone ligation

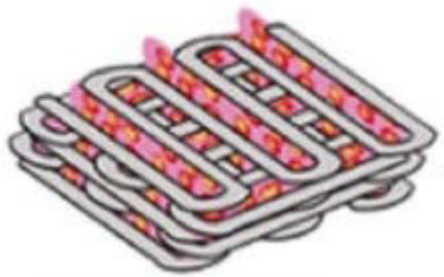
X:
O - Alkoxyamine
NH - Hydrazine

R:
H - Aldheyde
CH_3 - Ketone

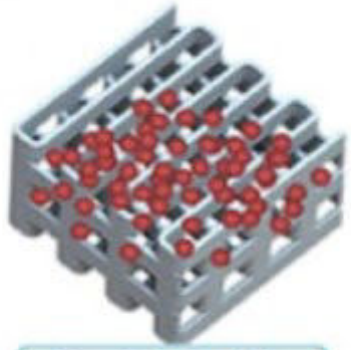


X:
O - Oxime
NH - Hydrazone

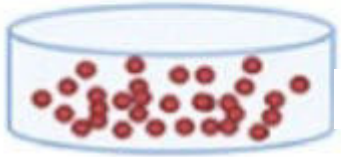
Manufacturing and formulation



3D bio-printed models



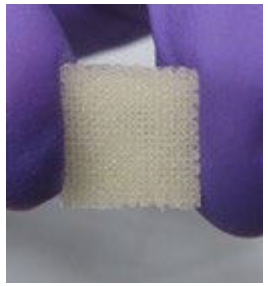
3D printed models

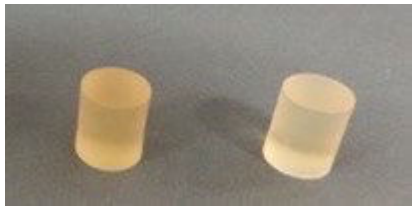


Culture in 3D fibrous scaffolds

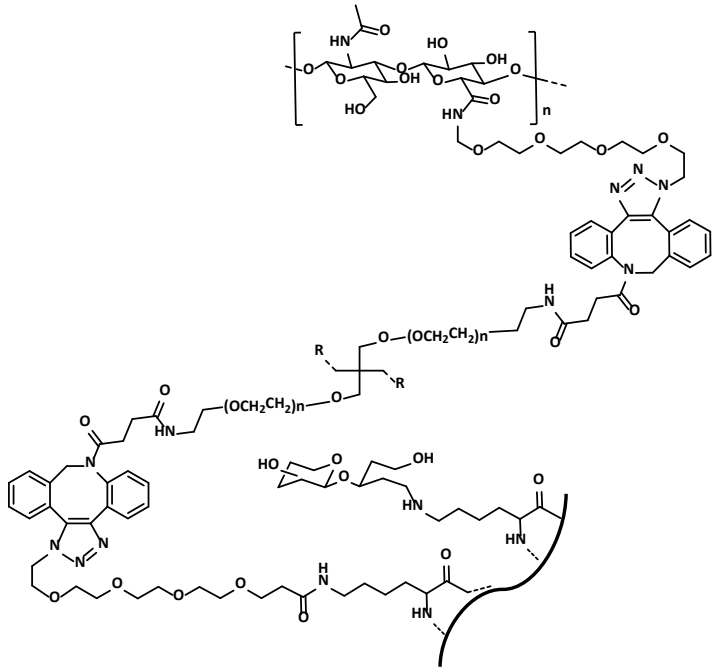
Culture in 3D porous scaffolds

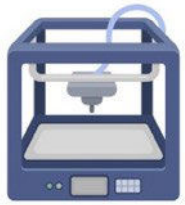
Culture in hydrogel





Projects – Artificial Tissues

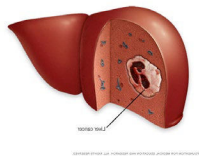




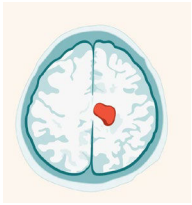
3D BioPrinting Set-Up

Colon cancer

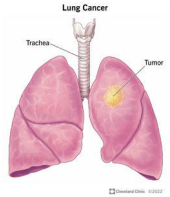
Gastric cancer



Liver cancer



Brain cancer



Lung cancer

Azienda Ospedaliera San Gerardo

30 ANOS A DESCOBRIR O CANCRO ipatimup

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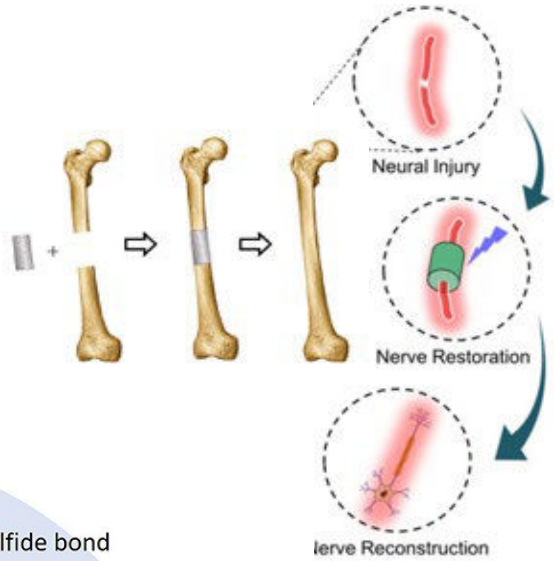
FONDAZIONE IRCCS ISTITUTO NAZIONALE DEI TUMORI

Projects – Regenerative Medicine

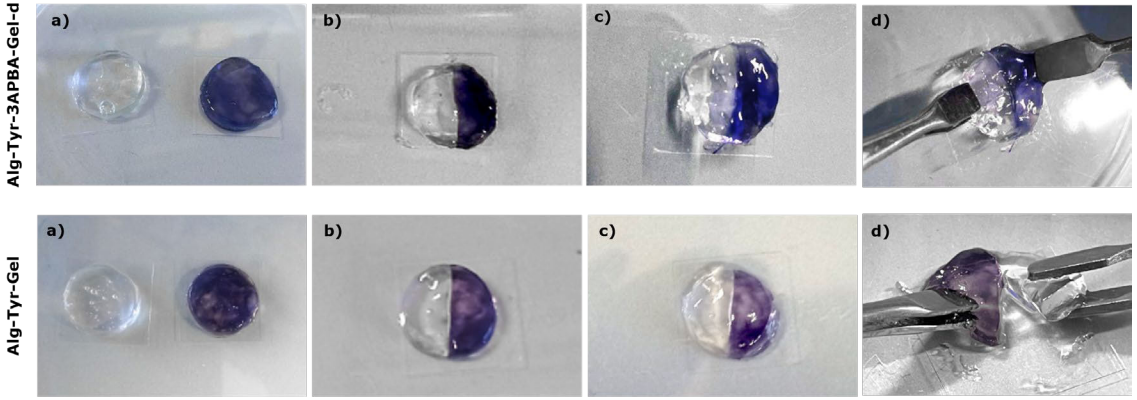
Nervous system

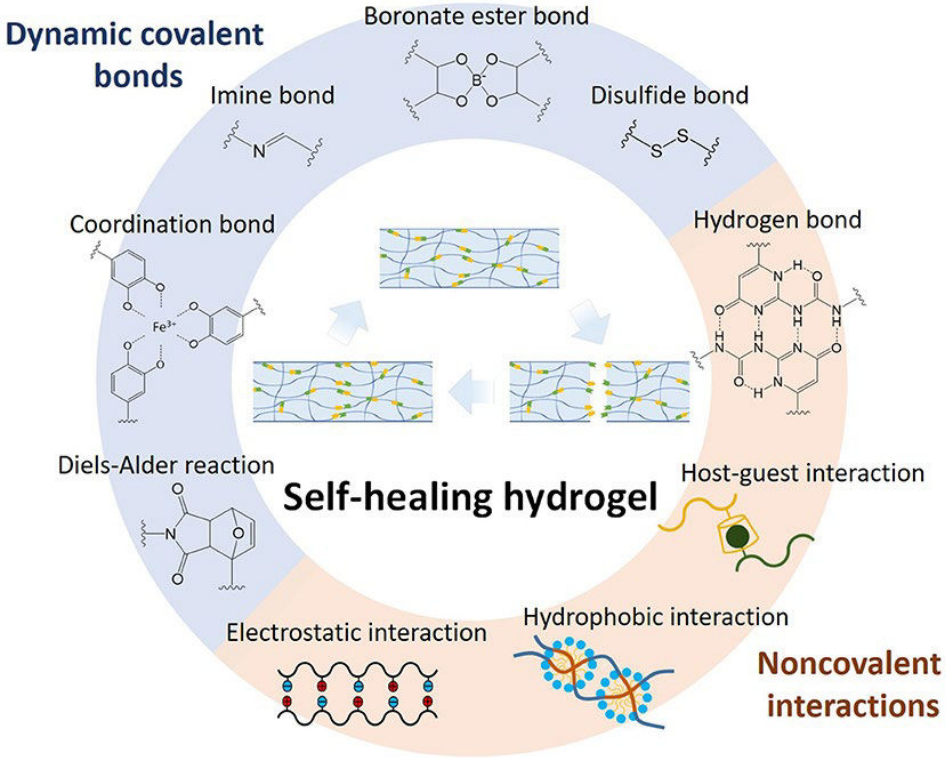
Osteochondral system



Artifical Organs and Tissues

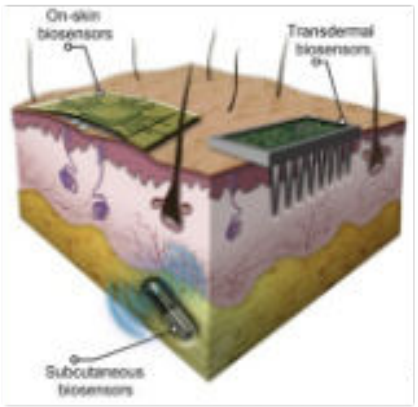
- Injectable hydrogels
- Dynamic and self assembled polymers
- Smart Biomaterials





Projects - Biosensors

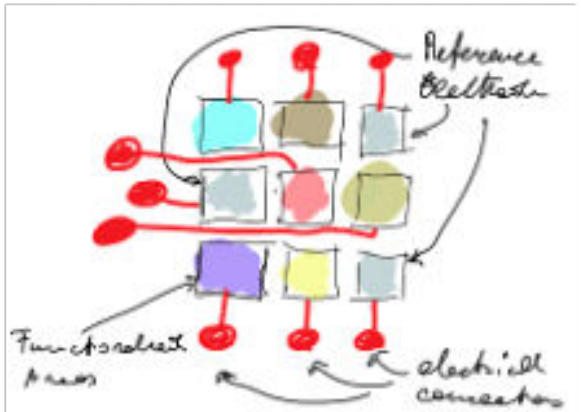
In collaboration with Prof. Sanguinetti – Deaprtment of Material Science



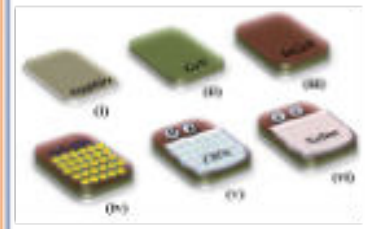
Chemical and Biochemical sensing

- Glucose
- Colesterol
- pH / ions
- Microbial infection
- Inflammation

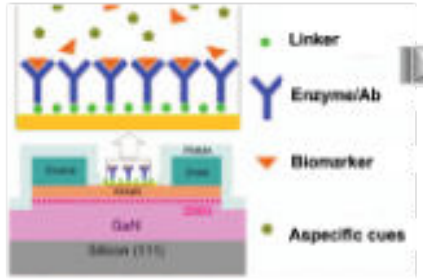
Smart 3D Medical Devices



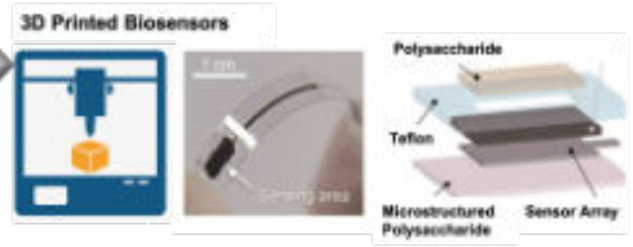
Potentiometric Biosensors



Functionalization for Multifunctional detection

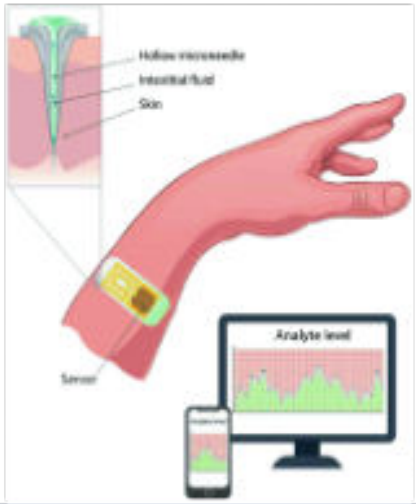


Arrays incorportan in 3D printed polymeric systems

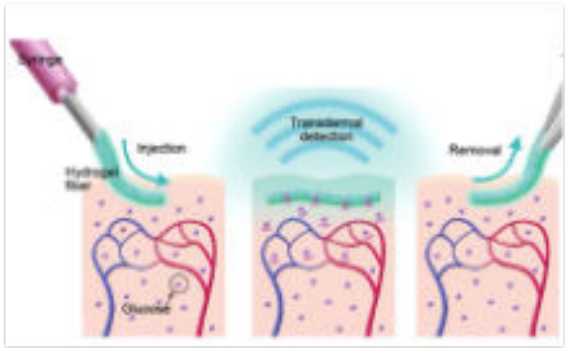


Wereable

Transdermal



Subcutaneous



Projects – medical devices

Medical devices coating

- Conjugation of antiadhesive polymers
- Coating with antimicrobial polymers