MARS SAMPLE HANDLING PROTOCOL WORKSHOP SERIES

WORKSHOP #2 TENTATIVE AGENDA

(8/24/00 DRAFT)

Day 1 Afternoon Session

1:00 p.m. Plenary (Intros and tutorials – 2 hours, max)
  + Mars program status
  + Workshop #2 process (Organization and Objectives)
  + Workshop #1 recap
  + NRC life detection recap
  + COMPLEX Mars sample return report (if available)
  + Introduction to Strawman Protocol

3:30 Establish three Sub-groups to deal with key questions from framework:
  + Life detection translation group
  + Biohazard testing 1
  + Biohazard testing 2

5:30 ADJOURN TO WELCOME RECEPTION

Day 2 Morning Session

7:30 a.m. BREAKFAST
8:00 Day 1 Sub-groups caucus individually (until noon)
12:00 LUNCH

Day 2 Afternoon Session

1:00 p.m. Plenary – Day 1 Sub-group reports (1/2 hour each)
2:30 Discussion of Day 1 Sub-group reports
5:30 Establish three new Sub-groups
  + Physical and chemical test sequencing
  + Molecular tests
  + Organism-based tests (Cellular & Microbial; Plant; Animal)

6:00 ADJOURN

Day 3 Morning Session

7:30 a.m. BREAKFAST
8:00 Day 2 Sub-groups caucus individually (until noon)
12:00 LUNCH

Day 3 Afternoon Session

1:00 p.m. Plenary – Day 2 Sub-group reports (1/2 hour each)
2:30 Synthesis and final writing assignments
6:00 ADJOURN
## WORKSHOP #2 CONFIRMED PARTICIPANTS (10/18/00)

<table>
<thead>
<tr>
<th>PARTICIPANT</th>
<th>AFFILIATION</th>
<th>AREA(S) OF EXPERTISE</th>
<th>SUB-GROUP ASSIGNMENTS (Day 1; Day 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acevedo, Sara E.</td>
<td>SETI Institute (Planning Committee Member)</td>
<td>Sample handling and curation; physical/earth and planetary sciences</td>
<td><em>Floater</em></td>
</tr>
<tr>
<td>Allen, Carl</td>
<td>NASA Johnson Space Center</td>
<td>Sample handling and curation; physical/earth and planetary sciences</td>
<td>Biohazard Protocol (1); Physical and Chemical Tests (Chair)</td>
</tr>
<tr>
<td>Alton, Judith H.</td>
<td>NASA Johnson Space Center</td>
<td>Sample handling and curation; physical/earth and planetary sciences</td>
<td>Life Detection Protocol; Physical and Chemical Tests</td>
</tr>
<tr>
<td>Bada, Jeffrey</td>
<td>Scripps Institute of Oceanography, University of California, San Diego</td>
<td>Structure, stability, and evolution of proteins</td>
<td>Life Detection Protocol; Molecular Tests</td>
</tr>
<tr>
<td>Bialitzki, Joseph</td>
<td>NASA Ames Research Center</td>
<td>Chief NASA Veterinary Officer</td>
<td>Biohazard Protocol (2); Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Bradley, John</td>
<td>MVA Associates, Norcross GA; Georgia Institute of Technology, Atlanta, GA</td>
<td>Electron Microscopy; Physical/Earth and Planetary Sciences</td>
<td>Life Detection Protocol; Physical and Chemical Tests</td>
</tr>
<tr>
<td>Candresse, Thierry</td>
<td>French National Institute of Agronomical Research (INRA)</td>
<td>Deputy Head of the Plant Health and Environment Department; Molecular-based detection and identification techniques for plant viruses and viroids</td>
<td>Biohazard Protocol (2) (Co-chair); Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Crissman, Harry A.</td>
<td>Los Alamos National Lab</td>
<td>Flow cytology and cytochemical life detection methods; life detection</td>
<td>Life Detection Protocol; Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Daly, Michael J.</td>
<td>Department of Pathology, Uniformed Services University</td>
<td>Radiation resistant bacteria</td>
<td>Biohazard Protocol (1); Molecular Tests</td>
</tr>
<tr>
<td>DeVincenzi, Donald</td>
<td>NASA Ames Research Center</td>
<td>(Planning Committee Member)</td>
<td>Life Detection Protocol; Physical and Chemical Tests</td>
</tr>
<tr>
<td>Eisen, Johannathen</td>
<td>Institute for Genomic Research</td>
<td>Radiation resistance and DNA repair; microbial genomics and evolution; characterization of uncultured microbes</td>
<td>Biohazard Protocol (2); Molecular Tests</td>
</tr>
<tr>
<td>Fishbein, William N.</td>
<td>Dept. of Environment and Toxicologic Pathology, Armed Forces Institute of Pathology</td>
<td>Molecular toxicology; biochemical and molecular pathology; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
<td>Biohazard Protocol (1); Organismal/Cellular Tests</td>
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<tr>
<td>Gabriel, Dean W.</td>
<td>Professor, Molecular Plant Pathology, University of Florida</td>
<td>Molecular plant pathology; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
<td>Biohazard Protocol (2); Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Giloir, Brett P.</td>
<td>Univ. of Texas Southwestern Medical Ctr</td>
<td>Endotoxins in pharmacological studies</td>
<td>Biohazard Protocol (1); Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Grange, Jacques</td>
<td>Laboratoire de Haute Securite P4 Jean Merieux</td>
<td>Research Professor; Doctor Ingenior in Chemistry; Responsible of the MERIEUX Biosafety level 4 Facility; Thesis in virology; abilities in biochemistry and in cancerology</td>
<td>Biohazard Protocol (1); Organismal/Cellular Tests</td>
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<tr>
<td>Gray, Greg</td>
<td>Naval Health Research Center</td>
<td></td>
<td>Biohazard Protocol (1); Organismal/Cellular Tests</td>
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<tr>
<td>Hawley, Robert</td>
<td>USAMRIID, Ft. Detrick MD</td>
<td>Biosafety, emergent biohazard detection, and containment methods; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
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<tr>
<td>Holland, Heinrich D.</td>
<td>Harvard University, Department of Earth and Planetary Sciences</td>
<td>Earth Sciences</td>
<td>Life Detection Protocol; Organismal/Cellular Tests</td>
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<tr>
<td>Humble, Michael</td>
<td>National Institute of Environmental Health Sciences</td>
<td></td>
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<td>Jehring, Peter</td>
<td>USAMRIID, Ft. Detrick MD</td>
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<tr>
<td>Joyce, Gerald</td>
<td>Department of Molecular Biology, The Scripps Research Institute</td>
<td>Origins of life; RNA and Pre-RNA Worlds</td>
<td>Biohazard Protocol (2); Molecular Tests (Chair)</td>
</tr>
<tr>
<td>Khan, Ali S.</td>
<td>National Center for Infectious Diseases, Centers for Disease Control and Prevention</td>
<td>Biodefense; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
<td>Biohazard Protocol (1) (Chair); Molecular Tests</td>
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<tr>
<td>Kovacs, Gregory T.A.</td>
<td>Associate Professor, Electrical Engineering, Stanford University</td>
<td>Biodefense; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
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<tr>
<td>Leonard, Debra G.B.</td>
<td>Dept. of Pathology and Laboratory Medicine University of Pennsylvania</td>
<td>Molecular pathology of Infectious diseases; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
<td>Biohazard Protocol (1); Molecular Tests</td>
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<tr>
<td>MacPherson, Glenn</td>
<td>National Museum of Natural History, Smithsonian Institution</td>
<td>(Planning Committee Member)</td>
<td>Biohazard Protocol (2); Physical and Chemical Tests</td>
</tr>
<tr>
<td>Mauret, Marie-Christine</td>
<td>Institut Jacques Monod</td>
<td>Microbiology; life origins</td>
<td>Life Detection Protocol; Molecular Tests</td>
</tr>
<tr>
<td>Moutou, François</td>
<td>Head of the laboratory of General Epidemiology at the Central laboratory for veterinary research</td>
<td>Epidemiology of major animal diseases and zoonosis; modeling of airborne dissemination of the FMD virus; Epidemiology of Transmissible Spongiform Encephalopathies; Risk analysis methodology and disease control; Epidemiological surveillance of wild and domestic animal diseases.</td>
<td>Biohazard Protocol (2); Organismal/Cellular Tests (Co-chair)</td>
</tr>
<tr>
<td>Mustin, Christian</td>
<td>Centre de Pédologie Biologique</td>
<td></td>
<td>Life Detection Protocol; Physical and Chemical Tests (Co-chair)</td>
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<tr>
<td>Pardoe, Arthur B.</td>
<td>Dana Farber Cancer Institute Biological Chemistry and Molecular Pharmacology</td>
<td>Molecular evolution; cell cycle control; cancer etiology</td>
<td>Biohazard Protocol (1); Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Prieur, Daniel</td>
<td>Université de Bretagne Occidentale</td>
<td></td>
<td>Life Detection Protocol; Molecular Tests</td>
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<tr>
<td>Prufert-Bebout, Lee</td>
<td>NASA Ames Research Center (Planning Committee Member)</td>
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<tr>
<td>Racei, Margaret</td>
<td>SETI Institute (Planning Committee Member)</td>
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<tr>
<td>Raulin, François</td>
<td>Universités Paris 12 &amp; 7</td>
<td></td>
<td>Life Detection Protocol (Co-chair); Physical and Chemical Tests</td>
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<tr>
<td>Richmond, Jonathan</td>
<td>Director, Office of Health and Safety, Centers for Disease Control and Prevention (Planning Committee Chair)</td>
<td>Biosafety, emergent biohazard detection, containment methods; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
<td>Biohazard Protocol (2); Organismal/Cellular Tests (Chair)</td>
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<tr>
<td>Rummel, John</td>
<td>Planetary Protection Officer, NASA Headquarters (Planning Committee Chair)</td>
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<td><em>Floater</em></td>
</tr>
<tr>
<td>Scannon, Patrick J.</td>
<td>Chief Scientific and Medical Officer XOMA Corp. (Planning Committee Chair)</td>
<td>Microbial pharmacology</td>
<td>Biohazard Protocol (2); Molecular Tests</td>
</tr>
<tr>
<td>Schad, Jack</td>
<td>NASA Headquarters (Planning Committee Member)</td>
<td></td>
<td>Biohazard Protocol (1); Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Sourbride, David J.D.</td>
<td>Centre d'Etudes du Bouchet (Planning Committee Member)</td>
<td>Viral Immunology, antiviruses; Biotechnology project leader at CEB (Min. of Defense); High sensitivity detection and identification of potentially hazardous microorganisms</td>
<td>Biohazard Protocol (1) (Co-chair); Molecular Tests</td>
</tr>
<tr>
<td>Stabekis, Pericles D.</td>
<td>Lockheed-Martin, Washington DC (Planning Committee Member)</td>
<td></td>
<td>Biohazard Protocol (2) Physical and Chemical Tests</td>
</tr>
<tr>
<td>Vasil, Indra K.</td>
<td>Professor, Plant Cell and Molecular Biology, University of Florida (Planning Committee Member)</td>
<td>Plant tissue culture methods and biotechnology; biohazard testing; cellular and molecular genetic mechanisms in pathogenesis</td>
<td>Biohazard Protocol (1); Organismal/Cellular Tests</td>
</tr>
<tr>
<td>Visso, Michel</td>
<td>CNES, France (Planning Committee Member)</td>
<td>Secretary of the French PP group; Program scientist for animal Physiology and Biology; Radiation effects in biology; Applied Medical Statistics, Animal and Comparative Immunology</td>
<td><em>Floater</em></td>
</tr>
<tr>
<td>Wainwright, Norman R.</td>
<td>Senior Scientist, Molecular Biology, Marine Biological Laboratory (Planning Committee Member)</td>
<td>Comparative molecular biology and evolution; life detection</td>
<td>Life Detection Protocol (Chair); Molecular Tests</td>
</tr>
</tbody>
</table>

Observers:  
Beatty, David NASA, Jet Propulsion Laboratory "Floater"  
Boyce, Joseph NASA Headquarters "Floater"  
Hoyl, Diana NASA Headquarters "Floater"  
David, Leonard Science Writer "Floater"  
Lindstrom, David NASA, Jet Propulsion Laboratory "Floater"  
Meyer, Michael NASA Headquarters "Floater"
MARS SAMPLE HANDLING PROTOCOL WORKSHOP SERIES

ORGANIZING COMMITTEE

(8/24/00 DRAFT)

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1) **Venue:** The Workshop is to be convened October 25-27, 2000 at the Marriott Pooks Hill Hotel. The hotel is located at 5151 Pooks Hill Road, Bethesda, Maryland, at the intersection of I-495 (the "Washington Beltway") and Route 355 (Wisconsin Avenue). The telephone number for the front desk at the hotel is 301-897-9400.

2) **Airports/Shuttles/Cars:** The Marriott is ~30 minutes from three airports: National, Dulles, or Baltimore/Washington. The airfare rates to fly into these three airports can vary greatly, so a price comparison is worth looking into when making your flight plans. If you are not renting a car, shuttle service between the airports and the hotel is available through Super Shuttle (1-800-258-3826). The Marriott has a complimentary shuttle service to the Medical Center Metro stop, which is 1.5 miles from the hotel; please contact the hotel (301-897-9400) for a detailed shuttle schedule.

3) **Accommodations:** A block of rooms is on hold at the Marriott at the U.S. government rate ($118.00 per night plus tax). Each out-of-town participant should make his or her own reservations for accommodations. To book your room reservation call 1-800-228-9290; the deadline to take advantage of the special rate is October 4, 2000. To make certain that you receive the special room rate, please indicate that you are part of the "NASA meeting on Mars Sample Handling." The sleeping rooms will be charged to a master bill, nevertheless you may be asked to provide a credit card to cover any incidental expenses.

4) **Materials/Equipment:** A 35mm slide projector and an overhead viewgraph projector will be available in the plenary room. If any additional or different electronic equipment is required by any speaker, please contact Ms. Sara Acevedo as soon as possible in advance of the meeting.

5) **Travel, Meals, and Incidental:** Funds are available to cover the travel expenses (including airfare at the coach-class rate) for participants who are not U.S. Civil Servants. Breakfast and lunch will be provided for ALL attendees during the Workshop each day so the reimbursed per diem rate will be adjusted accordingly. It is the responsibility of each U.S. Civil Servant to operate according to the policy of their agency regarding accepting travel reimbursements for participating in this NASA-sponsored Workshop. Please contact Ms. Acevedo if you have any questions on this matter.

6) **Agenda:** The current draft of the agenda for this Workshop is attached. The Workshop will begin at 1:00 p.m. on Monday October 25 and will conclude at 6:00 p.m. on Friday October 27. The hotel will post in the lobby the name of the hall in which the opening plenary session will be convened.

7) **Speakers:** All Speakers are requested to bring one hard copy of their presentation materials to the Workshop and are also requested to e-mail the electronic file(s) to Ms. Sara Acevedo.

8) **Participants' List:** A list of all confirmed participants will be distributed in the final mailing. Since we have assembled a group from a wide range of areas of scientific expertise, the list will provide a note on the area of expertise of each participant.

9) **Reading Materials:** Summaries of various reports related to Mars sample handling studies and issues will be provided in a final mailing in late-September/early October. Some attendees will be quite familiar with the information in these materials, others much less so. The materials are intended to provide a common summary background for all attendees.

10) **If you have any questions, please contact us:**

    **Agenda/Program Questions:**
    John Rummel  
    tel# 202-358-0702  
    jrummel@hq.nasa.gov

    **General Information:**
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