19 September 2022

MEMORANDUM FOR RECORD

SUBJECT: Fiscal Year 2022 (FY22) Military Burn Research Program (MBRP) Stakeholders Meeting

The following is a summary of the main topics discussed during the FY22 MBRP Stakeholders Meeting. Please note that all comments are not captured in this summary report. This summary also does not reflect the opinions or views of the MBRP, the CDMRP or the Department of Defense (DOD).

1. The MBRP held a stakeholders meeting on 13 May 2022. The stakeholders meeting provided an opportunity to engage scientific, clinical, and military burn experts, as well as lived-experience subject matter experts, in an open-dialogue forum to identify critical issues and underfunded areas of military burn research and care. Representatives from burn injury-related non-profit organizations, academia, government institutions, and the public contributed broad perspectives on potential barriers in research and patient outcomes, key knowledge or scientific gaps, and potential approaches for the treatment of burn injuries incurred while in the course of military Service. A list of stakeholder participants, invited speakers, and other attendees are included in Appendix A.

2. Welcome and Overview of the Congressionally Directed Medical Research Programs (CDMRP) (Enclosure 1)

Ms. Sandy Snyder, Program Manager for the MBRP, welcomed the participants and emphasized the importance of stakeholders meetings for informing the strategies of new and established programs managed by the CDMRP. Ms. Kristin Jones Maia offered a moment of silence in honor of Service Members that have suffered burn injuries. Ms. Snyder described the purpose of the meeting as identifying knowledge gaps to inform future MBRP research funding and strategic directions. Mr. Scott Wheeler provided an overview of the meeting agenda and explained his role as the lead meeting facilitator. Last, Ms. Allison Poore provided administrative remarks before Ms. Snyder began her introductory comments.

Ms. Snyder gave a brief overview of the CDMRP's history, mission, and vision, noting the unique role of consumer advocates in each aspect of the program. She described the program cycle and the two-tier review process used by CDMRP, highlighting the differences between peer review and programmatic review.

3. Overview of the MBRP (Enclosure 1)

Ms. Snyder introduced the MBRP, which was established by an FY11 $8 million (M) appropriation. She noted that that the FY22 appropriation for the program is $10M. Ms. Snyder highlighted the program's intent, vision, mission, and funding portfolio. She acknowledged the

essential participation of burn survivor advocacy organizations and the work of consumer reviewers at both peer and programmatic review.

4. Topic Area Presentations

4A. Combat Casualty Care Research Program - Severe Burn Injury Portfolio Research and Development Overview (Dr. Bonnie J. Woffenden) (Enclosure 2)

Dr. Woffenden introduced herself as the Severe Burn Injury Portfolio Manager for the Combat Casualty Care Research Program (CCCRP)/Joint Program Committee 6 (JPC-6). She noted that delayed evacuation from combat as well as prolonged field care (PFC) at any level is expected in future conflict; this will have significant impact on the care and treatment of military burn injuries. She explained that the CCCRP funds both knowledge and materiel products and that their investments are guided by requirement documents. She noted that high-priority focus areas are novel burn wound covers, non-surgical debridement, and therapeutic covers that do not generate antibiotic resistance. Dr. Woffenden explained that the CCCRP works with numerous partners within the Department of Defense as well as other government and outside partnerships.

4B. Overview of the U.S. Army Institute of Surgical Research (Dr. Kai Leung and Dr. Leopoldo Cancio) (Enclosure 3)

Dr. Leung introduced himself as the Science Lead for the Combat Wound Repair Group for the U.S. Army Institute of Surgical Research (USAISR). He explained that USAISR supports the CCCRP and U.S. Army Medical Materiel Development Activity (USAMMDA's) development of products to treat and repair burn wounds. He provided information about multiple products currently in development and noted that the USAISR has received MBRP funding for therapeutic development.

Dr. Cancio introduced himself as the director of the Burn Center at the USAISR and noted his military expertise in the field of combat care and burn wound treatment. He reviewed the history of military burn injuries in prior conflicts as well as concerns about future conflicts, including lack of air superiority, which would lead to delays in care. He also noted that even one burn patient can overwhelm combat medical staff, which has implications for any mass casualty event involving burn injuries. He also emphasized the importance of the entire spectrum of burn care, including a focus on long-term outcomes.

5. Breakout Session Discussion Summaries

These are not the official programmatic gaps for the FY22 cycle. The stakeholder-defined gaps may be used by the MBRP Programmatic Panel to determine the program's strategy for funding opportunities. Please refer to future funding opportunities for any final gaps and Focus Areas associated with a specific application receipt cycle.

5A. Emergency/Point of Injury (POI)/Field Care (Subgroup 1)

The subgroup discussed their top concerns within emergency/POI/and field care (including PFC). The high-priority gaps include:

- Atypical Burns, including any burn not caused by high heat thermal
    - This could include chemicals, white phosphorus, electrical, nuclear, radiation, cold/frostbite, directed energy, hyperbaric, laser, or any type of new weaponry.
    - Therapeutics for frostbite or therapeutics to address multiple types of burns at once; combat medical personnel have limited space to carry or store medical supplies so treatments need to be more universal.
    - Establishment of a far-forward standard of care for these types of burns.
    - Establishment of accurate preclinical models for these types of injuries.
    - Noted the impact of inhalation injuries and the need for PFC/POI treatments.
- Burn Wound Conversion, which sparked debate over whether a human burn wound converts or progresses after the injury, or if initial wound assessment does not fully capture the extent of the injury
    - Stakeholders had differing opinions on whether burn wound conversion has been proven in humans.
    - Those who contend burn wound conversion occurs in humans noted the lack of therapeutics to stop progression of burns at POI.
    - Those who questioned whether burn wound conversion occurs in humans noted that preclinical animal models of burn wound conversion may not accurately represent the human burn wound.
- Improved/Novel Dressings, particularly those that could be applied in austere, resource-limited environments or under delayed evacuation
    - Included bioactive dressings that are easy to use.
    - Dressings with multiple benefits and/or active ingredients to address infection, inflammation, pain control, barrier function.
    - Dressings that are elastic and adjust to changing size of injury to minimize dressing reapplication.
- Infection Control, which stakeholders agreed was a serious concern due to minimal options for field care and as a frequent contributor to fatality
    - Strategies for prevention and therapy are needed.
    - Lack of characterization of the pathogens to support development of treatments.
    - Handheld diagnostics to determine pathogen presence, other fieldable diagnostics that could be used in austere, resource-limited environments.
    - Nontraditional antibiotic interventions that would avoid development of resistance.
    - Broad spectrum infection control approaches that address multiple disease-causing organisms.

  - Need to learn more about biofilms and their interaction with the host.
  - Alternate treatment approaches for local versus systemic infections combined with polytrauma.
  - Strategies for the treatment and/or prevention of sepsis.
- Inflammation control, which the stakeholders considered critical during PFC, as unregulated systemic inflammation over multiple days contributes to mortality
  - Addressing hypermetabolic inflammation response in PFC scenarios through treatments or prevention.
  - Establishment of standards of care for inflammation control in PFC.
  - Mitigation of immune suppression and/or preventing infection during the inflammatory phase of burn injury.
  - Preliminary studies using biologics to alter inflammation.
  - Topical approaches that reduce inflammation and also increase wound closure and decrease scar formation.
- Other considerations:
  - Burns with concurrent polytrauma (i.e., traumatic brain injury [TBI], radiation exposure) will complicate every aspect of burn care and need more research; some also noted that these types of injuries can quickly overwhelm medical staff even with only a small number of patients.
  - Inhalation injuries remain a challenging problem in burn care and need strategies for PFC/POI management.
  - Resuscitation in PFC/POI scenario remains a challenge due to large amounts of fluid needed and other challenges; the group suggested the use of a powder versus fluid that could be more easily carried.
  - Long-term scarring could possibly be improved by intervention at this early stage.
  - Preparation for mass burn casualty events will require establishment of evidence-based standards of care for triage, stabilization, addressing polytrauma, resuscitation, and evacuation strategies.
  - Measuring efficacy of any treatment in an accurate, measurable, and quantitative way, especially when non-military populations are used (i.e., unhoused populations to study frostbite injuries)
  - Non-surgical debridement remains an important challenge in PFC/POI care in need of products and/or strategies to address situations where a burn surgeon is not available.

5B. Acute/Intensive Care Unit (ICU) Hospital Care (Subgroup 2)

The subgroup discussed their top concerns within acute/ ICU hospital care. The high-priority gaps include:

- Burns and Polytrauma, including burns not caused by heat/thermal
    - A need for multi-center studies to address military-relevant burns with polytrauma
    - Establishment of care guidelines including triage of multiple injuries within one casualty (i.e., burn and TBI, burn and inhalation injury, burn and radiation exposure).
- Infection Control, which could possibly be combined with inflammation control. Stakeholders also noted that many of these studies are difficult to conduct with civilian populations.
    - Need for diagnostic markers that could be an early indicator for infection.
    - Biomarkers for sepsis that could be quickly tested.
    - Studies needed for additional understanding of the balance between immune function and inflammation.
    - Need for an understanding of what currently used silver-based products are doing to the wound microbiome.
    - How early skin grafting impacts the wound microbiome.
    - Fungal infections can happen later in the course of the injury but are difficult to address.
- Inhalation Injuries were designated as a top gap for this group; however, some stakeholders felt that significant investment has been made in this topic without significant advancement. Some stakeholders felt that additional investment would not change outcomes and others felt that additional investment in this topic was needed.
    - Need for a uniform definition of inhalation injury and subsequent diagnostic criteria.
    - Strategies for diagnosis and treatment of various types of inhalation injuries (i.e., those associated with thermal burns versus those associated with chemical burns).
    - Accurate early diagnosis is critical and current strategies are lacking; secondary to this would be new treatment modalities that could intervene early.
    - Studies on what is in the patient's airway in the first 6 hours post-injury could be helpful in determining chemical exposure and toxin absorption.
- Burn Wound Closure
    - Importance of maintaining joint elasticity, especially in the hands, while addressing burn wound closure.
    - Establishing different strategies for burn wound closure within PFC hospitalization, which may require delayed grafting.
    - Functional skin grafts that have true skin barrier function, not just the physical appearance of skin.
    - Any cells used for closure need to perform barrier functions; the best strategy may be multiple layers and multiple types of cells.
    - Need for evidence-based clinical endpoints for patients on burn wound closure evaluation.

  - Study of the skin microbiome that may be aiding in closure or causing delay.
  - The whole body impact on burn wound closure (systemic inflammation, gut health).
  - Inclusion of all elements of skin such as pigment, sweat glands, and hair follicles.
- Resuscitation, which stakeholders noted is currently performed with guidelines that are 50 years old and require large amounts of fluid for one patient
  - Prevention strategies that could be implemented to reduce need for resuscitation.
  - Need for low volume resuscitation.
  - Understanding the pathology of edema and ways to resuscitate that improve organ function.
  - Understanding the time and role of immunotherapies.
  - Establishing the role of prevention and prior determination of genetic response (i.e., Hunter Reflex).
  - Strategies for post-fluid resuscitation management.
  - New blood and blood products needed for resuscitation treatment options.
- Other considerations:
  - Strategies for burns other than those caused by heat/thermal when they reach hospital/ICU care.
  - Improved guidelines for polar medicine: treatments for frostbite and conducting care for burn injuries in cold climates.
  - Combat or field hospitals/ICUs lack the resources of a burn center and need fast, minimal resource strategies for all of these problems.
  - Inflammation control and how that relates to infection control, including sepsis within a hospital setting.
  - New, emerging weapons may cause burn injuries that will require new treatment and prevention strategies (i.e., microwave, lasers, directed energy).
  - Polytrauma is a significant concern, including whole body radiation exposure.
  - Determination of presence of burn wound conversion in humans.
  - Strategies for early interventions for psychological health in an acute care/ICU setting.
  - Strategies for pain management that are non-narcotic; stakeholders acknowledged that unmitigated pain and current narcotic medicines are associated with post-traumatic stress disorder (PTSD) and substance use disorder (SUD).
  - Stakeholders noted a large blind spot within research on mass burn casualty events, including the need for automation, faster and more automated resuscitation, best standard of care within limited resource and limited medical personnel environments.

5C. Subacute Burn Care/Rehabilitation (Subgroup 3)

The subgroup discussed their top concerns regarding subacute burn care and rehabilitation. The high-priority gaps include:

- Tissue regeneration and repair
  - Portable devices that can preserve skin elements.
  - Strategies for reduction in skin grafting by applying cells to the wound (possibly, cells from the patient to avoid rejection).
  - Devices and products that can be used in the field by non-medical personnel.
  - Muscle also needs to be regenerated.
- Novel and/or improved strategies of dressing
  - Need dressings that address inflammation and infection.
  - Big data approaches could be useful in evaluating new dressings along with a central data repository.
  - Real-time data-driven wound monitoring is needed.
  - Decrease the need for dressing changes; survivors note dressing changes as one of the most painful procedures.
- Burn wound closure and injury progression/conversion
  - Hypovolemia and Hypothermia are both still major issues.
  - Occurrence of secondary necrosis after a burn (burn wound progression or conversion) needs to be addressed with preventative therapeutics.
  - Establishing the optimal cell source for burn wound closure cell therapies.
  - Wound coverings that preserve dermal elements.
  - Alternatives to surgical debridement are needed.
  - Translation of preclinical research findings to humans is not always accurate.
- Infection and Inflammation Control
  - Early field-based measures to prevent infection are needed.
  - Topical treatments for infection and inflammation need to be evaluated for systemic effects.
  - Topical applications need to be usable by non-medical personnel and applied early.
  - Treatments that address many types of bacterial infections are needed.
- Rehabilitation/Clinical Care (emphasizing mobility and exercise); the stakeholders renamed this gap to reflect a more comprehensive view of this stage of care.
  - Strategies are needed for prevention of limited mobility.
  - Prevention of tissue fibrosis and inappropriate bone growth are needed.

  - Dressings need to allow for early mobility in rehabilitation.
  - Mobility, exercise, and range of motion need to be emphasized early in rehabilitation to prevent contractures, especially with hands.
- Other considerations:
  - Transitions to different phases of care need additional attention and are often challenging for the patient mentally and physically.
  - Psychological health and pain were both initially selected as a top gap in this group, but were outside the top five upon a vote in the second breakout session.
  - Pain in burn patients is multi-faceted and can be from nerve pain, blood vessels, contractures; strategies for pain management should address the various causes.
  - Concerns over lack of data with burns not caused by heat thermal.
  - Best practices need to be established for treatment of polytrauma, especially when that delays treatment of the burn.
  - Need for a large-scale database of patient characteristics for all of those who enter a burn center.

5D. Long-Term Challenges (Subgroup 4)

The subgroup discussed their top concerns regarding long-term challenges in burn care. The high priority gaps include:

- Behavioral Health, Functional Recovery, and Holistic Well-being, a more comprehensive category replacing the original Psychological Health
  - Strategies for improved motivation and adherence to long-term treatment regimens.
  - Transitions were identified as a significant challenge in the continuum of care; burn survivors indicated that leaving a burn center was the time they were most at risk for Behavioral Health concerns and they felt vastly underprepared for return to their homes and lives.
  - Strategies for cognitive recovery.
  - Inclusion of psychological well-being in rehabilitation, not just the focus on physical recovery.
  - A need for social skills training, help navigating social situations, and help with body image concerns so that survivors do not feel they have to isolate.
  - Survivors discharged to rural environments may not be able to easily access care at a U.S. Department of Veterans Affairs (VA) Medical Center and there are significant barriers to treatment.
  - Care delivery strategies so that survivors can be treated in their homes versus traveling are needed.
  - Facial injuries can be challenging at this stage.

  - A strong need for a sense of community and family once discharged from a burn center; burn survivors indicated they felt a sense of loss when they left a burn care community such as USAISR.
  - Concerns over loss of identify if they cannot return to duty.
  - Need for early management of delirium.
- Functional Skin and Scar Prevention/Treatment
  - Prevention of severe scarring could drastically improve quality of life concerns.
  - Focus on early care of skin and scarring but minimal investment in long-term skin concerns.
  - Need for innovative medical devices to remold scarred tissues.
  - Scarring mechanisms of facial skin are a significant challenge and need to be evaluated separately from information about trunk and extremity skin.
  - Functional skin that includes hair follicles and sweat glands and that can regulate temperatures would improve long-term outcomes for survivors.
  - Considerations for cellular therapies include their reliance on the viable tissues left behind post-injury and that some stem cell treatments do not engraft and therefore will have a temporary effect.
- Pain/Neuropathic Pain/Itch, a category the stakeholders suggest renaming to encompass the multi-faceted pain that survivors experience
  - Alternatives to opioid medications are critical because of addiction as well as functional impairment from opioids.
  - Non-pharmacological interventions need to be tested and evaluated (i.e., laser therapy).
  - Itching can be so severe that patients cannot differentiate it from acute pain.
  - Novel treatments in this area are a critical need.
- Clinical Care, Rehabilitation
  - Motivation and support throughout rehabilitation is necessary.
  - Pharmacology, environment analysis, and diet/nutrition should all be part of a comprehensive rehabilitation process.
  - Survivors spend the most amount of time in the rehabilitation and/or long-term outcomes stage but there is little emphasis on it.
  - Transitions of care, especially when leaving a burn center, are a huge challenge for survivors. Survivors note feeling cared for at burn centers and then extremely isolated, alone, and abandoned once they return home.
  - Lack of trained burn care providers in the survivor's home area represents a significant need for every type of provider (internal medicine, pain management, mental health).
  - Veterans have significant barriers to care, and burn care provider stakeholders indicated that many patients in this category are not heard from at all post-discharge.

- Burns and Polytrauma
    - Lack of evidence-based information on long-term sequelae from these injuries (i.e., amputations and TBI along with a burn injury).
    - Burns are evaluated in clinical study as a separate event, which creates a huge knowledge gap.
    - Stakeholders felt that central nervous system impacts of burn injuries with polytrauma, including pain agitation, hypoxemia, delirium, and long-term cognitive function are not well studied.
    - Need for useful ways to quantify the severity of injury.
- Other considerations:
    - Lack of information about aging burn survivor populations.
    - Lack of medical staff outside of burn centers with expertise in this area creates fragmented, ineffective long-term care where the survivor lives.
    - Scarring and pain are the primary challenges noted by burn survivors.
    - Transplants without help for psychosocial impacts leads to poor outcomes.
    - Fixing a scar does not change other factors like neuropathy, inhalation injuries, and painful contractures that delay return to Service or regular life activities.
    - Nutrition is an area of need for patients to maintain weight, muscle, and bone health, all of which affect quality of life.
    - Long-term impacts need to be considered in studies of any intervention at an earlier continuum stage; as an example, stakeholders indicated that many burn wound closure studies only used 30-day wound closure as the clinical endpoint.
    - Chronic reopening of wounds is an issue.
    - Contractures remain a significant challenge related to pain and functional mobility; stakeholders expressed the need for reversing contractures via cell turnover or reprogramming fibroblasts.

6. Adjournment

Ms. Snyder described how gaps identified during the stakeholder meeting will be used to inform MBRP investment strategy discussions and strategic planning discussions and will be shared with internal and external collaborators. She also noted that outcomes of the meeting would be posted on the CDMRP webpage for public dissemination. Ms. Snyder thanked the participants for their time and careful consideration of the gaps to be addressed by the MBRP.

Appendix A: Meeting Attendees

The following individuals were present for the video conference:

Invited Speakers	
Dr. Leopoldo Cancio	USAISR
Dr. Kai Leung	USAISR
Dr. Bonnie Woffenden	CCCRP/JPC-6
Invited Stakeholders	
Dr. Ronald Acierno	University of Texas Health Sciences
Ms. Amy Acton	Phoenix Society for Burn Survivors
Dr. Aftab Ahmad	University of Alabama at Birmingham
Dr. Bhagwat Alapure	Louisiana State University Health Sciences Center New Orleans
Dr. Praveen Arany	University of Buffalo
Dr. Evangelos Badiavas	University of Miami, Aegle Therapeutics Corp.
Dr. Austin Baird	University of Washington
Dr. Sigrid Blome-Eberwein	Lehigh Valley Health Network
Dr. Lorena Braid	Aurora Biosolutions, Inc.
Mr. Thomas Brett	University of Virginia
Dr. Eric Brown	Synmedix, Inc.
Dr. David Burmeister	Uniformed Services University of the Health Sciences (USU)
Dr. Leopoldo Cancio	USAISR
Dr. Jill Cancio	USAISR
Dr. Sylvain Cardin	Naval Medical Research Unit (NAMRU), San Antonio
Dr. Anders Carlsson	USAISR/The Metis Foundation
Dr. Jeffrey Carter	Louisiana State University, Health Sciences Center
Dr. Lourdes Castanon	University of Arizona
Dr. Curtis Cetrulo	Massachusetts General Hospital/Harvard Medical School
Dr. Donna Chang	Hope Biosciences
Dr. Chris Chao	National Institute of General Medical Sciences (NIGMS)
Ms. Elizabeth Chipriano	The Joint Program Committee-2/Military Infectious Diseases Research Program (JPC-2/MIDRP)
Dr. Mashkoor A. Choudhry	Loyola University Chicago
Dr. Richard A. Clark	Neomatrix Therapeutics, Inc.
Dr. Keith Cook	Carnegie Mellon University
Dr. David Herndon	Joseph M. Still Research Foundation
Dr. Ross Donaldson	Critical Innovations, LLC
Dr. Melanie Doyle-Eisele	Lovelace Biomedical
Dr. John Elfar	Pennsylvania State University
Dr. Alan Epstein	CCCRP/JPC-6
Dr. Fateme Fayyazbakhsh	Missouri University of Science and Technology
Dr. Michael Feldman	Virginia Commonwealth University

Dr. Celeste Finnerty	University of Texas, Medical Branch
Dr. Alberto Forcella Jr.	MBET Health, LLC
Dr. Sheldon Garrison	Rogers Behavioral Health
Dr. Luis Garza	Johns Hopkins School of Medicine
Dr. Aarti Gautam	Walter Reed Army Institute of Research (WRAIR)
Dr. Colleen Gibney	U.S. Army Medical Research and Development Command/Small Business Innovation Research (SBIR) Office
Dr. Nicole Gibran	University of Washington
Dr. Angela Gibson	University of Wisconsin, School of Medicine and Public Health
Dr. Jacob Glaser	NAMRU, San Antonio
Dr. Kerriann R. Greenhalgh	Kericure Medical
Dr. Bronwyn Griffin	Griffith University
Dr. Jianjun Guan	Washington University in St. Louis
Dr. Geoffrey Gurtner	Stanford University
Dr. Jin-Oh Hahn	University of Maryland
Dr. Saher Hamed	Remedor Biomed, Ltd.
Dr. David Harrington	Brown Surgical Associates
Dr. Mark Hemmila	University of Michigan
Dr. Rhonda Holgate	Houston Methodist Hospital
Dr. James H. Holmes IV	Atrium Health Wake Forest Baptist Burn Center/The ABA Burn Research Network
Dr. Seok Jong Hong	Northwestern University
Dr. Suresh G. Joshi	Drexel University
Dr. Karen Kowalske	University of Texas Southwestern, Parkland
Dr. John Kubasiak	Loyola University Medical Center
Dr. Alexandra Lacey	Regions Hospital Burn Unit
Dr. James A. Lederer	Brigham and Women's Hospital, Harvard Medical School
Dr. Kai Leung	USAISR
Dr. Jakkarin Limwongyut	University of California, Santa Barbara/National University of Singapore
Ms. Kristin Jones Maia	U.S. Army Medical Materiel Development Activity (USAMMDA)
Dr. Luis Martinez	NAMRU, San Antonio
Dr. Sanjeev K. Mathur	NAMRU, Dayton
Dr. Bryan McCranor	United States Army Medical Research Institute of Chemical Defense (USAMRICD)
Dr. Mehdi Mirsaeidi	University of Florida
Dr. Lauren Moffatt	MedStar Washington Hospital Center
Dr. Nyssa Morgan	Georgia Institute of Technology
Dr. Rachel M. Nygaard	Hennepin Healthcare
Ms. Lori Palfalvi	American Burn Association
Dr. Tina L. Palmieri	University of California, Davis
Dr. Ingrid Parry	University of California, Davis

Dr. Shaurya Prakash	The Ohio State University
Dr. Jagadeesha Prasad	Pennsylvania State University
Dr. Anthony Pusateri	USAISR
Dr. Laurence Rahme	Massachusetts General Hospital, Harvard Medical School
Dr. Joseph F. Rappold	Maine Medical Center
Dr. Vivek Raut	Organogenesis Holdings, Inc.
Ms. Andrea Renner	SBIR Office
Dr. Julee Rendon	Johns Hopkins University
Dr. Paul Robben	WRAIR
Dr. Evan Ross	USAISR
Dr. Chad J. Roy	Tulane University School of Medicine
Dr. V. Sujith Sajja	WRAIR
Dr. Miyuki Sakuma	Massachusetts General Hospital
Dr. Alisa Savetamal	Bridgeport Hospital
Dr. Carl Schulman	University of Miami
Dr. Chandan K. Sen	Indiana University School of Medicine
Dr. Linda Sousse	University of Texas Health Science Center
Dr. Wesley Thayer	Vanderbilt University Medical Centre
COL Stuart Tyner	JPC-2/MIDRP
Dr. Evelina Vågesjö	Ilya Pharma
Dr. Haitao Wang	Mayo Clinic
Mr. James West	SAIC, PEO Aviation Fixed Wings
Dr. Kenneth Wilson	University of Chicago
Dr. Bonnie Woffenden	JPC-6/CCCRP
Dr. Steven Wolf	University of Texas Medical Branch
Dr. James K. Wright	University of Alabama at Birmingham
Dr. Peter Yen	Burn and Reconstructive Centers of America
Dr. Yuanyuan Zhang	Wake Forest Institute for Regenerative Medicine

Government Observers

Ms. Sandy Snyder	Program Manager, MBRP, CDMRP
Dr. Gayle Vaday	Civilian Deputy Director, CDMRP
Dr. Rebecca Fisher	Deputy Director for Program Management, CDMRP
Dr. Kristy Lidie	Deputy Director for Program Management, CDMRP
Dr. Melissa Tursiella	Program Manager, CDMRP
Dr. Ray Santullo	Program Manager, CDMRP
Dr. Robin Walker	Science Officer, Goldbelt

Leidos Support Contractors

Ms. Bethany Orlando	Task Order Manager
Ms. Allison Poore	Scientific Manager, MBRP
Ms. Mariah Baldwin	Biomedical Life Scientist
Ms. Alexandria Bakke	Biomedical Life Scientist
Ms. Caitlyn Barnes	Biomedical Life Scientist
Ms. Sydney Bentz	Biomedical Life Scientist

Ms. Angela Braunschweiger	Biomedical Life Scientist
Ms. Cynthia Chiang	Database Administrator
Ms. Maggie Defreytas	Biomedical Life Scientist
Ms. Veronica Doxey	Biomedical Life Scientist
Dr. Cindy Estremera Gauthier	Facilitator, Strategy Arts
Ms. Christina George	Biomedical Life Scientist
Ms. Elizabeth Guman	Facilitator, Strategy Arts
Mr. William Huggins	Facilitator, Strategy Arts
Dr. Janet Hsu	Biomedical Life Scientist
Ms. Adeola Olufunmilade	Biomedical Life Scientist
Ms. Caroline Rocourt	Biomedical Life Scientist
Mr. Scott Wheeler	Facilitator, Strategy Arts

Enclosure 1
Overview of the CDMRP and MBRP

\

Enclosure 2
Overview of the CCCRP

Enclosure 3
Overview of the USAISR