<table>
<thead>
<tr>
<th>Theme</th>
<th>Recommendation</th>
<th>Year</th>
<th>Est. Cost US $</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attacking Artemisinin Resistance</td>
<td>Establish stable resistant parasite lines to improve access and broaden the number of groups able to study resistance mechanisms. Identify and evaluate an appropriate range of “omic” approaches to search for discriminatory tools and markers of artemisinin resistance.</td>
<td></td>
<td>5 mill</td>
<td>Continue &amp; expand work already underway</td>
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</tbody>
</table>
| Delivering Enabling Technologies | Precisely define and develop novel methods and assays for evaluating drug activity against each stage of the *P. Falciparum* lifecycle  
  - Disseminate existing tools to all interested parties  
  - Enhance existing tools | | 1 mill 2 mill/yr. | On-going programme |
| | Precisely define and develop novel methods and assays for evaluating drug activity against non-blood stages of *P. falciparum* lifecycle  
  - Disseminate existing tools to all interested parties  
  - Enhance existing tools | | 2 mill/yr. 2 mill/yr. | On-going programme |
| | Precisely define and develop novel methods and assays for evaluating transmission-blocking drug activity against *P. falciparum*  
  - Disseminate existing tools to all interested parties  
  - Enhance existing tools | | 7 mill/yr. 2 mill/yr. | On-going programme |
| Exploiting HTS Positive Hits Quickly | Continue routine screening of compound libraries and prioritisation of positive hits in secondary screening. Agrochemical libraries are a particular priority. | | 1 mill/yr. | |
| | Expand early use of ADME & toxicology screens to filter positive HTS hits | | 1 mill/yr. | Based on 1,000 compounds per year |
| | Utilise information on resistance to each drug class to probe underlying biological processes and drug targets | | 500,000/yr. | Based on 2,000 compounds per yr. with 10 different assays |
| | Evaluate speed of action and stage specificity of current HTS hits to identify new chemotypes with similar PD to artemisinins (including activity against artemisinin-resistant strains) | | 2.5 mill/yr. | Continue until resistance is gone |
| Identifying Novel Targets | Focus on looking for novelty in 1st & last 12 hours of the ring stages | | 25 mill/yr. | |
| | Phenotype parasite strains to identify differential chemotype activity & identify novel targets  
  - Phenotyping  
  - Identify novel targets from phenotyping information | | 2 mill/yr. 5 mill/yr. | Depends on data availability & duration |
| | Develop mathematical tools from other biological fields to be used in malaria | | 2 mill/yr. | |
| | Focus on increasing understanding of activity of current antimalarial in high priority areas | | 2 mill/yr. | |