

**Technology:** [Peritoneal dialysis methods and apparatus](#)

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**Inventor:** Martin Roberts

**Location:** Los Angeles, CA

**Topic:** Therapeutic

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The VA has joint ownership with The Regents of the University of California

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**Abstract:** A peritoneal-based artificial kidney processes peritoneal fluid without need for additional fluids. Spent dialysate is separated into a protein-rich stream and a protein-free stream. The protein-rich stream is regenerated using a sorbent assembly, and its protein composition can be modified by removal of selected protein(s). Alternatively, the spent dialysate is first processed in a sorbent assembly and then separated into the protein-rich and protein-free streams. Immobilization of urease allows more protein rich fluid to be regenerated and re-circulated into the peritoneal cavity for toxin removal and allows practicable development of portable and wearable artificial kidneys.