Microscopic characterization and ablation of substrate to treat cardiac arrhythmias

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Technology description

Invention Summary

This product utilizes a disposable probe with a catheter in order to treat atrial fibrillation. The probe is capable of creating an image that can be used to steer the catheter during atrial fibrillation treatment. U-5896 has the potential to improve outcomes for ablation therapy, which is currently not the preferred method of treating atrial fibrillation as it is more invasive and less effective than drug therapy. This novel method would replace current ablation therapy and potentially be preferable to drug therapy in some cases.

Market Opportunity

This technology could apply to oncology, neurosurgery, gastroenterology, and animal model research; however, the developers have chosen to focus on treating atrial fibrillation through ablation therapy. Currently, approximately 3 million people are diagnosed with atrial fibrillation in the United States with a market size of $26 billion. Roughly 27% of patients are treated using ablation therapy providing a target market of $7 billion. Furthermore, if this technology improves patient outcomes, drug therapy could be replaced with this method expanding the market size. Ideal early adopters would be surgeons who are already performing ablation therapies. As this technology replaces ablation and fibrillation catheters in all surgeries, if the technology was fully adopted but the market size for ablation therapies did not increase, they would ship approximately 100,000 units per year. This results in an market potential of approximately $300 million to $600 million for the first several years.

Advantages

Increased accuracy in determining need for therapy
Better information and guidance for doctors throughout procedure
Improved patient outcomes
Decreased costs for treatment

Institution

The University of Utah

Inventors

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