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(12) **United States Patent**
Ma

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(54) **PTERIDINE ANALYSIS BY CAPILLARY ELECTROPHORESIS USING LASER-INDUCED FLUORESCENCE DETECTION**

Han et al. ("Pteridine Analysis in Urine by Capillary Electrophoresis Using Laser Induced Fluorescence Detection", Anal. Chem. Apr., 1999, 71, 1265-1269).*

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

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The present invention provides a unique method and means for detecting pteridines in biological samples using the novel combination of capillary electrophoresis (CE) and laser-induced fluorescence detection (LIF). The method is effective in detecting eight pteridine compounds at very low detection limits of less than about 1×10^{-10} M. The method allows for the detection of pteridines for various purposes involving metabolism and function investigation, including cancer monitoring and precancer screening.

(51) **Int. Cl.**⁷ **G01N 27/447**

(52) **U.S. Cl.** **204/451**

(58) **Field of Search** 204/451, 456, 204/601, 606, 600, 450; 422/69; 210/656

(56) **References Cited**

PUBLICATIONS

Fuller et al. ("Single Neuron Analysis by Capillary Electrophoresis with Fluorescence Spectroscopy", Neuron, vol. 20, 173-181, Feb. 1998,*)

16 Claims, 4 Drawing Sheets

