

Title (en)
SYSTEMS AND METHODS FOR DETERMINING LESION DEPTH USING FLUORESCENCE IMAGING

Title (de)
SYSTEME UND VERFAHREN ZUR BESTIMMUNG EINER LÄSIONSTIEFE DURCH FLUORESZENZBILDGEBUNG

Title (fr)
SYSTÈMES ET PROCÉDÉS PERMETTANT DE DÉTERMINER LA PROFONDEUR D'UNE LÉSION GRÂCE À L'IMAGERIE DE FLUORESCENCE

Publication
EP 3068288 A4 20170726 (EN)

Application
EP 14861958 A 20141114

Priority

- US 201361904018 P 20131114
- US 2014065774 W 20141114

Abstract (en)
[origin: CN106028914A] Systems, catheter and methods for treating Atrial Fibrillation (AF) are provided, which are configured to illuminate a heart tissue having a lesion site; obtain a mitochondrial nicotinamide adenine dinucleotide hydrogen (NADH) fluorescence intensity from the illuminated heart tissue along a first line across the lesion site; create a 2-dimensional (2D) map of the depth of the lesion site along the first line based on the NADH fluorescence intensity; and determine a depth of the lesion site at a selected point along the first line from the 2D map, wherein a lower NADH fluorescence intensity corresponds to a greater depth in the lesion site and a higher NADH fluorescence intensity corresponds to an unablated tissue. The process may be repeated to create a 3 dimensional map of the depth of the lesion.

IPC 8 full level
A61B 5/00 (2006.01); **A61B 18/00** (2006.01)

CPC (source: EP US)
A61B 5/0044 (2013.01 - EP US); **A61B 5/0071** (2013.01 - EP US); **A61B 5/0084** (2013.01 - EP US); **A61B 5/4836** (2013.01 - EP); **A61B 18/02** (2013.01 - EP); **A61B 18/12** (2013.01 - EP); **A61B 2018/00351** (2013.01 - EP US)

Citation (search report)

- [X] LUTHER MITCHELL SWIFT: "Real-Time Visualization of Cardiac Ablation Lesions Using Endogenous NADH Fluorescence and Reflected Light", SOUTHWESTERN UNIVERSITY M.S. IN MICROBIOLOGY, 23 July 2013 (2013-07-23), XP055381790, ISBN: 978-1-303-33207-4, Retrieved from the Internet <URL:http://search.proquest.com/docview/1436990880> [retrieved on 20170614]
- [A] M. MERCADER ET AL: "Use of endogenous NADH fluorescence for real-time in situ visualization of epicardial radiofrequency ablation lesions and gaps", AMERICAN JOURNAL OF PHYSIOLOGY: HEART AND CIRCULATORY PHYSIOLOGY, vol. 302, no. 10, 9 March 2012 (2012-03-09), US, pages H2131 - H2138, XP055381470, ISSN: 0363-6135, DOI: 10.1152/ajpheart.01141.2011
- See references of WO 2015073871A2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
CN 106028914 A 20161012; CN 106028914 B 20200915; CN 112674861 A 20210420; EP 3068288 A2 20160921; EP 3068288 A4 20170726

DOCDB simple family (application)
CN 201480062665 A 20141114; CN 202010834384 A 20141114; EP 14861958 A 20141114