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(54) Title: DETECTION OF PROTEASE AND PROTEASE ACTIVITY USING A SINGLE NANOCRESCENT SERS PROBE

(57) Abstract: This invention pertains to the in vitro detection of proteases using a single peptide-conjugate nanocrescent surface enhanced Raman scattering (SERS) probes with at least nanomolar sensitivity. The probe enables detection of proteolytic activity in extremely small volume and at low concentration. In certain embodiments the probes comprise an indicator for the detection of an active protease, where the indicator comprises a nanocrescent attached to a peptide, where said peptide comprises a recognition site for the protease and a Raman tag attached to the peptide.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/10722

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **A01N 37/18(2006.01);A61K 38/00(2006.01)**

USPC: **514/2**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 514/2

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)
 Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005/0272114 A1 (DARZINS et al) 08 December 2005 (08.12.2005). See entire document, e.g., claims 124-130.	1-56
A	US 20060024808 A1 (DARZINS et al) 02 February 2006 (02.02.2006) See entire document.	1-56
A	US 20050048639 A1 (WALLACH et al) 03 March 2005 (03.03.2005). See entire document.	1-56
A	US 20060008924 A1 (ANKER et al) 12 January 2006 (12.01.2006). See entire document including figures.	1-56

Further documents are listed in the continuation of Box C. See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:
EAST (US-PGPUB, USPAT, EPO, JPO, DERWENT) and STN (REGISTRY, HCAPLUS, BIOSIS, EMBASE, MEDLINE)