Ovydrome's Catch: A Biosensor for the Early Detection of Polycystic Ovarian Syndrome With and Approach to Prevent Further Gynecological Cancers

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Polycystic Ovary Syndrome is the most common endocrine disorder in women of reproductive age. It has its existence in almost 1 in every 10 females. It is a hormonal disorder that affects the ovaries and leads to the formation of cysts which gradually takes the shape of endometrial malignancies. PCOS is caused by a combination of genetic and environmental factors. The condition is associated with Hyperandrogenism, Anovulation, Insulin resistance amongst others. 50% of women affected with the syndrome goes undiagnosed. 50% of them develop Type II Diabetes and have chances of experiencing strokes, cardiovascular diseases etc. Despite its high ubiquity, the exact cause and pathway of PCOS remains uncertain and there is no known cure. The prevailing diagnostic strategies involve a long list of procedures like blood tests, transvaginal ultrasound, pelvic examination etc. even after which its prevalence remains uncertain to determine. The aim of the study was to develop a Point of care (POC) lateral flow immunoassay test strip for urine with the potential biomarkers Testosterone and Hippuric acid with their corresponding antibodies Anti-Testosterone antibody and Anti-Hippuric acid antibody. The competitive xLFIA works such that the presence of a color at the test lines deem negative result and the absence of the color deem positive result. The control line always shows up marking the successful working of the strip. The key benefit of this strip is that it will be non-invasive, reasonably priced testing method that patients may use to their best advantage while screening in their comfort zone.

Awards Won:

Third Award of $1,000