Antimalarial Drug Discovery: Structural Insights

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Propositions

for the thesis

Antimalarial Drug Discovery: Structural Insights

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1. Scientists tend to further focus on well-researched areas where probe tools are available rather than expanding their toolset. This phenomenon is known as “Harlow-Knapp” effect.
2. Drug discovery targeting malaria must be at least as fast as the ability of the parasite to develop resistance.
3. Innovative methods are urgently required to provide and validate new drug targets to counter rapidly emerging parasite resistance to the current treatment strategies.
4. Validation of the druggability of a selected target is as important as the drug development. Rational selection of drug targets can minimize the time and efforts required for subsequent drug discovery.
5. Examination of the oligomeric interfaces offers an opportunity for specific interference with target enzymes to assess their druggability.
6. Structure-based mutagenesis can provide inactive(ating) enzyme species indistinguishable from their wild type targets. Further recombinant overexpression of these mutants within the parasite using transfection technique can ensure highly specific targeting of the selected oligomeric system.
7. Protein Interference Assay (PIA) is a validation tool that is particularly relevant in highly complex system where effectiveness of other tool techniques is under debate.
8. Protein X-ray Crystallography remains the working horse of rational drug design, despite the significant advances in orthogonal methods. Television did not kill the Theatre neither did Internet. But Video killed the Radio star.
9. На каждую хорошую мысль неизбежно находится свой дурак, аккуратно доводящий ее до абсурда. И. Ильф и Е. Петров, Пьеса в Пять Минут. 1930

Every decent idea inevitably gets a dedicated idiot to carefully turn it into nonsense. I. Ilf & E. Petrov, 5 Minute Play. 1930