## One-step Instrument-free High-affinity Aptamer Selection

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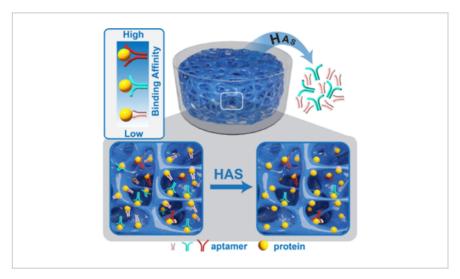


Figure 1. Schematic illustration of the HAS method

## **Technology Summary**

The inventors have developed a Hydrogel for Aptamer Selection (HAS) method for fast, reliable aptamer selection in one single step with a virtually 100% success rate. Aptamers, also known as chemical antibodies, can be applied to most, if not all, areas that antibodies have been designed for. This includes cancer therapy, anti-inflammation, anti-coagulation, regenerative medicine, molecular biosensing, cell separation, drug or nanoparticle delivery, detoxification, and more fields. Aptamers selected through HAS have high affinity, high specificity (minimal off-target effects), and high stability, but do not need modification or truncation.

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## Application & Market Utility

This new method is different from all traditional time-consuming and tedious selection methods and will be of high importance for areas that antibodies are able to be applied, including cancer therapy, anti-inflammation, regenerative medicine, molecular biosensing, and drug or nanoparticle delivery. For example, according to Mordor Intelligence, as of 2020, cancer therapies alone make up \$158 B in the market. Given the high interest and potential for aptamers, this alternative method for their selection is necessary to select aptamers faster and without negative selection or complicated instruments.

## **Next Steps**

The research team is seeking licensing and investment opportunities.



rbp5558@psu.edu

