

Contents

Vol. 87, No. 2, 2022

Special Issue

Protein Misfolding and Aggregation in Cataract Disorders

Guest Editors Reza Yousefi and Boris I. Kurganov

Engl./Russ.

Crystallins as Important Pathogenic Targets for Accumulation of Structural Damages Resulting in Protein Aggregation and Cataract Development:
Introduction to This Special Issue of *Biochemistry (Moscow)*

Reza Yousefi 87 155

Relationship between the Structure and Chaperone Activity of Human α A-Crystallin after Its Modification with Diabetes-Associated Oxidative Agents and Protective Role of Antioxidant Compounds

Sogand Sasan Moghadam, Maryam Ghahramani, Kazem Khoshaman, Ahmad Oryan, Ali Akbar Moosavi-Movahedi, Boris I. Kurganov, and Reza Yousefi 91 160

Review

Biochemistry of Eye Lens in the Norm and in Cataractogenesis

Konstantin O. Muranov and Mikhail A. Ostrovsky 106 177

Effect of Trehalose on Oligomeric State and Anti-Aggregation Activity of α B-Crystallin

Natalia A. Chebotareva, Tatiana B. Eronina, Valeriya V. Mikhaylova, Svetlana G. Roman, Kristina V. Tugaeva, and Boris I. Kurganov 121 194

Effect of Sorbitol on Alpha-Crystallin Structure and Function

Ch. Uday Kumar, Udaykanth Suryavanshi, Vishwaraj Sontake, P. Yadagiri Reddy, Rajeshwer S. Sankhala, Musti J. Swamy, and G. Bhanuprakash Reddy 131 —

REGULAR PAPERS

Investigation of the Antioxidant Properties of the Quaternized Chitosan Modified with a Gallic Acid Residue Using Peroxidase that Produces Reactive Oxygen Species

Dmitry B. Kiselevsky, Alla V. Il'ina, Alexey P. Lunkov, Valery P. Varlamov, and Vitaly D. Samuilov 141 116

Review

The Origin of Genetic Code and Translation in the Framework of Current Concepts on the Origin of Life

Liya G. Kondratyeva, Marina S. Dyachkova, and Alexey V. Galchenko 150 45

Mini-Reviews

Potential Effect of Post-Transcriptional Substitutions of Tyrosine for Cysteine Residues
on Transformation of Amyloidogenic Proteins

Vladimir I. Muronetz, Denis V. Pozdyshev, Maria V. Medvedeva, and Irina A. Sevostyanova

170 205

Mechanism of Energy Storage and Transformation in the Mitochondria
at the Water–Membrane Interface

Semen V. Nesterov, Elena G. Smirnova, and Lev S. Yaguzhinsky

179 216
