

Research and Development at a Private Healthcare Institution: Challenges and Opportunities

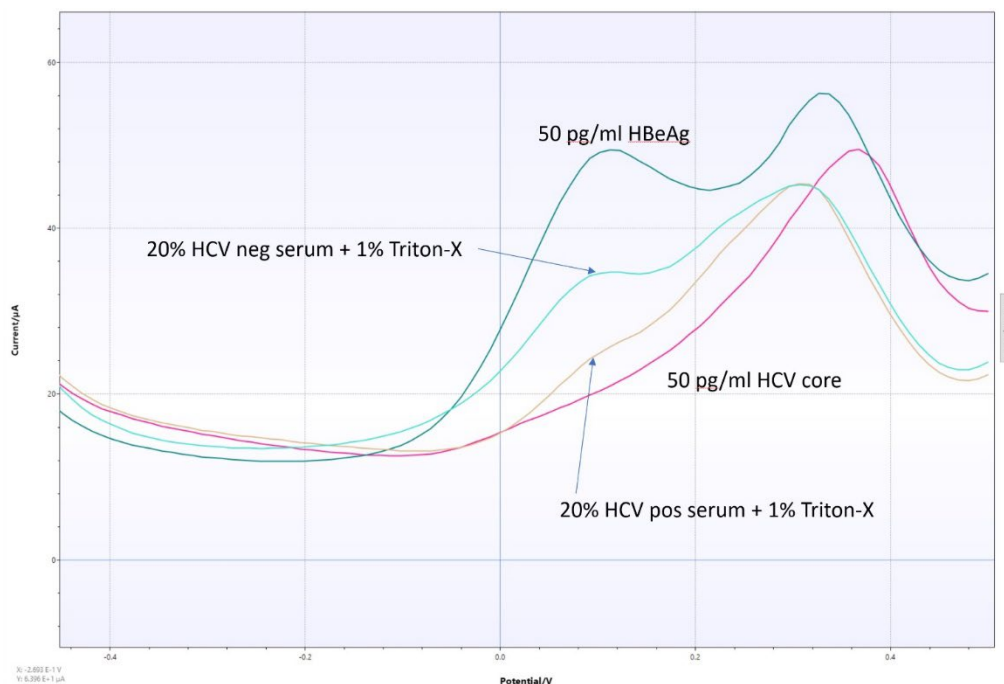
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The research ecosystem in Romania has been always struggling with securing the necessary funding. During the last few years, private companies also started investing in R&D activities. However, for private healthcare providers, such endeavours carry high risks, but also very rewarding opportunities. I will present the journey of our small healthcare business in creating a research lab and growing it over the years, by seizing opportunities in the field of developing new diagnostic devices and fostering collaborations with public research institutions.

The SARS-CoV-2 pandemic was a huge challenge worldwide. Our lab developed the first and only Elisa assay for detecting COVID-19 antibodies that was registered as a CE IVD device in Romania. With the lucky combination of a dedicated research team and readily available clinical samples, we adjusted our research goals to also develop diagnostic devices for hepatitis C core protein and anti-hepatitis Delta antibody detection as well. We also assessed the possibility of developing biosensors for such antibody detection, with mixed results. Our most promising results in this field involve gold nanoparticles functionalized with covalently linked virus antigens, using square wave voltammetry for antibody detection in clinical samples.



Example SWV graph for biosensors functionalized with covalently linked anti-HCV core antibodies, incubated with samples containing either HCV core antigen or an irrelevant antigen (HBeAg) or a serum sample negative for HCV infection.