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(71) Applicants: ALTEON INC. [US/US]; 170 Williams Drive, Ramsey, NJ 07446 (US). THE PICOWER INSTITUTE FOR MEDICAL RESEARCH [US/US]; 350 Community Drive, Manhasset, NY 11030 (US).

(72) Inventors: CERAMI, Anthony; Ram Island Drive, Shelter Island, NY 11964 (US). ULRICH, Peter, C.; 148 DeWolf Road, Old Tappan, NJ 07675 (US). WAGLE, Dilip, R.; Cottage No. 4, 731 Route 9W, Valley Cottage, NY 10989 (US). HWANG, San-Bao; 38 Carriage Way, Sudbury, MA 01776 (US). VASAN, Sara; 1155 Warburton Avenue, Yonkers, NY 10701 (US). EGAN, John, J.; 63 Ball Road, Mountain Lakes, NJ 07046 (US).

(74) Agents: RENDA, Barbara, L. et al.; Klauber & Jackson, 411 Hackensack Avenue, Hackensack, NJ 07601 (US).

(54) Title: USE OF THIAZOLIUM COMPOUNDS FOR PREVENTING AND REVERSING THE FORMATION OF ADVANCED GLYCOSYLATION ENDPRODUCTS

(57) Abstract

The present invention relates to compositions and methods for inhibiting and reversing nonenzymatic cross-linking (protein aging). Accordingly, compositons are disclosed which comprise an agent capable of inhibiting the formation of advanced glycosylation endproducts of target proteins, and which additionally reverse pre-formed crosslinks in the advanced glycosylation endproducts by cleaving alpha-dicarbonyl-based protein crosslinks present in the advanced glycosylation endproducts. Certain agents useful are thiazolium salts. The method comprises contacting the target protein with the composition. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated. A novel immunoassay for detection of the reversal of the nonenzymatic crosslinking is also disclosed.