



Antibody purification method based on porous polyprotein hydrogel OTT 1524

Applications

Protein purification, protein research, quantification of proteins, drug discovery, vaccine production, pharmaceuticals, affinity purification etc.

Target Problems

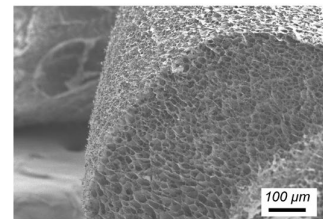
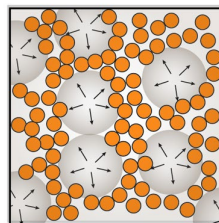
In current antibody purification techniques, antibodies bind in a single layer on a surface of agarose beads reducing overall yield and increasing retention time.

Key Features

- **Easy**- Straight forward process for making polyprotein-based porous hydrogel network,
- **Fast** – Purify proteins in 10 minutes,
- **More efficient** – Captures 3X more antibody on a weight for weight basis due to increased surface area.

Technology

Inventors at University of Wisconsin, Milwaukee (UWM) have developed a new class of protein hydrogels made from soluble proteins into a porous 3-dimensional stable network. This technology is fast and efficient without an increased cost.



This new method to produce polyprotein-based hydrogels with micron-sized pores facilitate their interaction with large particles and molecules, such as antibodies with increased active surface area. Unlike regular methods, where the antibodies bind in a single layer on a surface of agarose beads, our method produces binding sites throughout the material. This method offers a much higher surface density of binding sites and provides improved retention time and yield over current antibody purification methods. These protein-based porous hydrogels can be attractive candidates for purification of research-based or therapeutic antibodies used for a broad range of targets in oncology, immunology, hematology and many more prevalent medical applications.

Intellectual Property | PCT filed 2023

About The Inventor | [Ionel Popa](#) Associate Professor, Physics Department

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