Rapid mRNA-Display Selection of an IL-6 Inhibitor Using Continuous-Flow Magnetic Separation.

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Public Summary:
Since the invention of hybridoma technology, methods for generating affinity reagents that bind specific target molecules have revolutionized biology and medicine. In the postgenomic era, there is a pressing need to accelerate the pace of ligand discovery to elucidate the functions of a rapidly growing number of newly characterized molecules and their modified states. Nonimmunoglobulin-based proteins such as DARPins, affibodies, and monobodies represent attractive alternatives to traditional antibodies as these are small, soluble, disulfide-free, single-domain scaffolds that can be selected from combinatorial libraries and expressed in bacteria. We report herein a rapid, low-cost, highly efficient method for generating high-affinity antibody mimetics using small-scale, continuous-flow magnetic separation (CFMS).

Scientific Abstract: