Paper Based Pregnancy Test: The pLFI Technique

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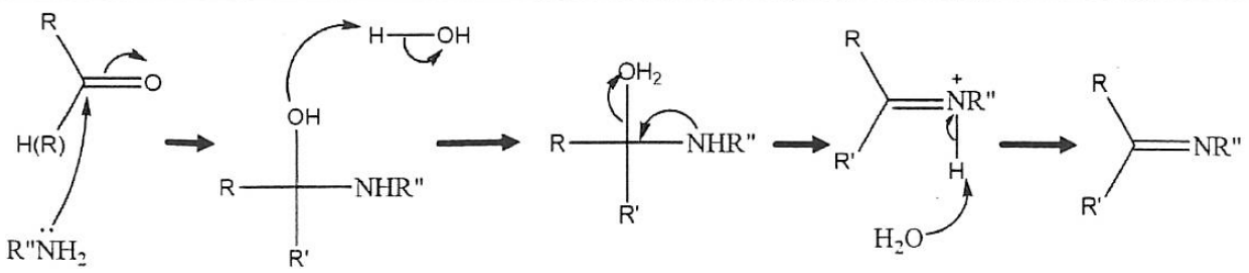
DESCRIPTION

The Paper Lateral Flow Immunoassay (pLFI) technique improves upon the traditional LFI, commonly recognized as diagnostic blood tests or pregnancy tests, reducing the costs of materials and precision in manufacturing. The pLFI takes the benefits of the traditional LFI and applies it to a new test platform that is simple, inexpensive, and streamlined. In contrast to a regular LFI which uses multiple layers and components, this invention has one layer made up of aldehyde functionalized printer paper that has been striped with capture and detection antibodies.

PROBLEM SOLVED

The invention has been developed to lower the cost of on-site clinical diagnostic tests and to expand the reach of diagnostic tests to vulnerable areas of the world. The tests can be used in clinics in industrialized countries for rapid diagnosis with the goal that sales of clinical tests in advanced countries would fund distribution of the same tests to third world countries.



Arrow pushing mechanism showing the process of how proteins bind to aldehyde functionalized paper.

KEY ADVANTAGES

- ***Lower cost of manufacturing***
- ***Simplified process***
- ***Rapid diagnosis***

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APPLICATIONS

The pLFI technique can be applied to detecting other biomarkers in biological fluids as well as any other applications where LFI tests are performed (e.g. clinical analysis, toxins and pathogens, pesticides, pharmaceuticals and drugs).

IP Status:
Patent Pending

Lead Inventor

Dr. Richard Watt
PhD, Biochemistry

BYU TECHNOLOGY transfer

Mike Alder
mike_alder@byu.edu
(801) 422-6266