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Synthesis and preliminary in vitro kinase inhibition evaluation of new diversely substituted pyrido[3,4-g]quinazoline derivatives

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Abstract – The synthesis of new diversely substituted pyrido[3,4-g]quinazolines is described. The inhibitory potencies of prepared compounds toward a panel of five CMGC protein kinases (CDK5, CLK1, DYRK1A, CK1, GSK3), that are known to play a potential role in Alzheimer's disease, were evaluated. The best overall kinase inhibition profile was found for nitro compound **4** bearing an ethyl group at the 5-position.

Keywords – Pyrido[3,4-g]quinazoline / Protein kinase inhibition / CLK1 / DYRK1A / CDK5 / GSK3 / CK1.

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