

EVALUATION OF *Macaca fascicularis* AS A LABORATORY  
MODEL FOR MALARIA RESEARCH

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PROGRESS :

The world wide shortage of rhesus monkeys (*Macaca mulatta*) resulting from the moratorium on the export of this species by the Indian Government has spawned the search for alternate animal species to conduct research in certain areas. The antimalarial drug development program is among those areas.

Reports in the literature indicate that the crab-eating macaque or Cynomolgus monkey (*Macaca fascicularis*) is not suitable as an animal model for malaria research using *Plasmodium cynomolgi* as the causative organism. This is based upon the fact that in the wild state, *P. cynomolgi* is a natural parasite of *Macaca fascicularis* thereby rendering these monkeys either infected or immune due to prior infection. Until now, no attempts have been made to our knowledge to infect laboratory-reared, non-exposed *Macaca fascicularis* monkeys with the *P. cynomolgi* organism.

Two cynomolgus monkeys (AF-1 and AF-3) born and raised in our laboratory were inoculated I.V. with approximately 1,000,000 sporozoites of *P. cynomolgi* harvested from infected *Anopheles dirus* mosquitoes and are currently being monitored by examining daily blood smears to determine parasitemia levels. Both monkeys have developed parasitemias and attempts to infect *Anopheles dirus* mosquitoes by feeding them on these cynomolgus monkeys are underway at this time.

FUTURE OBJECTIVES :

To pursue the development of an animal model for use in the antimalarial drug program using the Cynomolgus monkey - *P. cynomolgi* model. Additional, laboratory-raised, malaria-free cynomolgus monkeys will be required to fully develop this new model.