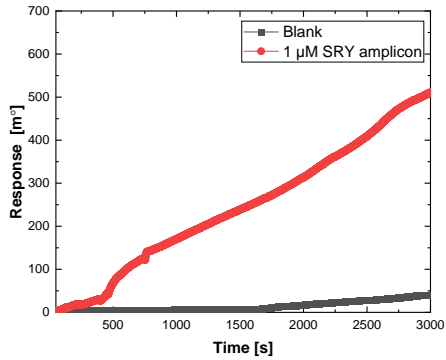


Results Step 4

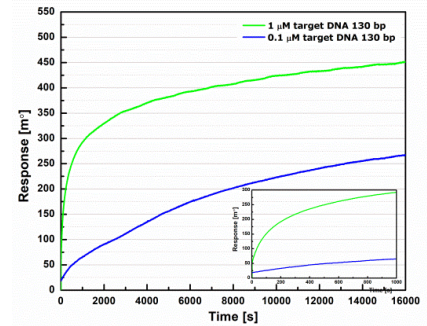
P1-Prenatal non-invasive screening, using cell free fetal DNA, extracted from the mother's blood. SPR-DNA

Protocol for lowering the detection limit



Comparative SPR response between blank solution consisting of H1 and H2 diluted in hybridization solution and sample consisting of 1 μM amplicon and 0.5 μM H1 and H2, diluted in hybridization solution

SPR response for 1 μM and 0.1 μM target sequence

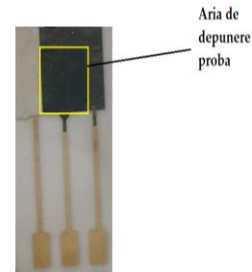


P2 - Non-invasive microsensors for continuous glucose monitoring during pregnancy

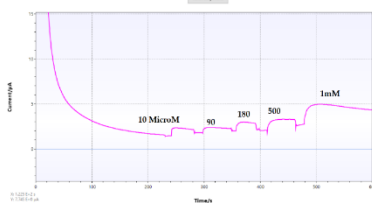
Monitoring protocol and testing of the sensor system / development plan for the next years



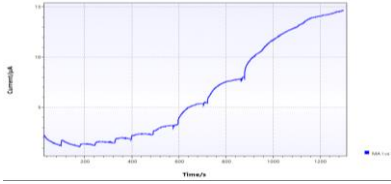
A Multi Potentiostat sensor assembly
 A- sensors
 B - The box in which the sensors are inserted to connect to MultiEmStat C- Multipotentiostat



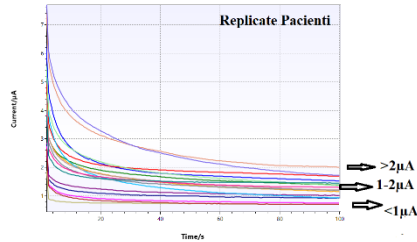
Saliva test deposition area



Recording of 5 samples continuously with increasing oxidation currents after adding standards / samples



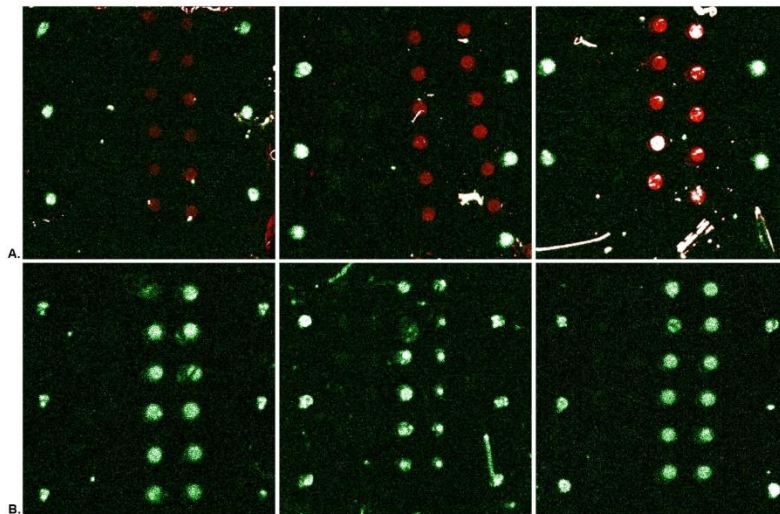
Recording of 10 samples continuously with increasing oxidation currents after adding 10 consecutive standards



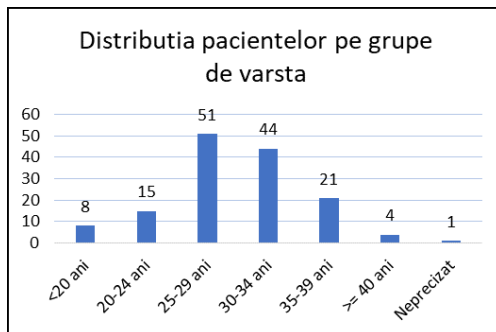
Samples of patients in the range 0-1000 μM in values of concentrations and low signals $<1\mu\text{A}$, averages between $1\mu\text{A}$ - $2\mu\text{A}$, high $>2\mu\text{A}$

P 3: Evaluation of premature birth risks due to the HPV-EVA-RINA infection.

Fluorescent marking protocol of samples from patients for detection based on the microarray system

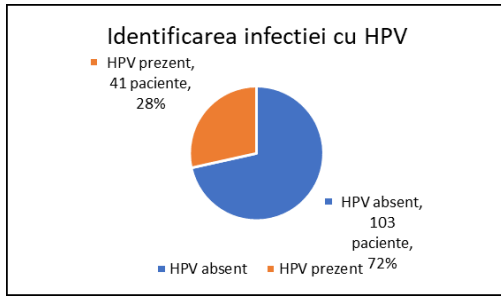


(A) Results of hybridization of fluorescently labeled single-stranded DNA (Cy5 - red) obtained by asymmetric PCR. (B) Fluorescent labeled single-stranded DNA (Cy3 - green) hybridization results obtained by digestion with Lambda exonuclease. The green-marked marginal columns represent the positive control of the probe immobilization on the microarray chip. Negative hybridization control shows no fluorescent signal.



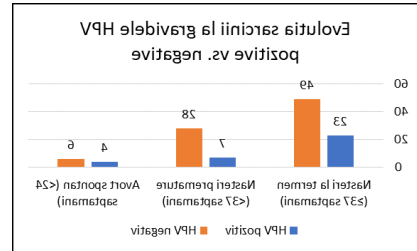
Distribution of patients by age groups Identification of HPV infection

In the study group of pregnant women, infection with at least one strain of HPV was identified in 41 people (28%)



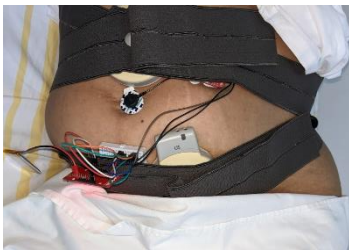
Identification of HPV infection

The evolution of pregnancy in HPV positive patients vs. negatively



Proiectul 4 - Wireless multi-sensor system for fetal activity and uterine contractions monitoring and classification during pregnancy.

Development of a demonstration system for monitoring abdominal movements during pregnancy



Demonstrator - wireless network of sensors for monitoring the movements of the mother's abdomen



Mobile application developed for retrieving and viewing data provided by the wireless sensor network