



Open source drug discovery for malaria

Thursday 5 June 1 – 2pm

Speaker

**Associate Professor
Matthew Todd**

School of Chemistry,
The University of Sydney

Location

Slatyer Seminar Room

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Cunningham Close, ANU

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This lecture is free and open to the public

BSB event information:

biology.anu.edu.au/News/events-bsb.php



Science today is typically practiced by groups working in isolation, frequently with barriers to the sharing of data that arise from our need to protect intellectual property. The Todd lab currently leads a worldwide community, Open Source Malaria (OSM)¹, that adopts an *open source* approach to drug discovery – all data and ideas are freely shared, anyone may participate at any level and there will be no patents.

The OSM consortium has so far examined four series of compounds, all derived from public-domain hits. The first three series all provided promising compounds but were abandoned for differing reasons. Members of the current series have shown rapid reduction of parasitemia in mouse models of malaria and

are now being made more “druggable”. There is some evidence that the compounds are active against the ion pump PfATP4, and the team is working with the Kirk laboratory at ANU to validate this mechanism of action.

This talk will describe the results to date from OSM’s medicinal chemistry program, the methods employed by the consortium to carry out the research openly,² and OSM’s evolution from an earlier open source project in parasitology involving the anthelmintic used to treat schistosomiasis, praziquantel.^{3,4}

¹<http://opensourcemalaria.org>

²Open Source Drug Discovery – A Limited Tutorial, M. N. Robertson, P. M. Ylloja, A. E. Williamson, M. Woelfle, M. Robins, K. A. Badiola, P. Willis, P. Olliaro, T. N. C. Wells and M. H. Todd, *Parasitology* 2014, 141, 148-157

³Open Science is a Research Accelerator, M. Woelfle, P. Olliaro and M. H. Todd, *Nature Chemistry* 2011, 3, 745-748

⁴Resolution of Praziquantel, M. Woelfle, J.-P. Seerden, J. de Gooijer, K. Pouwer, P. Olliaro and M. H. Todd, *PLoS Negl. Trop. Dis.* 2011, 5(9): e1260.

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