

## Affiblot screening device for antibody selection

### Development status

#### Phase 2

**Feasibility study.** There is a realistic design of the technology and the initial tests in the laboratory are leading to the specification of the technology requirements and its capabilities.

### Challenge

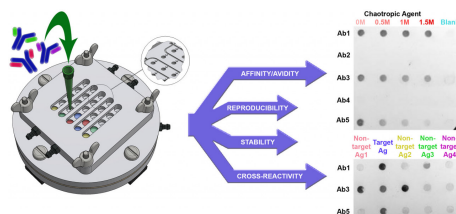
The increasing use of antibodies in various research fields (e.g. biotechnology) is closely related to their ever-expanding market portfolio. Thus, the selection of a suitable commercial antibody for a given application, which has appropriate affinity, high specificity, reproducibility, and low cross-reactivity, becomes crucial for this research area. A certain part of antibodies on the market does not fulfill the mentioned criteria therefore it is recommended to test the antibody before starting the experiments with them.

### IP protection status

Czech patent granted, doc. No. 308111 European patent granted, doc. No. 3669983

### Partnering strategy

*Co-development, Collaboration, licensing*



### Description

- Compact device based on standard procedure dot blot technology - Innovative lid with reagent reservoirs on the upper side and a pattern of drainage microchannels on the bottom side ensure all steps are inside the device - Comparison of antibodies from multiple perspectives without cutting the membrane (against dot blot) - Parallel evaluation of up to 5 antibodies - Affinity/avidity comparison - Determination of cross-reactivity with other biomolecules and whole cells (e.g. bacterial) - Batch-to-batch comparison Advantages of the technology: - Only smartphone, vacuum pump, and software for densitometric evaluation are needed - Speed of assay and reproducibility - Simplicity in interpretation - Antigen applied to the membrane can be both soluble (protein/peptide) and corpuscular (e.g. bacterial cell) - Easy application, disposal of reagents, and blotting membrane - Easy, reproducible, and precise SLA 3D printing of device - Patented solution - reduction of time-consuming steps used in standard methods such as ELISA or Western blot

### Institution

**University of Pardubice**

### Vlastník

**Univerzita Pardubice, Ústav analytické chemie AV ČR Brno**

### Commercial opportunity

The end users are all research teams and laboratories that work with antibodies or other affinity reagents.