THE UNIVERSITY of TEXAS
HEALTH SCIENCE CENTER AT HOUSTON
Office of Technology Management

APPARATUS AND METHOD FOR PALOPGRAPHIC CHARACTERIZATION OF VULNERABLE PLAQUE AND OTHER BIOLOGICAL TISSUE

Market: Information collected by the Centers for Disease Control and Prevention during 2006 showed that cardiovascular disease (CVD) from all causes accounts for 29% of deaths worldwide and ranks second only to infectious and parasitic diseases. In the United States alone, atherosclerosis reportedly affects one in four persons, causing approximately 42% of all deaths. With a market size of more than $15 billion, the market for novel atherosclerosis therapies has very lucrative potential.

Competitors and Current Problems: Atherosclerosis, a process underlying coronary artery disease, myocardial infarction and cerebrovascular disease, is a leading cause of morbidity and mortality in industrialized countries. Imaging techniques currently available utilize invasive and non-invasive methods to characterize coronary artery stenosis. The present invention provides a device that enhances the technology of prior art to detect and diagnose atherosclerotic plaques.

The Technology: A researcher at the University of Texas Health Science Center at Houston (UTHSC-H) has developed a device that can be used to characterize biological tissue such as vulnerable plaque and cancer tissue by determining tissue stiffness and texture. This device utilizes a catheter with an expandable element at the end equipped with pressure sensors to detect changes in tissue stiffness, temperature and pH. Furthermore, the catheter can be used to determine the width of any section of the body cavity. Data from all sensors and width gauges are created by a software reconstruction program that generates three-dimensional image maps of the tissue.

NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION

The preceding is intended to be a non-confidential summary of a novel technology created at the University of Texas Health Science center at Houston (UTHSCH), for which the University has obtained patent protection.

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