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(71) Applicants (for all designated States except US): **VAN-
DERBILT UNIVERSITY** [US/US]; 1207 17th Avenue
South, Suite 105, Nashville, TN 37212 (US). **CLEVE-
LAND CLINIC FOUNDATION** [US/US]; 9500 Euclid
Avenue, Cleveland, OH 44195 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WEI-CHIANG, Lin**

[US/US]; 3200 Coral Way, Unit PH201, Miami, FL 33145
(US). **TOMS, Steven, A.** [US/US]; 2890 West Park Boule-
vard, Shaker Heights, OH 44120 (US). **MAHADEVAN-
JANSEN, Anita** [US/US]; 7517 Hallows Drive, Nashville,
TN 37235 (US). **CHARI, Ravi, S.** [US/US]; 1209 Canter-
bury Drive, Nashville, TN 37205 (US).

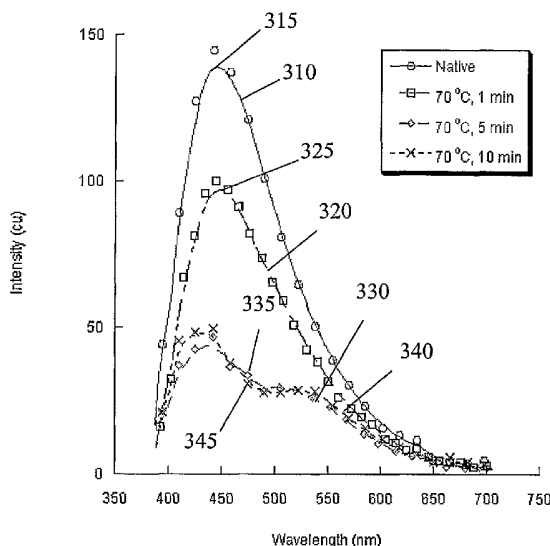
(74) Agent: **XIA, Tim, Tingkang**; Morris, Manning & Martin,
LLP, 1600 Atlanta Financial Center, 3343 Peachtree Road,
N.E., Atlanta, GA 30326-1044 (US).

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(54) Title: METHODS AND APPARATUS FOR OPTICAL SPECTROSCOPIC DETECTION OF CELL AND TISSUE DEATH



(57) Abstract: A method for detecting death process of a cell or tissue of a living subject. In one embodiment, the method includes the steps of illuminating the cell or tissue of the living subject with a coherent light, collecting fluorescent light returned from the illuminated cell or tissue of the living subject, identifying a NAD(P)H peak of a spectrum of the collected fluorescent light with a wavelength, λ_{peak} , and obtaining the intensity of the NAD(P)H peak of the spectrum of the collected fluorescent light substantially corresponding to the wavelength λ_{peak} . These steps are repeated at sequential stages until the intensity of the NAD(P)H peak of the spectrum at a current stage is less than the intensity of the NAD(P)H peak of the spectrum at an earlier stage immediately prior to the current stage so as to detect death process of the cell of the living subject at the current stage using the intensity of the NAD(P)H peak of the spectrum.



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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,813,987 A (MODELL et al) 29 September 1998 (29.09.1998), column 5, lines 50-67, column 9, lines 47-67, column 10, lines 1-35, column 17, lines 33-36.	1-18
Y	US 20030170898 A1 (GUNDERSEN et al) 11 September 2003 (11.09.2003), paragraphs [0007] [0015] [0018] [0033] [0034] [0063] [0064] [0094] [0189] [0194] [0200] [0204] [0253] [0264].	1-18
Y	US 6,167,297 A (BENARON) 26 December 2000 (26.12.2000), column 4, lines 44-67, column 5, lines 1-7.	45-60
Y	US 6,537,211 B1 (WANG et al) 25 March 2003 (25.03.2003), column 4, lines 1-6 lines 49-67.	19-44

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☐ See patent family annex.

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner of Patents
P.O. Box 1450
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Facsimile No. (703) 305-3230

Authorized officer

Baisakhi Roy

Telephone No. 571-272-7139

Sheila H. Venky
Patent Specialist
Tech. Center 3700