

EXECUTIVE SUMMARY
File # TT00-004CM

**METHOD AND APPARATUS FOR TREATING
RENAL DISEASE WITH HEMODIALYSIS**

SUMMARY:

Hemodialysis is the process of purifying blood through dialysis for individuals with End Stage Renal Disease (ESRD). Hemodialysis is a \$14.5 billion industry in the U.S., treating approximately 230,000 people with ESRD. More than 850,000 are treated in this \$22 billion market, worldwide. The U.S. market for dialysis is predicted by the United States Renal Data System (USRDS) to grow to more than 500,000 patients by the year 2010. Although the process of dialysis remains virtually unchanged since the 1970's, it is not optimal and holds room for improvement. **Dr. Paul Bolin**, Section Head for Nephrology at East Carolina University's Brody School of Medicine and his colleague **Dr. Craig McCotter** have developed a device that increases the clearance of dialyzers by introducing pulsatile flow into the system, thus improving efficiency.

POTENTIAL AREAS OF APPLICATIONS: Improvements to hemodialysis process.

MAIN ADVANTAGE OF INVENTION:

- Increased molecular clearance of urea and creatinine
- Potential for less membrane clotting
- Avoidance of molecular channeling
- 30% more efficient than current technology

STATE OF DEVELOPMENT: Animal data available.

FURTHER R & D REQUIRED: Product development is required for human studies.

LICENSING POTENTIAL: University seeks research & development partners.

PATENT STATUS: U.S. patent pending

DISCLOSURE: Detailed description of data may be made available upon execution of a confidential disclosure agreement.

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