MICROFLUIDIC BAR CODE ASSAY DEVICE

Tech ID: 21847 / UC Case 2012-005-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,634,673	04/28/2020	2012-005

BRIEF DESCRIPTION

Current protein microarrays can analyze targets from a single sample against hundreds of surface-immobilized capture molecules. However, problems preventing widespread adoption of traditional protein microarrays include high costs, long assay times, or a lack of customization, sample multiplexing, and specificity.

To meet these challenges, investigators at UC Berkeley have developed a rapid microfluidic device and assay using novel chemical and physical based techniques. The microfluidic assay uses minimal sample volume (5µl) on a small footprint format, which is amendable to portable, low-cost and disposable use at the point-of-care. The technology would allow the end user to rapidly pattern their own high-throughput arrays, reducing assay time from days or weeks to minutes.

SUGGESTED USES

- Clinical diagnostic devices and assays (e.g., identifying and detecting viral antibodies)
- Protein testing (e.g., research and diagnostic applications)
- Point-of-care diagnostic devices
- Lab-on-a-chip microfluidic devices
- Antibody development
- Drug development and high-throughput pharmaceutical research

ADVANTAGES

- Reduced consumption of sample and reagents
- Portable, low-cost and disposable
- Ease of automation
- Fast reaction times

PUBLICATION

CONTACT

Terri Sale
terri.sale@berkeley.edu
tel: 510-643-4219.

INVENTORS

- Apori, Akwasi A.
- Araz, Muhammet K.
- Herr, Amy E.

OTHER INFORMATION

KEYWORDS

Microfluidics, diagnostic, assay, electrophoresis, antibody detection, point-of-care, POC, confirmatory assay

CATEGORIZED AS

- **Materials & Chemicals**
  - Biological
- **Medical**
  - Diagnostics
- **Research Tools**
  - Other
- **Sensors & Instrumentation**
  - Medical

RELATED CASES

2012-005-0

Microfluidic barcode assay for antibody based confirmatory diagnostics

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Simultaneous Detection Of Protein Isoforms And Nucleic Acids From Low Starting Cell Numbers
- Single-Cell Isoelectric Focusing and pH Gradient Arrays
- Automated Microfluidic Device for Analyte Detection

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University of California, Berkeley Office of Technology Licensing
2150 Shattuck Avenue, Suite 510, Berkeley,CA 94704
Tel: 510.643.7201 | Fax: 510.642.4566
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