OFFICE OF NAVAL RESEARCH
Contract No. N00014-81-C-0552
Task No. NR 204-117
ANNUAL REPORT NO. 2

Materials for Vaccine Development

by

M. A. Stirewalt

and

F. A. Lewis

28 September 1982

Reproduction in whole or in part is permitted for any purpose of the United States Government

This document has been approved for public release; its distribution is unlimited
This contract is funded to provide schistosomes (Schistosoma mansoni) for research at the Naval Medical Research Institute (NMRI). To meet the needs of the NMRI investigators, the life cycle of this parasite is maintained at the Biomedical Research Institute (BRI) and research material provided as requested.

*Biophalaria glabrata* snails (NMRI substrain) were reared in 20 gallon aquaria. Eggs collected from these snails were hatched and the young snails reared in shallow pans to infection size of 5 to 7 mm diameter. Each week, the following schedule was maintained. (1) 250 to 300 snails were exposed to 5 to 7 or to 1 newly-hatched miracidia each. Exposed snails were kept in a 27 to 28°C warm room. (2) Snails exposed 4 week previously were checked individually for cercarial production and thereafter patent snails were held in a warm dark room in dark covered pans. Rotifers were washed off all shedding snails. (3) 8 to 10 mice were exposed to 250 to 270 cercariae for use as the source of miracidia 7 weeks later. (4) Cercariae were harvested 4 days a week and delivered to investigators as requested.

Schistosome research materials were provided on request as follows: cercarise as a mix of both sexes; cercariae of known sex, that is, from 1 miracidium snails with a known male or female infection; snails shedding cercariae; infected mice.
CURRENT PUBLICATIONS BASED ON
BIOMEDICAL RESEARCH INSTITUTE SCHISTOSOME MATERIALS


CURRENT PRESENTATIONS BASED ON
BIOMEDICAL RESEARCH INSTITUTE SCHISTOSOME MATERIALS


Dean, D. A. Schistosomiasis Update: Resistance to reinfection. Thirtieth Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, 16-20 November 1981.

Dean, D. A., Mangold, B. L. Georgi, J. R., and Jacobson, R. H. Tracking of Schistosoma mansoni irradiated cercariae in immunized, previously infected and normal mice by means of autoradiography. Fifth International Congress of Parasitology, Toronto, Canada, 7-14 August 1982.
<table>
<thead>
<tr>
<th>Number of Copies:</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>(12)</td>
<td>Administrator, Defense Documentation Center Cameron Station Alexandria, VA 22314</td>
</tr>
<tr>
<td>(6)</td>
<td>Director, Naval Research Laboratory Attention: Technical Information Division Code 2027 Washington, D. C. 20390</td>
</tr>
<tr>
<td>(6)</td>
<td>Code 1021P (ONRL DOC) Office of Naval Research 800 N. Quincy Street Arlington, VA 22217</td>
</tr>
<tr>
<td>(3)</td>
<td>Office of Naval Research Department of the Navy Code 443 Arlington, VA 22217</td>
</tr>
<tr>
<td>(2)</td>
<td>Commanding Officer (Code 00) Naval Medical Research &amp; Development Command National Naval Medical Center Bethesda, Maryland 20014</td>
</tr>
<tr>
<td>(2)</td>
<td>Technical Reference Library Naval Medical Research Institute National Naval Medical Center Bethesda, Maryland 20014</td>
</tr>
<tr>
<td>(2)</td>
<td>Office of Naval Research Department of the Navy Code 200 Arlington, VA 22217</td>
</tr>
<tr>
<td>(1)</td>
<td>Office of Naval Research Branch Officer 495 Summer Street Boston, Massachusetts 02100</td>
</tr>
<tr>
<td>(1)</td>
<td>Office of Naval Research Branch Office 536 South Clark Street Chicago, Illinois 60605</td>
</tr>
</tbody>
</table>

Enclosure (3)
<table>
<thead>
<tr>
<th>Number of Copies:</th>
<th>Recipient</th>
</tr>
</thead>
</table>
| (1)              | Office of Naval Research Branch Office  
1030 East Green Street  
Pasadena, California  91101 |
| (1)              | Commanding Officer  
U. S. Naval Medical Research Unit #2  
Box 14  
APO, San Francisco  96263 |
| (1)              | Commanding Officer  
U. S. Naval Medical Research Unit #3  
FPO, New York  09527 |
| (1)              | Commanding Officer  
U. S. Naval Medical Research Unit #5  
APO, New York  09319 |
| (1)              | Officer in Charge  
Submarine Medical Research Laboratory  
U. S. Naval Submarine Base, New London  
Groton, Connecticut  06342 |
| (1)              | Scientific Library  
Naval Biosciences Laboratory  
Naval Supply Center  
Oakland, California  94625 |
| (1)              | Scientific Library  
Naval Aerospace Medical Research Institute  
Naval Aerospace Medical Center  
Pensacola, Florida  32512 |
| (1)              | Commanding Officer  
U. S. Naval Air Development Center  
ATTN: Aerospace Medical Research Department  
Johnsville, Warminster, Pennsylvania  18974 |
| (1)              | Commanding General  
U. S. Army Medical Research & Development Command  
Forrestal Building  
Washington, D. C.  20314  
ATTN: MEDDH-Sr |

Enclosure (3)
<table>
<thead>
<tr>
<th>Number of Copies</th>
<th>Name and Details</th>
</tr>
</thead>
</table>
| (1)              | Director of Life Sciences  
Air Force Office of Scientific Research  
Bolling Air Force Base  
Washington, D. C.  20032 |
| (1)              | STIC-22  
4301 Suitland Road  
Washington, D. C.  20390 |
| (1)              | Director  
Walter Reed Army Institute of Research  
Walter Reed Army Medical Center  
Washington, D. C.  20012 |
<table>
<thead>
<tr>
<th>Report number</th>
<th>Recipient's catalog number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual No. 2</td>
<td>AD-A123891</td>
</tr>
</tbody>
</table>

**Title:** Schistosome materials for vaccine development

**Authors:** M. Stirewalt and F. A. Lewis

**Performing Organization Name and Address:**
American Foundation for Biological Research
12111 Parklawn Drive
Rockville, Maryland 20852

**Controlling Office Name and Address:**
Procurement Contract Officer
Office of Naval Research (433) Department of the Navy
Washington, D.C. 20360

**Security Class. (of report):** Unclassified

**Subject Terms:**
Schistosoma mansoni; Biomphalaria glabrata; trematode; cercariae; eggs; worms; miracidia; snails; optimal maintenance conditions.

**Abstract:**
Parasite materials (S. mansoni) were supplied to investigators at the National Naval Medical Research Institute in Bethesda, Maryland for immunoparasitological research.

**Report Date:** 1982

**Number of Pages:** 1