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(54) **MICROFLUIDIC DEVICES AND USES
THEREOF**

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(57) **ABSTRACT**

The invention provides for devices and methods for interfacing microchips to cartridges and pneumatic manifolds. The design of the cartridges, microchips, and pneumatic manifolds can allow for the use of magnetic forces to capture magnetic beads in a chamber formed between the microchip and the cartridge or a chamber within the microchip. The devices of the invention can be used for mRNA amplification and purification.