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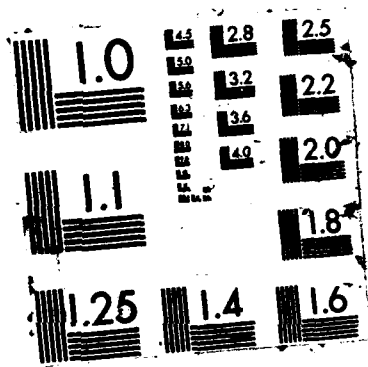
GORDON RESEARCH CONFERENCE ON MOLECULAR AND  
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1987 Gordon Research Conference on Molecular  
and Immunological Aspects of Parasitology

FINAL REPORT

E.R. Pfefferkorn, Ph.D.

September 15, 1987

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Supported by

U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND  
Fort Detrick, Frederick, Maryland 21701-5012

Grant No. DAMD17-87-G-7010  
Gordon Research Conferences  
Gordon Research Center  
University of Rhode Island  
Kingston, RI 02881

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| 19. ABSTRACT (Continue on reverse if necessary and identify by block number)<br>The U.S. Army Medical Research and Development Command paid part of the expenses of running the 1987 Gordon Research Conference in Molecular and Immunologic aspects of Parasitology. The conference was a substantial scientific success. More than 100 applicants had to be turned down because attendance was limited to 135. Three speakers came from U.S. military research laboratories. |                               |   |  |  |                                  |
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**SUMMARY:** The 1987 Gordon Research Conference on Molecular and Biochemical Parasitology was held in Plymouth, NH, from August 3-7. A large amount of new and exciting information was presented and provoked wide ranging discussion. Many of those attending gained new ideas for their own research projects.



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## BODY OF REPORT

The fourth Gordon Conference on Molecular and Biochemical Parasitology was held at Plymouth State College, Plymouth, NH, August 3-7, 1987. The grant from the USAMRDC provided travel funds and conference fees for a number of important speakers whose presence was essential to the Conference. Three scientists from US military research institutes were invited speakers. They contributed greatly to the success of the conference. (This grant was not used to pay the travel expenses of speakers from military research institutes.)

This Gordon Conference proved to be very popular. The organizers were forced to turn down over 100 applicants in order to limit the size to 135, the maximum allowed. A wide variety of topics were discussed. The identification of stage specific antigens and their genes in helminths has opened the way for new and better vaccines. Similarly, increased knowledge of the surface antigens of kinetoplastae suggested new ways to control African sleeping sickness. Much discussion and interest was provoked by presentation of the relatively poor protection afforded in human trials of a sporozoite malaria vaccine. We clearly need to know more about the human immune response to synthetic vaccines. This will be a major topic of the next Gordon Conference. Drug resistance is increasingly a problem in the treatment of parasite diseases. Two common biochemical mechanisms of drug resistance were discussed in detail: overproduction of a critical enzyme and a marked decrease in permeability to the inhibitory drug. Several notable advances in using molecular probes diagnostically were reported. Of particular interest was the use of this procedure to identify the species of arthropod vectors and to identify those arthropods that contained parasites that could be transmitted to humans. The biogenesis of trypanosomal organelles was discussed in detail and provoked an unresolved dispute over the interpretation of results. The data on helminth proteases may lead to a vaccine against hookworm infection. The mechanism of cytoadherence of Plasmodium falciparum was an important topic of discussion because it is likely to play a central role in the pathogenesis of cerebral malaria. *Keywords: disease vectors*

In addition to the formal presentations by 36 speakers, more than 50 other participants displayed posters with unpublished data that included the sequence of a critical malaria gene. These posters were the occasion for wide-ranging individual discussions. The importance of this Gordon Conference is shown by the fact that many more scientists applied than could be invited. The success of the conference is indicated by the fact that the attendees voted unanimously to meet on an annual basis.

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