

**TABLE OF CONTENTS**

1. **The Maillard Reaction – A Journey from the Discovery of Advanced Glycation Endproducts to their Chief Cellular Receptor, RAGE: A Mechanism Underlying Diabetic Complications and the Inflammatory Response** Ravichandran Ramasamy, Shi Fang Yan and Ann Marie Schmidt
2. **Activation of cellular antioxidative defense mechanisms by CML-RAGE interaction** Sebastian Foth and Veronika Somoza
3. **The Pathogenic Potential of Different Sized AGE Modified Molecules via RAGE Signalling Pathways.** Sally A. Penfold , Karly C. Sourris, Melinda T. Coughlan, Adeline L. Tan, David M. Kaye, Mark E. Cooper, Josephine M. Forbes
4. **Glycated proteins bind to ERM proteins and modulate their actions** Leon A Bach, Andrea Young, Marisa A Gallicchio, and E Anne McRobert
5. **Modification of Human Serum Albumin with Reactive Aldehydes Alters the Antioxidant Activity.** Katsumi Mera, Kazuhiro Takeo, Daisuke Honda, Toru Maruyama, Masaki Otagiri and Ryoji Nagai
6. **A novel mechanism of mental illness: Carbonyl stress induced schizophrenia: a glyoxalase I deficit pedigree with psychosis.** Masanari Itokawa<sup>1</sup>, Makoto Arai<sup>1</sup>, Takeo Yoshikawa, Yuji Okazaki and Toshio Miyata
7. **Glyceraldehyde-derived Advanced Glycation End Products Decrease White Adipose Tissue Weight and Downregulate Leptin, Adiponectin, and Macrophage Marker.** Hirohito Watanabe, Yuki Yoshid and Fumitaka Hayase
8. **Methylglyoxal modification of heat-shock protein 27 in colon mucosa of human ulcerative colitis.** Tomoko Oya-Ito, Yuji Naito, Tomohisa Takagi, Osamu Handa, Hirofumi Matsui, Koji Uchida, Masaki Yamada, Keisuke Shima and Toshikazu Yoshikawa
9. **Extracellular matrix glycation and pathogenesis of diabetic complications** Paul A. Voziyan

10. **Structural analysis of a skin collagen-linked fluorophore that increases in diabetes and end-stage renal disease** David R. Sell, Ina Nemet and Vincent Monnier
11. **Advanced Glycation End-products: biomarkers for age-related macular degeneration.** Jiaqian Ni Ram H Nagaraj and John W Crabb
12. **Metal Catalyzed Lens Crystallin Oxidation During Aging and in Diabetes : the Role of Glutathione.** Xingjun Fan, Jianye Zhang, Ina Nemet, Vincent M Monnier
13. **Impaired oxygen metabolism in diabetic nephropathy: advanced glycation, hypoxia, and oxidative stress**Toshio Miyata and Masashi Okamura
14. **Role of carbonyl/oxidative stress on the pathogenesis of chronic kidney disease and the metabolic syndrome.** Takefumi Mori, Qi Guo, Takashi Nakamichi, Toshio Miyata, Masaaki Nakayama, Susumu Ogawa, Kyozo Suyama and Sadayoshi Ito
15. **Role of the Glyoxalase System in Renal Senescence** Yoichiro Ikeda, Masaomi Nangaku, and Reiko Inagi
16. **Serum low molecular weight fluorescent AGEs are higher in neonates than in adults: role of kidney metabolism** Alejandro Gugliucci, Satoshi Kimura, Teresita Menini, Jennifer Taing and Masahide Numaguchi
17. **The Renin-Angiotensin System and Advanced Glycation End-products in diabetic nephropathy. How important are these pathways as therapeutic targets?** Karly C. Sourris and Josephine M. Forbes
18. **N $\epsilon$ -Carboxymethyllysine: its origin in selected foods and its urinary and faecal excretion in healthy humans** Frédéric J Tessier, Céline Niquet, Larbi Rhazi, Karima Hedhili, Pilar Navarro, Isabel Seiquer and Cristina Delgado-Andrade
19. **Oxidative stress and the Maillard reaction in food** Monika Pischetsrieder
20. **Dicarbonyls in cola drinks sweetened with sucrose or high fructose corn syrup** Paul J Thornalley and Naila Rabbani

21. **Formation of mutagens/carcinogens under physiological conditions and the inhibitory effects of daily foods on their formation and the induction of genotoxicity** Naohide Kinae Motomi Hirano Tomoko Urahira, Misako Iio, Shoji Masumori and Shuichi Masuda
22. **Antitumor Effects of the Early Maillard Reaction Products**  
V.V. Mossine, V.V. Glinsky and T.P. Mawhinney
23. **AGEs fluorescence of plasma, urine and skin reflects dietary exposure to Maillard products in formula-fed infants** Katarína Šebeková, Giselle Saavedra, Kristína Klenovicsová, Peter Boor and Ines Birlouez-Aragon
24. **Novel Maillard pigments formed from furfural and xylose with lysine under 1 weakly acidic conditions** Masatsune Murata
25. **Urinary Excretion of Non-Toxic and Toxic Carbonyls as Urea Derivatives** K.Suyama, M. Endo, T. Mori and T. Miyata
26. **Isolation of Glucose Ureide, Urea Derivative of Glucose, in Human Urine** Kyozyo Suyama and Atsusi Sasaki
27. **Some Natural Products Extracts Inhibit the Formation of Nw-(Carboxymethyl)arginine**  
Yukio Fujiwara, Makiko Yoshitomi, Katsumi Mera1, Mime Nagai, Motohiro Takeya, Tsuyoshi Ikeda and Ryoji Nagai
28. **Screening of AGE inhibitors by antibody library.** Ryoji Nagai, Satoko Shimasakia, Ayako Horikoshia, Masako Nakanoa, Mime Nagaia, Katsumi Merab and Yukio Fujiwarab
29. **Taste Modulating Maillard Reaction Products of Creatinine** C. Kunert, T. Sonntag, A. Walker and T. Hofmann
30. **Improved Extraction of Acrylamide and Its Quantification in Pork Sausages** M. Plotkowiak, S. Floyd and L. Farmer
31. **Chemistry of Pigments as Intermediate of Melanoidins** F. Hayase, Y. Sshirahashi, T. Machida, T. Ito, T. Usui, and H. Watanabe