Intravascular Photoacoustic Tomography Assessment of Lipid Content in Arteries

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Technology description

Background

Photoacoustic imaging is a biomedical imaging modality based on the use of laser-generated ultrasound. This technology has been improving for the last ten years. Currently, other types of imaging like x-ray angiography or OCT have some problems including insufficient resolution or does not have enough depth or chemical information. There is a need for a new technology that can improve photoacoustic imaging and make it a better solution than current imaging technologies.

Technology Summary

Researchers at Purdue University have developed a new technology that is a catheter-based intravascular imaging in the presence of luminal blood. This technology allows doctors or preclinical researchers to get information about lipid deposit in arterial wall in vivo. It does this by accurately and reliably assess the vulnerability of the artery. This technology could greatly improve artery assessment by photoacoustic imaging in the future.

Application area

Artery assessment
Photoacoustic imaging

Advantages

Accurate assessment of artery
Reliable assessment of artery

Institution

Purdue University

Inventors

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