Kidney Injury Dysfunction Support (KIDS) - CRRT

EXECUTIVE SUMMARY

TEAM

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FUNDING
$310K Biolocity Grant

INTELLECTUAL PROPERTY
2 Issued Patents

STATUS
Proof of Concept Prototype Validated

TECHNOLOGY

The KIDS device is a novel precision Continuous Renal Replacement Therapy (CRRT) device that will improve outcomes for pediatric patients, who are currently treated by traditional adult CRRT machines. This will improve standard of care, as adult CRRT machines require a large extracorporeal blood volume, and have high fluid error rates associated with treatment.

The device has been designed to be a stand-alone product that has every necessary feature of current CRRT machines.

MARKET NEED

There are approximately 423 Pediatric ICUs in the US; and on average each requiring 5 devices. The total potential US capital equipment addressable market for a pediatric CRRT is estimated between $55M and $84M with a $9M to $14M annual replacement market once full market penetration has been achieved. The consumable pediatric market application is estimated at $12.5 million annually.

All current CRRT products are designed to provide slow, continuous treatment that mimics the function of the injured kidney. Unfortunately, current products are not designed to precisely measure fluid volumes required to treat children under 20 kilograms in weight.

KIDS-CRRT will be a substantial improvement from current standards for treating acute kidney injury in pediatric populations, as current off-label use of adult devices is the only available option for patients who weigh under 20kg. Though the pediatric application would serve as the entry market, the scalability of the KIDS-CRRT technology could also allow it to serve as a next-generation adult product, or as an at-home dialysis system.

STATUS

A functional proof-of-concept prototype has been developed, tested, and validated.

For more information on this technology contact:
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