

# 7 Steps of Protein



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Poster presentation:

High capacity magnetic supports for automated antibody and epitope-tagged protein purifications

CONTINUING EDUCATION (CME/CE/CEU) CREDITS: P.A.C.E. CE | Florida CE



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**Biography:** Barbara received her Ph.D. in biochemistry from the Medical College of Wisconsin. Her post-doctoral fellowship was performed at The Pennsylvania State University under the direction of Stephen Benkovic. She has over twenty years of industry experience, and she currently leads a team of R & D scientists in new product development in the areas of protein interactions, affinity chromatography, and protein sample preparation.

## Abstract:

For academic, biotech, and pharmaceutical scientists who are screening clones or performing high throughput protein purification, the goal is to automate the sample processing without sacrificing binding capacity. Traditionally, magnetic beads have facilitated process automation, but they lack the high binding capacity of agarose resins. On the other hand, agarose or sepharose resins have high binding capacity, but are not amenable to automation. Magnetic agarose resins combine the best of both formats by enabling high throughput sample processing with high protein binding capacity. Here we demonstrate the advantages of using magnetic agarose resins in simple benchtop protein purifications as well as their utility in 1) the screening of recombinant antibodies using the Invitrogen™ ExpiCHO™ Expression Systems and 2) the purification of recombinant proteins expressed by *in vitro* translation (cell-free) systems using the Thermo Scientific™ KingFisher™ Flex magnetic particle processor. Both the Protein AG and anti-DYKDDDDK magnetic agarose supports result in isolation of >0.5mg protein per sample at >90% purity.

Learning objectives — in this presentation you will learn the following information:

- Become familiar with the use of cell based and cell free systems for protein expression.
- Determine how to use magnetic affinity supports to screen best expressers.
- Learn how to automate sample processing with magnetic beads for protein purification.