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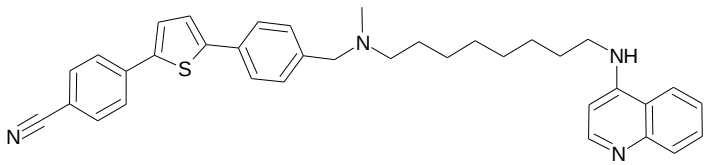
Nova generacija 4-aminohinolina: dizajn, sinteza i antimalarijska aktivnost

Milica Đ. Videnović, Bogdan A. Šolaja*
Inovacioni centar Hemijskog fakulteta u Beogradu, Beograd
**Hemijski fakultet, Univerzitet u Beogradu, Studentski trg 12-16, Beograd*

Malarija je infektivna bolest od koje je samo 2013. godine obolelo 198 miliona ljudi, sa smrtnim ishodom kod oko pola miliona pacijenata. Malariju izaziva parazit iz roda *Plasmodium*, koji na ljude prenosi ubodom ženka *Anopheles* komarca. Usled razvoja rezistencije parazita prema postojećim lekovima, postoji stalna potreba za pronalaženjem novih antimalarika. U nastavku naših istraživanja u oblasti dizajna i sinteze potencijalnih antimalarika sa različitim aromatičnim grupama kao nosačima aminohinolinske farmakofore,[1a,b] sintetisani su novi derivati 4-aminohinolina i ispitana njihova biološka aktivnost prema različitim sojevima *P. falciparuma*. Pokazana je zavisnost antimalarijske aktivnosti ispitanih jedinjenja od dužine alkil-niza i supstituenata na heterocikličnim jezgrima.



***P. falciparum* IC50 (nM)**		
W2	**D6**	**TM91C235**
5	**7**	**13**

New generation of 4-aminoquinolines: design, synthesis and antimalarial activity

Milica Đ. Videnović, Bogdan A. Šolaja*
Innovation center of the Faculty of Chemistry, Belgrade
**Faculty of Chemistry, University of Belgrade, Studentski trg 12-16, Belgrade*

Malaria is an infectious disease resulting in 198 million estimated cases and over half a million deaths in 2013 alone. It is caused by the *Plasmodium* parasite transmitted among humans by female mosquitoes of the genus *Anopheles*. According to the development of parasite's resistance to standard antimalarial drugs, there is a constant need for identification of new effective therapeutics. Following our previous results in the field of design and synthesis of potent antimalarials with an aromatic group as a carrier of aminoquinoline pharmacophore, we have synthesized new 4-aminoquinoline derivatives and discussed their *in vitro* antimalarial activities against three *P. falciparum* strains. We have shown that antimalarial activity depends on the length of alkyl linker and substitution pattern of heterocyclic cores.

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1. a) Opsenica, I. M.; Tot, M.; Gomba, L.; Nuss, J. E.; Sciotti, R. J.; Bavari, S.; Šolaja, B. A.; *J. Med. Chem.* **2013**, *56*, 5860-5871; b) Opsenica, I. M.; Verbić, T. Ž.; Tot, M.; Sciotti, R. J.; Pybus, B. S.; Đurković-Đaković, O.; Slavić, K.; Šolaja, B. A.; *Bioorg. Med. Chem.* **2015**, *23*, 2176-2186