Task Book Report Generated on: 03/29/2024

Human Research Program Elements: None Human Research Program Risks: None Space Biology Element: (1) Cell & Molecular Biology (2) Animal Biology: Vertebrate Space Biology Cross-Element (1) Developmental Biology (2) Neurobiology Space Biology Special Category: (1) Translational (Countermeasure) Potential PI Email: mdelp@fsu.edu Fax: FY PI Organization Type: UNIVERSITY Phone: 352-214-1195 Organization Name: Florida State University PI Address 1: College of Human Sciences PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallahassee State: FL				
Project Title: Effects of Spaceflight on Ocular Oxidative Stress and the Blood-Retinal Barrier Program/Discipline: Program/Discipline: Program/Discipline: Program/Discipline: SPACE BIOLOGYCellular and molecular biology Flement/Subdiscipline: Sone Street Program Rise None Spacefliology Stream Rises: None Space Biology Cross-Riement Ci) Cell & Molecular Biology Ci) Animal Biology: Verebrate Space Biology Cross-Riement Ci) Discipline: Ci) Discipline: Ci) Cell & Molecular Biology Ci) Neurobiology Space Biology Special Cittegory: (i) Discipline: Ci) Cell & Molecular Biology Ci) Neurobiology Space Biology Special Cittegory: (i) Discipline: Ci) Discipline: Ci) Cell & Molecular Biology Ci) Neurobiology Space Biology Special Cittegory: (i) Discipline: Ci) Congenization Type: UNIVERSITY Phone: S52-214-1195 Organization Type: UNIVERSITY Phone: S52-214-1195 Organization Name: Pi Address 1: College of Human Sciences Pi Address 2: Ci) Callege of Human Sciences Pi Address 3: Ci) College of Human Sciences Pi Address 2: Ci) Callege of Human Sciences Pi Address 3: Ci) Callege of Human Sciences Pi Address 3: Ci) Congressional District: Ci) Congressional	Fiscal Year:	FY 2015	Task Last Updated:	FY 02/26/2015
Division Name: Space Biology Program/Discipline: Program/Discipline: SPACE BIOLOGY—Cellular and molecular biology Element/Subdiscipline: Joint Agency Name: Joint Agency Name: None Human Research Program Elements: None Human Research Program Riks: None Human Ris	PI Name:	Delp, Michael Ph.D.		
Program/Discipline: Program/Discipline- Element/Suddiscipline SPACE BIOLOGYCellular and molecular biology Joint Agency Name: TechPort: No Human Research Program Elements: None Human Research Program Rikse: None Human Research Program Rikse: None Space Biology Element: (1) Cell & Molecular Biology (2) Animal Biology Cyterbrane Space Biology Special Cuttegory: (1) Translational (Countermeasure) Potential Bricipline: Space Biology Special Cuttegory: (1) Translational (Countermeasure) Potential Pl Email: Medipolitation Type: UNIVERSITY Pl Organization Type: Pl Organization Name: Pl Codies and University Pl Address 1: College of Human Sciences Pl Address 2: Pl Address 2: Pl Address 2: Pl Address 2: Pl Address 3: State: Fl. Zip Code: Comments: Project Type: Pl EliGHT Solicitation / Funding Source Project Type: Fl EliGHT Solicitation / Funding Source No. of Post Does: No. of Post Does: No. of Post Does: No. of Post Does: No. of PhD Degrees: No. of Master' Degrees: No. of Mast	Project Title:	Effects of Spaceflight on Ocular Oxidative Stress and the Blood-Retinal Barrier		
Program/Discipline- Element's Monc TechPort: No	Division Name:	Space Biology		
Element/Subdiscipline: Joint Agency Name: Noe Human Research Program Elements: Noe Human Research Program Risks: Noe Space Biology Cross-Element: (1) Cell & Molecular Biology Crotswhre's Contact Phone (1) Cell & Molecular Biology Cross-Element: (2) Animal Biology Vertebrate Space Biology Special Category: (3) Neurobiology Space Biology Special Category: (4) Developmental Biology (5) Neurobiology Space Biology Special Category: (5) Neurobiology Space Biology Special Category: (6) Neurobiology Space Biology Special Category: (7) Neurobiology Space Biology Special Convection Way Space Biology Flight Neurobiology Space Biology Flight Neurobiology Space Biology Special Category: (8) Neurobiology Space Biology Special Category: (8) Neurobiology Space Biology Special Category: (9) Provious Biology Special Convection Way Space Biology Special Category: (9) Provious Advance Biology Special Category: (9) Provious Advance Biology Special Category: (9) Provious Plant Date of Congressional District: (9) Provious Plant Date of Congressional District: (9) Provious Plant Date of Congressional District: (9) Pr	Program/Discipline:			
Human Research Program Elements: None Human Research Program Risks: None Space Biology Element: (1) Cell & Molecular Biology (2) Animal Biology: Vertebrate (2) Animal Biology: Vertebrate (2) Animal Biology: Vertebrate (2) Animal Biology: Vertebrate (2) Neurobiology (2) Neurob		SPACE BIOLOGYCellular and mol	ecular biology	
Human Research Program Risks: Space Biology Element: (1) Cell & Molecular Biology (2) Animal Biology: Vertebrate Space Biology Cross-Element: (1) Developmental Biology (2) Neurobiology Space Biology Special Category: (1) Translational (Countermeasure) Potential PI Email: mideboffsucch Molefoffsucch PI Corganization Type: UNIVERSITY Phone: 352:214-1195 Organization Type: UNIVERSITY Phone: 352:244-1195 Organization Name: Florida State University PI Address 1: College of Human Sciences PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallahassec State: FL Zip Code: 32306-0001 Congressional District: Zip Code: 32306-0001 Congressional District: Zip Code: Comments: mid-2007), and Texas A&M University of Florida (mid-2007-June 2014), West Virginia University (mid-2005 to mid-2005). Project Type: FLIGHT Solicitation Funding Source: No. of Phot Degress: No. of Bachelor's Candidates: No. of Bachelor's Degress: No. of Bachelor's Candidates: No. of Bachelor's Degress: No. of Bachelor's Degress: No. of Bachelor's Candidates: No. of Bachelor's Degress: No. of Bache	Joint Agency Name:		TechPort:	No
Space Biology Element: (1) Cell & Molecular Biology (2) Animal Biology: (2) Animal Biology: (3) Cross-Element (1) Decolopmental Biology (2) Neurobiology (2) Neurobiology (3) Neurobiology (3) Neurobiology (4) Translational (Countermeasure) Potential (5) Ple Email: (6) Molecular State University (6) Ple Email: (7) Ple Email: (8) Molecular State University (8) Ple Email: (8) Ple Monarization Type: (8) UNIVERSITY (9) Ple Email: (8) Ple Monarization Name: (9) Florida State University (9) Address 1: (9) College of Human Sciences (9) Ple Address 2: (9) 242 Sandels Building, 120 Convocation Way (9) Ple Web Page: (10) Congressional District: (10) Congressional District: (10) Congressional District: (10) Congressional District: (11) Code: (12) Sandels District: (12) Comments: (13) Code: (14) Salicitation / Funding Source: (14) Apace Biology Flight (15) New Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). (15) End Date: (16) Oliversity (1995 to mid-2005) (17) And Texas A&M University (1995 to mid-2005) (18) End Date: (19) Oliversity (1995 to mid-2005) (19	Human Research Program Elements:	None		
Space Biology Cross-Element Discipline: (2) Animal Biology: Vertebrate Space Biology Cross-Element Discipline: (2) Neurobiology Space Biology Special Category: (1) Translational (Countermeasure) Potential PI Email: mdelp@fsu.edu Fax: FY PI Organization Type: UNIVERSITY Pl Organization Type: UNIVERSITY Pl Address 1: College of Human Sciences PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallabassee State: FL Zip Code: 32366-0001 Congressional District: 2 Comments: Previous affiliations were University (1993 to mid-2005) to mid-2005 to mid-2005 to mid-2007), and Texas A&M University (1993 to mid-2005 to mid-2005 to mid-2005) No. of Post Ducs: No. of Post Ducs: No. of Post Ducs: No. of Master's Candidates: No. of Master's Candidates: No. of Master's Candidates: No. of Master's Candidates: No. of Bachelor's Candidates: No. of Bachelor's Candidates: No. of Bachelor's Candidates: Smith, Jeffrey Smith, Jeffrey Contact Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Smith, Jeffrey Contact Honite: Smith Adards Honite Smith Smith Smith Sm	Human Research Program Risks:	None		
Discipline: (2) Neurobiology (2) Neurobiology (2) Neurobiology (3) Pane Biology Special Category: (3) Translational (Countermeasure) Potential (3) Parx FY	Space Biology Element:			
PI Email: mdelpfäfstuedu Fax: FY PI Organization Type: UNIVERSITY Phone: 352-214-1195 Organization Name: Florida State University PI Address 1: College of Human Sciences PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallahassee State: FL Zip Code: 32306-0001 Congressional District: 2 Comments: mrivation of Marker of				
PI Organization Type: UNIVERSITY Phone: 352-214-1195 Organization Name: Florida State University PI Address 1: College of Human Sciences PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallahassee State: FL Zip Code: 32306-0001 Congressional District: 2 Comments: Previous affiliations were University of Florida (mid-2007-June 2014), West Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: 2014 Space Biology Flight NNH14ZTT001N Start Date: 0201/2015 End Date: 01/31/2017 No. of Post Does: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Space Biology Special Category:	(1) Translational (Countermeasure) Po	otential	
Organization Name: Florida State University PI Address 1: College of Human Sciences PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallahassee State: FL Zip Code: 32306-0001 Congressional District: 2 Comments: Previous affiliations were University of Florida (mid-2007-June 2014), West Virginia University (mid-2003 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: 2014 Space Biology Flight NNH14ZTT001N Start Date: 02.01/2015 End Date: 01/31/2017 No. of Post Docs: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No: NNX15AE86G Performance Goal No:	PI Email:	mdelp@fsu.edu	Fax:	FY
PI Address 1: College of Human Sciences PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallahassee State: FL. Zip Code: 32306-0001 Congressional District: 2 Comments: Previous affiliations were University of Florida (mid-2007) June 2014), West Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: 2014 Space Biology Flight NNH14ZTT001N Start Date: 02/01/2015 End Date: 01/31/2017 No. of Post Docs: No. of PhD Degrees: No. of PhD Candidates: No. of PhD Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: ieffrey.d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Bearden, Shawn Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	PI Organization Type:	UNIVERSITY	Phone:	352-214-1195
PI Address 2: 242 Sandels Building, 120 Convocation Way PI Web Page: City: Tallahassee State: FL Zip Code: 32306-0001 Congressional District: 2 Comments: Previous affiliations were University of Florida (mid-2007-June 2014), West Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: NNH14ZTT001N Start Date: 02/01/2015 End Date: 01/31/2017 No. of Post Docs: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey d.smith2/@nasa.gov Flight Program: ISS Flight Assignment: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Organization Name:	Florida State University		
PI Web Page: City: Tallahassee State: FL Zip Code: 32306-0001 Congressional District: 2 Comments: Previous affiliations were University of Florida (mid-2007-June 2014), West Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: Nh14ZTT001N Start Date: 02/01/2015 End Date: 01/31/2017 No. of Post Docs: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey d.smith2@nasa.gov Flight Program: ISS Flight Assignment: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	PI Address 1:	College of Human Sciences		
City: Tallahassee State: FL Zip Code: 32306-0001 Congressional District: 2 Comments: Previous affiliations were University of Florida (mid-2007-June 2014), West Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: 2014 Space Biology Flight NNH14/ZTT001N Start Date: 02/01/2015 End Date: 01/31/2017 No. of Pbst Docs: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey.d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Bearden, Shawn Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G	PI Address 2:	242 Sandels Building, 120 Convocation	on Way	
Zip Code: 32306-0001 Congressional District: 2 Comments: Previous affiliations were University of Florida (mid-2007-June 2014), West Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: 2014 Space Biology Flight NNH14ZTT001N Start Date: 02/01/2015 End Date: 01/31/2017 No. of Post Docs: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey.d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	PI Web Page:			
Comments: Previous affiliations were University of Florida (mid-2007-June 2014), West Virginia University (mid-2005 to mid-2007), and Texas A&M University (1995 to mid-2005). Project Type: FLIGHT Solicitation / Funding Source: 2014 Space Biology Flight NNH14ZTT001N Start Date: 02/01/2015 End Date: 01/31/2017 No. of PhD Degrees: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of PhD Candidates: No	City:	Tallahassee	State:	FL
Project Type: FLIGHT Solicitation / Funding Source: Project Type: FLIGHT Solicitation / Funding Source: Project Type: Project Type: Project Type: Solicitation / Funding Source: Project Type:	Zip Code:	32306-0001	Congressional District:	2
Start Date: 02/01/2015 End Date: 01/31/2017 No. of Post Docs: No. of PhD Degrees: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey.d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous P1: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Comments:			Virginia University (mid-2005 to
No. of Post Docs: No. of PhD Candidates: No. of Master' Degrees: No. of Master's Candidates: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of PhD Degrees: No. of Master's Degrees: No. of Bachelor's Degrees: No. of Bachelo	Project Type:	FLIGHT	Solicitation / Funding Source:	
No. of PhD Candidates: No. of Master's Candidates: No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Candidates: No. of Bachelor's Candidates: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Master' Degrees: No	Start Date:	02/01/2015	End Date:	01/31/2017
No. of Master's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Candidates: No. of Bachelor's Degrees: No. of Bachelor's Degrees: No. of Bachelor's Degrees: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey.d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	No. of Post Docs:		No. of PhD Degrees:	
No. of Bachelor's Candidates: Monitoring Center: NASA ARC Contact Monitor: Smith, Jeffrey Contact Phone: 650-604-0880 Contact Email: jeffrey.d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	No. of PhD Candidates:		No. of Master' Degrees:	
Contact Monitor: Contact Email: jeffrey.d.smith2@nasa.gov Flight Program: ISS Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	No. of Master's Candidates:		No. of Bachelor's Degrees:	
Contact Email: jeffrey.d.smith2@nasa.gov Flight Program: ISS Flight Assignment: Tissue Sharing Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	No. of Bachelor's Candidates:		Monitoring Center:	NASA ARC
Flight Program: Flight Assignment: Key Personnel Changes/Previous PI: COI Name (Institution): Bearden, Shawn Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Contact Monitor:	Smith, Jeffrey	Contact Phone:	650-604-0880
Flight Assignment: Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Contact Email:	jeffrey.d.smith2@nasa.gov		
Key Personnel Changes/Previous PI: COI Name (Institution): Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Mao, Xiao Wen M.D. (University) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Flight Program:	ISS		
Pecaut, Michael Ph.D. (Loma Linda University) Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Flight Assignment:	Tissue Sharing		
COI Name (Institution): Bearden, Shawn Ph.D. (University of Florida) Mao, Xiao Wen M.D. (Loma Linda University) Grant/Contract No.: NNX15AE86G Performance Goal No.:	Key Personnel Changes/Previous PI:			
Performance Goal No.:	COI Name (Institution):	Bearden, Shawn Ph.D. (University of	f Florida)	
	Grant/Contract No.:	NNX15AE86G		
Performance Goal Text:	Performance Goal No.:			
	Performance Goal Text:			

Task Book Report Generated on: 03/29/2024

Approximately 29% of astronauts on short-term (~2 wk) space shuttle flights and 60% on long-duration (~6 mo) missions to the International Space Station (ISS) are reported to have experienced some impairment in distant or near

visual acuity. These visual disturbances have been hypothesized to be related to increases in intracranial pressure (ICP) and intraocular pressure. Modeling studies have shown that a compromise in the integrity of the vascular blood-brain barrier (BBB) would serve to elevate ICP. While much attention has been directed toward the role of the cerebral vasculature in elevating ICP, little work has been done to examine conditions of the vasculature in the eye and the potential role of microgravity in altering the blood-retinal barrier (BRB), which maintains a similar function in the eye for regulating intraocular pressure as the BBB in the cranium. One condition known to compromise the BRB is oxidative stress. For example, in diabetic retinopathy, the leading cause of blindness in Western society, elevations in oxidative stress compromise the BRB and increase vascular permeability in the eye. The proposed studies through the ISS Rodent Tissue Sharing Opportunity will provide new and important information regarding the effects of spaceflight on oxidative stress in the eye and its potential deleterious effects on the BRB.

Rationale for HRP Directed Research:

Research Impact/Earth Benefits:

Task Progress:

New project for FY2015.

Bibliography Type:

Description: (Last Updated: 06/21/2023)