



# A Review on Inhibition of RAGE via Marine Sources, Herbal Sources and Food Substances

Dr. Rahul Wagh<sup>1</sup>, June Milind Wagh<sup>2</sup>, Chanderhash Prajapati<sup>3</sup>, Himani Tanwar<sup>4</sup>, Komal Rathee<sup>5</sup>

Associate Professor, Department of Chemistry, Patkar College, Goregaon (W), Mumbai, Maharashtra, India<sup>1</sup>

Master of Pharmacy, Institute of Chemical Technology, Mumbai, Maharashtra, India<sup>2</sup>

Master of Technology in Biotechnology, Apeejay STYA University, Gurugram, Haryana, India<sup>3</sup>

M.Tech Biotechnology, Apeejay STYA University, Gurugram, Haryana, India<sup>4</sup>

Master of Science in Zoology, DPG Degree College, Gurugram, Haryana, India<sup>5</sup>

**Abstract:** Receptor for Advanced Glycation End-products (RAGE), also known as AGER, is a 35 kilodalton transmembrane receptor of the Immunoglobulin super family. Its name is mainly due to its ability to bind to advanced glycation end products (AGE), including glycoproteins and glycans which have been modified non-enzymatically through the Maillard reaction. RAGE is referred to as a Pattern Recognition Receptor. Studies have determined the contribution of protein glycation to disease-states and have mainly aimed at the harmful effects and mechanisms of these glycotoxins. Thus, the development and testing of AGE inhibitors, especially natural anti-AGE formulations, i.e. RAGE inhibitors without any side effects, may provide a therapeutic approach. In particular, the pursuit of RAGE inhibitors using in vitro and in vivo models identifies naturally occurring compounds for preventing glycation. This leads to inhibition of RAGE. Synthetic compounds also can inhibit the RAGE. Available data suggests that natural and synthetic compounds which have certain chemical constituents, may attenuate glycation, and can lead to RAGE inhibition via Natural as well as synthetic Sources.

**Keywords:** RAGE, Maillard reaction, Vascular Endothelial Growth Factor (VEGF) and Resveratrol.

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