# SUPPORT

**SMITH, MICHAEL B.**

**Current**

**Title:** Resolution of Clinical Lung Injury

**Time Commitments:** 0.6 calendar

**Supporting Agency:** NIH/NHLBI, R37 HL123456

**Address:**

NIH/NHLBI Information center

P.O Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Charmaine Prasad

**Performance Period:** 05/01/2011-04/30/2017

**Level of funding:** $289,000

**Project Goals:** To study the pathogenesis of acute lung injury and ARDS, with an emphasis on alveolar epithelial fluid clearance, through the use of clinical studies.

**Specific Aims:** The specific aims are to study the the pathogenetic and prognostic value of biomarkers in patients with ARDS, to test the effect of human edema fluid from ARDS patients in both an in vitro model of cultured human alveolar epithelial type 2 cells and new therapeutics for acute lung injury in an isolated perfused human lung preparation.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Allogeneic Human Mesenchymal Stem Cells for the Treatment of Acute Lung Injury

**Time Commitments:** 1.2 calendar

**Supporting Agency:** NIH/NHLBI, U01 HL111222

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Kimberly Stanton

**Performance period:** 08/01/2011-07/30/2017

**Level of funding:** $1,687,044

**Project Goals:** To test the safety and efficacy of human mesenchymal stem cells for the treatment of severe acute lung injury.

**Specific Aims:** The specific aim is to test the therapeutic value of intravenous human bone marrow derived mesenchymal stem cells for the treatment of 60 patients with moderate to severe ARDS for safety and limited efficacy endpoints, using a 2:1 randomization with a double blind design. There is also an aim to study the biologic markers of injury that may be altered in the plasma and bronchoalveolar lavage in the placebo versus treated patients.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Prevention and Early Treatment of Acute Lung Injury

**Time Commitments:** 1.2 calendar

**Supporting Agency:** NIH/NHLBI, U01 HL123456

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Gayle Jones

**Performance period:** 5/17/2014-04/30/2021

**Level of funding:** $286,844

**Project Goals:** Overlap: No scientific or budgetary overlap with the proposed PRMRP proposal

To test new treatments for acute lung injury in patients enrolled in the Emergency Department and in the Intensive Care Unit.

**Specific Aims:** The specific aim is to test new therapeutic approaches to testing the preventative or early treatment value of novel treatments in patients admitted to the Emergency Department at risk for ARDS or new treatments for ARDS in patients in the intensive care unit in primarily phase 3 designs.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Cigarette Smoke Exposure and Acute Lung Injury After Severe Blunt Trauma

**Time Commitments:** 0.30 calendar

**Supporting Agency**: NIH/NHLBI, R01 HL112233

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Charmaine Prasad

**Performance period:** 11/15/2011-11/30/2016

**Level of funding:** $250,000

**Project Goals:** To determine the biologic effects of cigarette smoke exposure that increase susceptibility to acute lung injury after severe trauma.

**Specific Aims:** The specific aim is to determine the effect of cigarette smoke on increasing the risk of ARDS in major trauma patients, including accounting for passive versus active cigarette smoke exposure and alcohol use. There is also one aim designed to test the relationship of the microbiome in the airways at baseline and on days 2-4 sampled by bronchoalveolar lavage to cigarette smoke exposure and to the development of ARDS in major trauma patients.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Identification of Patients at High Risk for the Development of ALI with Clinical and Biological Predictors

**Time Commitments:** Effort as needed

**Supporting Agency:** U Penn Subcontract/Glaxo Smith Kline, Galaxy ALI (subcontract)

Address:

Glaxo Smith Kline

709 Swedeland Road

King of Prussia, PA 19406

**Contracting/Grants Officer**: Susan Russell

**Performance period:** 05/26/2012-05/25/2016

**Level of funding:** $42,681

**Project Goals:** To identify clinical and biological predictors of ALI in a cohort of patients with sepsis

**Specific Aims:** The aim is to determine the biological predictors of ARDS in the plasma of sepsis patients in the Emergency department at risk for developing ARDS.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Quantification and Biomarkers of Short-Term Pulmonary Effects of Tobacco Smoke Exposure: Infection- Related Acute Lung Injury

**Time Commitments:** 0.60 calendar

**Supporting Agency:** NIH/FDA

NCI Contact Center

BG 9609 MSC 9760

9609 Medical Center Drive Bethesda, MD 20892-9760

**Contracting/Grants Officer:** Rebecca Brightful

**Performance period:** 08/01/2013-09/30/2018

**Level of funding:** $25,601

**Project Goals:** To quantify the association between cigarette smoke exposure and the development of acute lung injury in patients with severe infection and in mouse models of infection-related ALI, and to develop new biomarkers for tobacco-related acute lung injury

**Specific Aims:** The specific aims are to test the biological and clinical predictors of developing ARDS in patients at risk for developing ARDS who smoke cigarettes versus those who do not and identifying biomarkers that may be associated with the increased risk. One aim also tests the effects of cigarette smoke exposure in mice to determine if they are more susceptible to acute lung injury from endotoxin or bacterial lung infection. **Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** TIMP-3 For Viral Induced Acute Lung Injury

**Time Commitments:** 0.8 calendar

**Supporting Agency:** Amgen, 2013583306

**Address:**

Extramural Research Alliances (ERA)

Amgen, Inc.

One Amgen Center Drive Thousand Oaks, CA 91320

**Contracting/Grants Officer:** Scott Simonet

**Performance period:** 11/03/2013-11/02/2016

**Level of funding:** $156,275

**Project Goals:** To test a new therapy with TIMP-3 for influenza pneumonia and lung injury.

**Specific Aims:**  To evaluate the potential therapeutic value of inhibiting TIMP-3 to reduce acute lung injury from PR8 H1N1 influenza in mice.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** The GOLD STUDY: Goal of open lung ventilation in donors

**Time Commitments:** 1.2 Calendar

Supporting Agency: NIH/NHLBI,R01HL334455

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer**: Richard Steinheart

**Performance period:** 11/01/2014-10/30/2019

**Level of funding:** $100,102

**Project Goals:** Dr. Matthay’s laboratory will be responsible for processing the human lungs collected and studied in Aim 2 of this application. Dr. Matthay himself will also oversee the conduct of the trial as described in Aim 1 in conjunction with Dr. Ware at Vanbderbilt.

**Specific Aims:** The specific aim is to test a higher level of positive end expiratory pressure (PEEP) 10 cmH20 versus a lower PEEP of 5 cmH20 to increase the rate of transplantation of lungs from brain dead donors in a randomized trial.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Gene-modified mesenchymal stem (stromal) cells for Treatment of the Acute Respiratory Distress Syndrome

**Time Commitments:** 0.3 calendar

**Supporting Agency:** UC/CAI grant, 20130822SFM

**Address:**

11000 Kinross Avenue, Suite 211 Los Angeles, CA 90051

**Contracting/Grants Officer:** Susan Waelder

**Performance period:** 04/01/2015-03/31/2017

**Level of funding:** $100,000

**Project Goals:** Our primary objective will be to carry out proof of principle studies to determine which combination of genes for KGF, Ang-1, and TIMP3 transfected into MSCs will produce the most therapeutically effective conditioned media (CM) for treating ARDS using pre-clinical models of pneumonia and sepsis in mice and severe pneumonia and lung injury in our novel ex vivo perfused human lung.

**Specific Aims:** Specific aim is to determine to potential therapeutic efficacy of an enriched conditioned media from transfected MSCs for reducing in vitro lung endothelial and epithelial injury and then test the conditioned media in an endotoxin model of lung injury in mice.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Molecular Endotypes of ARDS: Identification, Biology, and Differential Response to Therapy

**Time Commitments:** 0.6 calendar

**Supporting Agency:** NIH/NHLBI R01 HL131126

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Sunshine Wilson

**Performance Period:** 05/01/2016-04/30/2020

**Level of funding:** $260,242

**Project Goals:** To identify endotype-specific treatment responses and differences in endotype biology within ARDS

**Specific Aims:** To test biologic and clinical variables in ARDS patients to identify clinically meaningful phenotypes that would be more specific for therapeutic targets.

**Overlap: None**

**Pending**

**Title:** Mesenchymal Stem Cell (MSC) or MSC Derived Factors for the Prolonged Field Care of Wounded Military Personnel with Traumatic Brian Injury and Hemorrhagic Shock

**Time Commitments:** 1.8 calendar

**Supporting Agency:** NIH

**Address:**

NIH

9000 Rockville Pike

Bethesda, MD 20892

**Contracting/Grants Officer:** Pending

**Performance Period:** 02/01/2017-12/13/2019

**Level of Funding:** $ 802,202

**Project Goal:** To conduct preclinical animal studies to test the efficacy of MSC derived factors, specifically lyophilized conditioned media from MSC, for treatment of traumatic brain injury in rats and pigs for application in prolonged field care as is currently done with lyophilized fresh frozen plasma in combat victims who are injured.

**Specific Aims:** Aim 1. To test lyophilized conditioned media of MSC for efficacy in cultured endothelial cells.Aim 2. To test the lyophilized conditioned media of MSC in a rat model of traumatic brain injury and Aim 3. To test the lyophilized conditioned media of MSC in a pig model of traumatic brain injury.

Overlap None

**Previous**

**Title:** Genetic risks for ALI in ARDSnet and the iSPAAR Consortium

**Time Commitments:** 0.6 calendar

**Supporting Agency:** NIH/NHLBI RC2 HL101222/University of Washington

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Michael Blackwell (University of Washington)

**Performance Period:** 8/30/2009-7/30/2012

**Level of Funding:** $50,000

**Project Goal:** To identify genetic factors contributing to the pathogenesis of ARDS.

**Specific Aims:** To study DNA and plasma for biological factors that predict outcomes in ARDS patients.

Overlap None

**Title:** Treatment of Pulmonary Edema in Organ Donors

**Time Commitments:** 0.6 calendar

**Supporting Agency:** NIH/NHLBI R01 HL885565/VUMC (subcontract)

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Libby Salberg (VUMC)

**Performance Period:**  4/01/2008 -03/31/2013

**Level of Funding:** $11,982

**Project Goal:** To test aerosolized albuterol a beta agonist to improve lung function in brain dead subjects.

**Specific Aims**  To carry out a randomized trial of inhaled albuterol versus placebo to increase lung utilization for lung transplantation.

**Overlap** None

**Title:** Sedation Management in Pediatric Patients with Acute Respiratory Failure

**Time Commitments**: 0.6 calendar

**Supporting Agency:** NIH/NHLBI U01HL554411 /University of Pennsylvania (subcontract)

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:**  Sheila R. Atkins (University of Pennsylvania)

**Performance Period:** 5/1/2008-4/31/2013

**Level of Funding:**  $11,269

**Project Goal:** To test a sedation strategy to improve clinical outcomes in children with acute respiratory failure who were being mechanically ventilated.

**Specific Aims:** To use a cluster design to test a protocolized sedation strategy to increase ventilator free days in pediatric patients with acute respiratory failure.

Overlap: None

**Title:** Lung Fluid Balance and Mesenchymal Stem Cells

**Time Commitments:** 2.4 calendar

**Supporting Agency:** NIH/NHLBI R01HL124565

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer**: Dianna Jessee (GMO)

**Performance Period:** 8/30/2008-7/30/2013

**Level of Funding:** $382,388

**Project Goal:** To study the mechanisms by which mesenchymal stem cells reduce lung injury in experimental models.

**Specific Aims:** To study the efficacy and mechanisms of mesenchymal stem cells in mouse models of acute lung injury.

**Overlap : None**

**Title:** Stromal stem cells of human placenta for the treatment of Acute Lung Injury

**Time Commitments:** 0.6 calendar

**Supporting Agency:** NIH/NHLBI R43HL115524/Plasalus LLC

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Frans A Kuypers (Plasalus)

**Performance Period:** 7/1/12-6/31/2014

**Level of Funding:** $72,342

**Project Goal:** To test the efficacy of human placental mesenchymal stem cells for reducing lung injury in both in vitro and in vivo models of lung injury.

**Specific Aims:** To use human type 2 cells and the ex vivo perfused human lung preparation to test the efficacy of human placental stem cells for reducing lung injury from endotoxin.

Overlap None

**Title:** Clinical Research Network for the Treatment of Acute Lung Injury (ALI) and Acute Respiratory Distress Syndrome (ARDS)

**Time Commitments:** 0.6 cal

**Supporting Agency:** NIH/NHLBI HHSN268200536166C

Address: NHLBI, NIH

Rockledge II building, Rm 6016

6701 Rockledge Drive MSC 7902

Bethesda MD 20892-7902

**Contracting/Grants Officer:** Scott Bredow (NHLBI)

**Performance Period:** 11/1/2011-5/30/2014

**Level of Funding:** $33,122

**Project Goal:To test in phase 3 trials new treatments for acute lung injury and ARDS.**

**Specific Aims: To enroll patients in randomized clinical trials in the NHBLI ARDS Network.**

**Overlap: None**

**Title:** Metabolic Response to Acute Injury in Alveolar Epithelium and ARDS

**Time Commitments:** 0.12 calendar

**Supporting Agency:** Stanford /American Thoracic Society, 60995841-117524

**Address:**

Stanford University Office of Sponsored Research 3160 Porter Drive, Suite 100

Palo Alto, CA 94304-8445

**Contracting/Grants Officer:** Teresa Tom

**Performance Period:** 12/30/14-12/29/15

**Level of Funding:** $10,000

**Project Goal:** To study the metabolic factors released by human alveolar epithelial type 2 cells in culture and to supply pulmonary edema fluid for metabolomics studies.

**Specific Aims:** The specific aim is to determine the metabolic abnormalities that may have pathogenetic or prognostic significance in cultured human epithelial type 2 cells exposed to cytomix (pro-inflammatory stimulus) and to test the metabolic abnormalities in undiluted edema fluid from patients with hydrostatic versus acute lung injury (ARDS).

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** Gene-modified mesenchymal stem (stromal) cells for Treatment of the Acute Respiratory Distress Syndrome **A125202**

**Time Commitments:** 0.6 calendar

**Supporting Agency:** NIH/NHLBI U54HL119893/UCLA

**Address:**

NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Mary Haskins (UCLA)

**Performance Period:** 2/1/15-1/31/2016

**Level of Funding**: $100,000

**Project Goal:** Our primary objective will be to carry out proof of principle studies to determine which combination of genes for KGF, Ang-1, and TIMP3 transfected into MSCs will produce the most therapeutically effective conditioned media (CM) for treating ARDS using pre-clinical models of pneumonia and sepsis in mice and severe pneumonia and lung injury in our novel ex vivo perfused human lung.

**Specific Aims:** Specific aim is to determine to potential therapeutic efficacy of an enriched conditioned media from transfected MSCs for reducing in vitro lung endothelial and epithelial injury and then test the conditioned media in an endotoxin model of lung injury in mice.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal

**Title:** The inflammasome: A Novel Biomarker in ALI/ARDS

**Time Commitments:** .12 calendar

**Supporting Agency:** NIH/NHLBI R01 HL112747/Brigham & Women’s Hospital

**Address:** NHLBI Health Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Stephanie Redfield (Brigham & Women’s Hospital)

**Performance Period:**  4/15/2012-3/30/2016

**Level of Funding:** $6,577

**Project Goal:** To determine the predictive value of biomarkers of the inflammasome in acute lung injury. **Specific Aims:** To test the predictive value of plasma levels of biomarkers of the inflammasome on developing ARDS in at risk patients plus to determine the modifying effect if any on these biomarkers of treatment with statins.

**Overlap: None**

**Title:** Recipient Epidemiology and Donor Evaluation Study-III \*REDS-III) –Domestic Sites

**Time Commitments:** 1.8 calendar

**Supporting Agency:** NIH/NHLBI, HHSN1234567890

**Address:**

NIH/NHLBI Information center

P.O Box 30105

Bethesda, MD 20824-0105

**Contracting/Grants Officer:** Michael Spears

**Performance period:** 04/15/2011-08/31/2016

**Level of funding: $**344,636

**Project Goals:** To assure safe and effective blood banking and transfusion medicine practices through a comprehensive, multi-targeted strategy involving basic, translational, and clinical research to improve the benefits of transfusion while reducing its risks.

**Specific Aims:** The specific aim is to test clinical criteria for determining if patients who have blood product transfusions who develop pulmonary edema have TACO or TRALI or ARDS from a usual risk factor (not blood products) by reviewing specific patient cases from three hospitals with a consensus panel.

**Overlap:** No scientific or budgetary overlap with the proposed PRMRP proposal