



Multiligands approaches for the developing neuroprotective agents for Alzheimer's disease.

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Abstract:

During past 15 years any new agent that was investigated in clinical trials on Alzheimer's disease (AD) patients have not been approved for the market. The same situation take place with agents for amyotrophic lateral sclerosis (ALS) therapy. One of the main problem in successful development of the agents for CNS neurodegenerative disorders treatment related to multifactorial nature of such diseases. In this relation, focused design of multi-target drugs that simultaneously act on several biotargets connected to pathogenesis of neurodegenerative diseases looks as a promising strategy for the developing new generation of neuroprotective CNS agents [1]. In the present work the results of design and synthesis of novel poly-pharmacophore" agents superposing in one molecule several structural pharmacophore fragments of already validated neuroprotective agents are presented. In particular, synthesis and study of conjugates of phenothiazine (methylene blue) and gamma-carboline (Dimebon) derivatives, as well as conjugates of adamantane (memantine) and carbazole derivatives was performed [2-4]. In particular, in series of adamantane-containing indole derivatives compounds with unique combination of mitoprotective and anti-aggregation properties were revealed [5]. It was also shown that these compounds manifested their efficacy for preventing and delaying of neuropathological symptoms on amyotrophic sclerosis animal models [6].

Biography:

Bachurin Sergey has completed his PhD and Dr. Sci. Degree in Moscow State University, Russia. In 1992



and in 1995 he had been working in the University San Francisco and in Taft's University (USA). In 2006-2018 he was a director of the Institute of Physiologically Active Compounds, Russian Academy of Science (IPAC) in Chernogolovka, Russia. At the present time he is the Head of Department of Medicinal and Biological Chemistry IPAC RAS. He has published more than 250 papers in reputed journals and about 40 patents, and has been serving as an editorial board member of repute.

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