

# ParaMedir

*Cutting-edge biomonitoring technology at the bedside!*

Biosensor-based devices for personalized healthcare

[carlos.cordeiro@paramedir.nl](mailto:carlos.cordeiro@paramedir.nl)

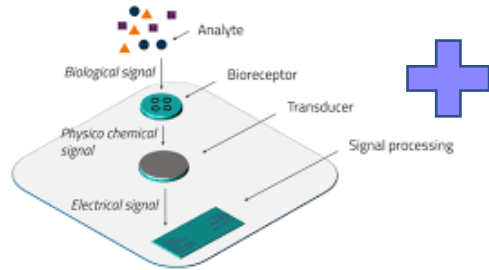
[pieter.oomen@paramedir.nl](mailto:pieter.oomen@paramedir.nl)

[jasper.dijkstra@paramedir.nl](mailto:jasper.dijkstra@paramedir.nl)

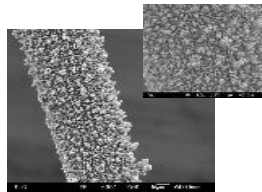
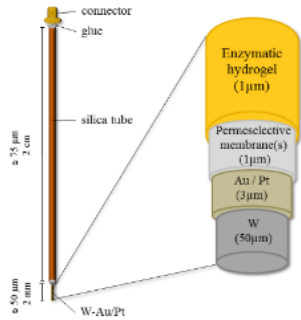
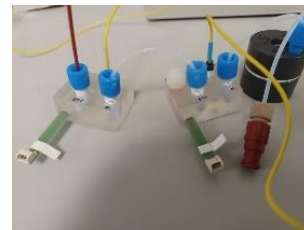
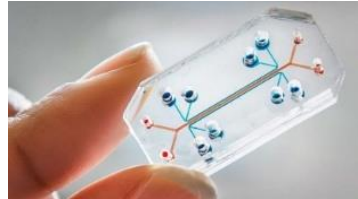
# Who is ParaMedir™?

## Technology

Biosensors

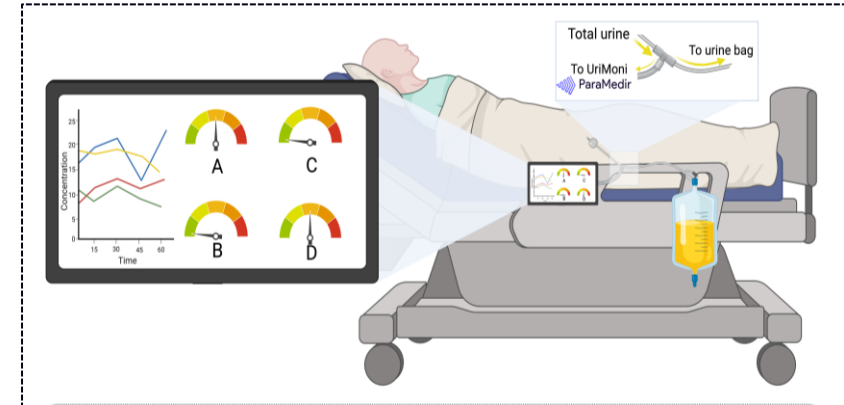


Microfluidics



Bedside  
monitoring

UriMoni™



**Real-Time Monitoring**  
**High Selectivity**  
**Low sample volume**  
**Multiple biomarkers**

## The Team



Ph.D - (*In vivo*) biosensor Development (15 yrs)  
Entrepreneurship (RuG), Finances (VU Ams)  
Business Dev, 10 yrs Project Mgt., 15 yrs

*CEO – Carlos Cordeiro, Ph.D*



Ph.D – Microfluidics (15 Yrs), Marie Curie Fellow  
15 yrs Project Management  
5 yrs Business Development

*CTO – Pieter Oomen, Ph.D*



Life Science / MedTech Management - 10yrs  
Multiple successful product introductions  
15 yrs Business Development

*CBO – Jasper Dijkstra M.Sc.*

Management Team

## Operational Team

R&D/Product Development

Software Development

Regulatory Affairs

## Advisory Board

### Key Opinion Leaders:

- AKI / ICU
- Cardiology

### Business Strategy

- Life Sciences/Medical Devices

## Acute Kidney Injury

>80 million AKI patients!

**1/5 hospitalized patients**

Growing rapidly

- High mortality rate: up to 70%
- ICU admissions: 60% of all IC beds
- Post-discharge burden
  - (Hemo)dialysis
  - Kidney transplant



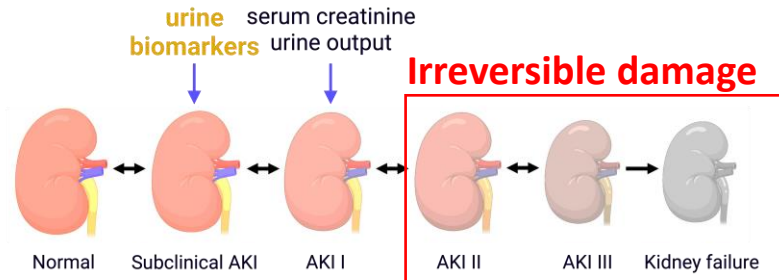
Direct Costs: **8000 billion €/year**

Indirect Costs:

- Hemodialysis
- Kidney Transplant



## Diagnosis - Monitoring



### Urine analysis

- Low frequency
- Large sample
- Off-site analysis



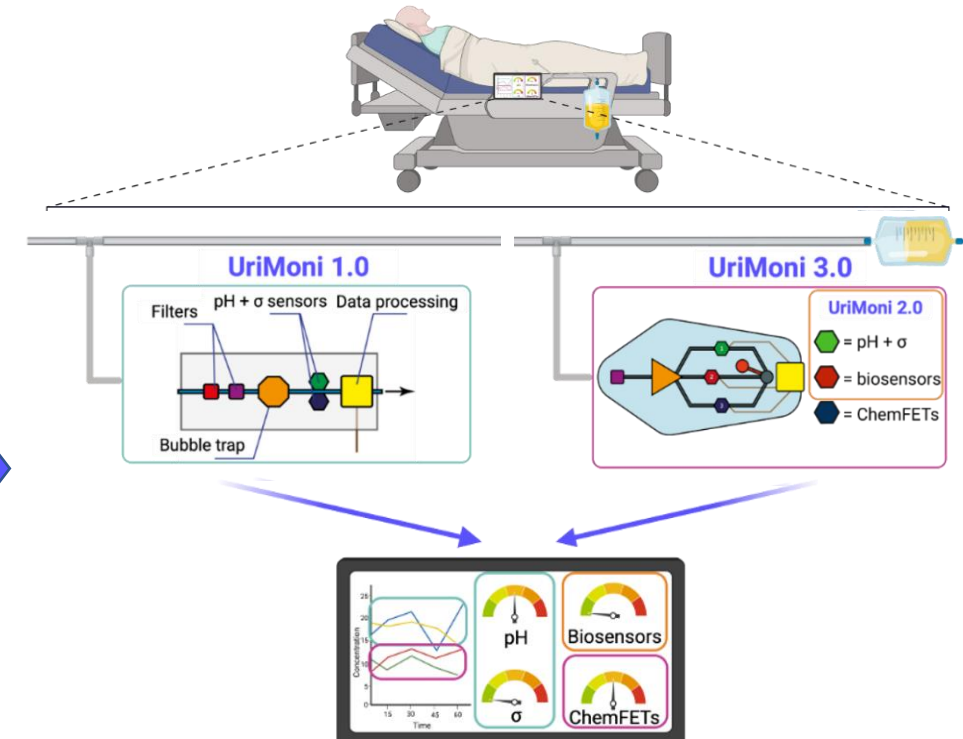
### Blood analysis

- Low frequency
- **Physiological delay:**
  - **24-48 hours!!**
- High patient variability



**Underestimation** of AKI severity  
**Delayed/absent** diagnosis & intervention  
**High workload** for nursing staff

## Bedside monitoring

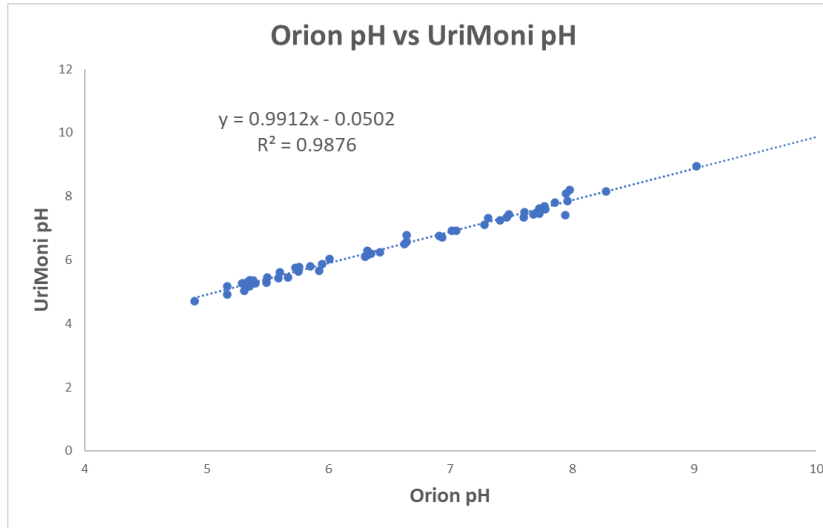


**Correct estimation** of AKI severity  
**Early diagnosis & effective** intervention  
**Reduction of workload** for nursing staff

## Bioanalytical Validation



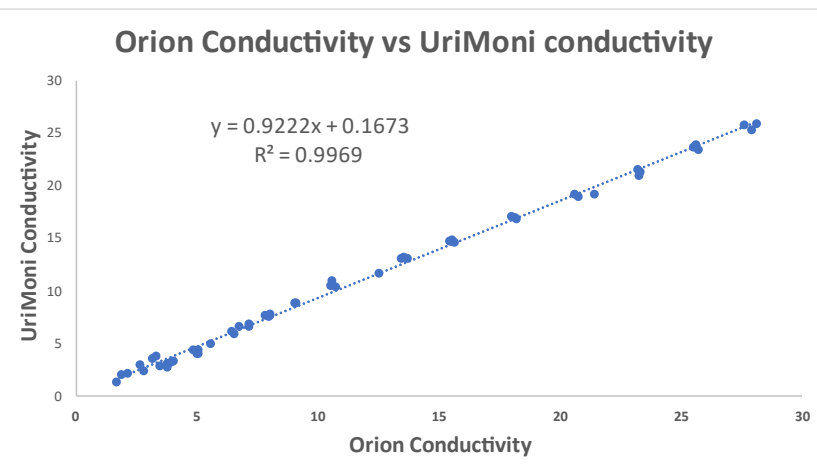
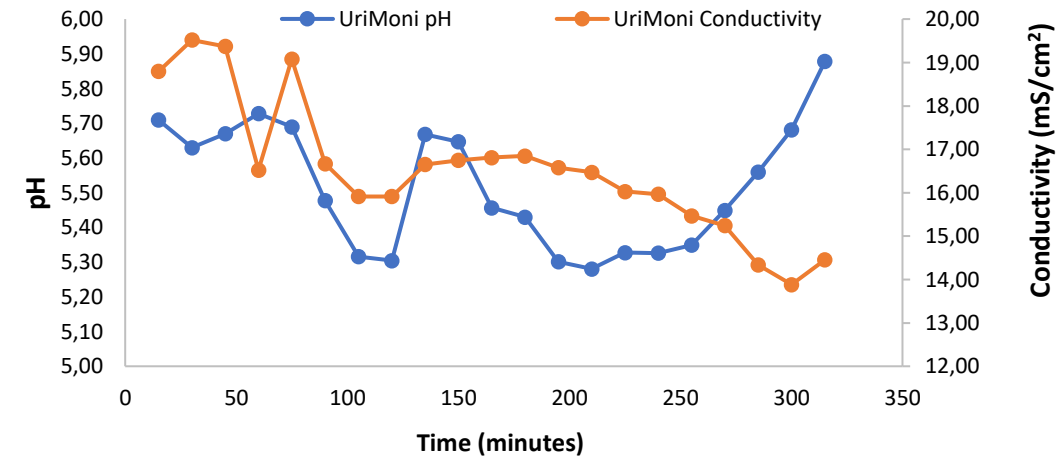
UriMoni™ prototype



## Clinical Validation

### (Pre-)clinical trials

- ICU: >200 patients (ca. 500 samples)
- AHF: >60 patients (ca 200 samples)



**Excellent Correlation  
with Gold Standard**

**Real-Time continuous and  
simultaneous monitoring**

# BioSensor Development

## RESEARCH AND DEVELOPMENT

Sensor Type	Sensors	Coating	Measurement in Beaker		Measurement in FlowCell		Short term Measurements	Long term Measurements
			Buffer	Urine	Buffer	Urine		
MONITORING	Conductivity							
	pH							
	Urea							
	Creatinine							
	Glucose							
	Lactate							
ION SENSORS	Na+							
	Cl-							
	NGAL							
	TMIP-2							
	KIM-1							

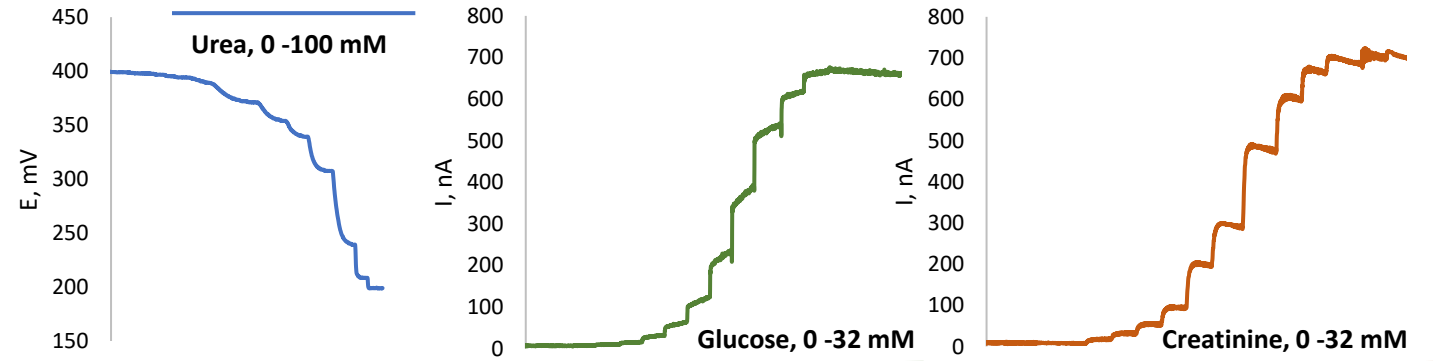
ParaMedir IP

## Bioanalytical Validation

Urea

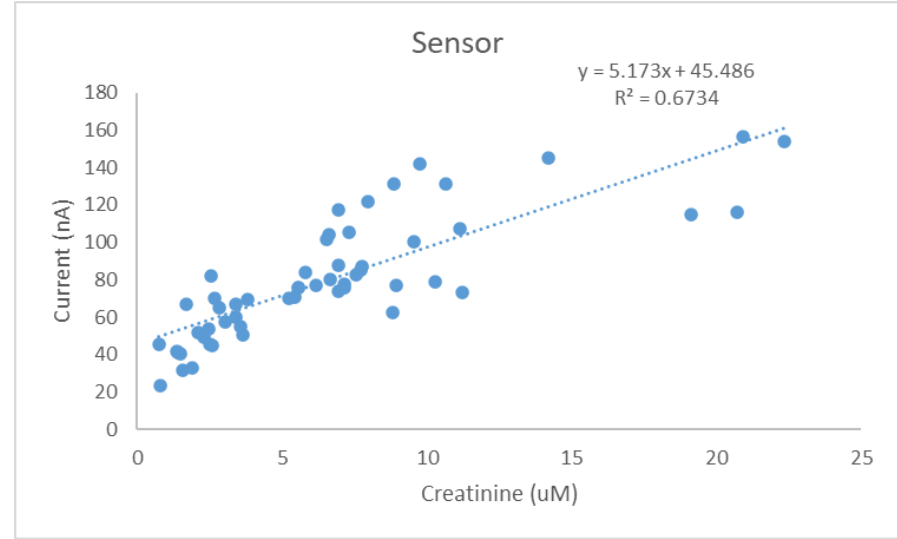
Glucose

Creatinine



## Clinical Validation

Creatinine



High Correlation with Gold Standard

# Proposition

## Funding

### Non-dilutive

Regional/National grants – ca 1 Mln€

### Dilutive

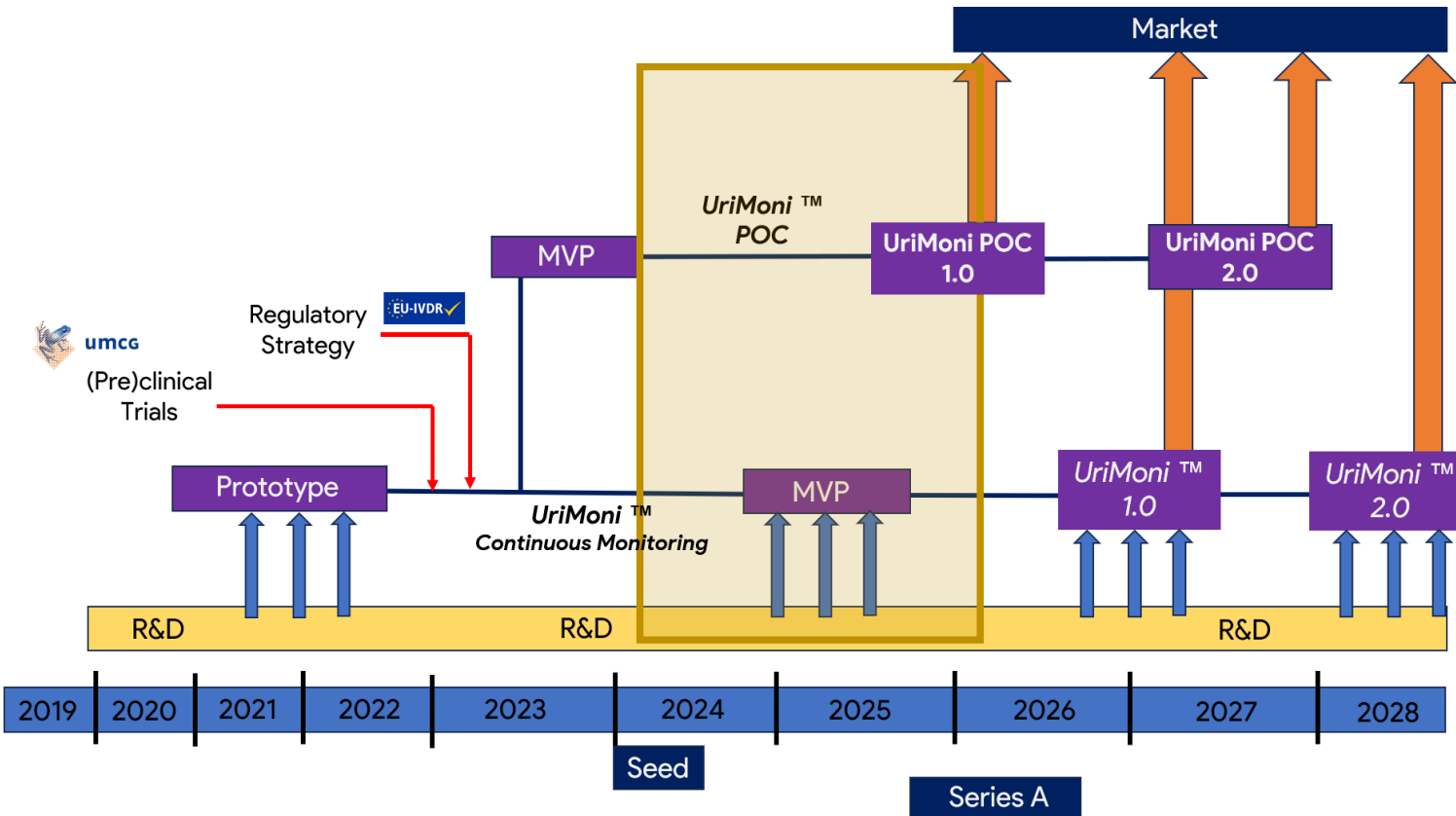
Angel investor – 200k€

Management team – > 0.5 Mln€

## Required

2 Mln €

- UriMoni™ 1.0
  - POC
  - Certified (IVDR)
- *Continuous Monitoring*
  - MVP (clinically validated)







# ParaMedir

*Cutting-edge technology at the bedside!*

Biosensor-based devices for personalized healthcare

## Thank you

[carlos.cordeiro@paramedir.nl](mailto:carlos.cordeiro@paramedir.nl)

[pieter.oomen@paramedir.nl](mailto:pieter.oomen@paramedir.nl)

[jasper.dijkstra@paramedir.nl](mailto:jasper.dijkstra@paramedir.nl)