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(54) Title: **DIAGNOSTIC BIOMARKER FOR OXIDATIVE STRESS**

(57) Abstract: The present invention is related to a method of identifying oxidative stress (OS) caused by ageing and/or Ultraviolet (UV) light exposure in a test cell, comprising (a) determining the methylation status of at least one CpG site in Protein Tyrosine Phosphatase Receptor Type N2 (PTPRN2), and/or the regulatory region of PTPRN2 in a DNA sample obtained from the test cell, (b) comparing the methylation status of the CpG site of PTPRN2 from (a) with that of a control without OS caused by ageing and/or UV light exposure, wherein a difference in the methylation status of the CpG site of PTPRN2, and/or the regulatory region of PTPRN2 in the test cell compared to the CpG site in the control is indicative of the test cell having OS caused by exposure of the cell to UV light and/or ageing.



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