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MEETING ABSTRACTS

2-PROPARGAYLAMINO-NAPHTHOQUINONE DERIVATIVES AS MULTIPOTENT AGENTS FOR THE TREATMENT OF ALZHEIMER'S DISEASE

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Alzheimer's disease (AD) is a progressive brain disorder with characteristic symptoms and several pathological hallmarks. The concept of "one drug, one target" has not generated any new drugs since 2004. The new era of drug development in the field of AD builds upon rationally designed multi-target directed ligands that can better address the complexity of AD (1). Herewith, we designed ten novel derivatives of 2-propargylamino-naphthoquinone. The biological evaluation of these compounds includes inhibition of monoamine oxidase A/B, inhibition of amyloid-beta aggregation, radical-scavenging, and metal-chelating properties. Some of the compounds possess low cytotoxicity profile with an anti-inflammatory ability in the lipopolysaccharide-stimulated cellular model. All these features warrant their further testing in the field of AD (2).

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Keywords: Alzheimer's disease; naphthoquinone; multi-target directed ligand; amyloid-beta; monoamine oxidase

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