

Fiscal Year:	FY 2018	Task Last Updated:	FY 09/12/2018
PI Name:	Goukassian, David A M.D., Ph.D.		
Project Title:	Space Flight Associated Changes in Astronauts' Plasma Derived miRNA Expression: Biomarker Identification		
Division Name:	Human Research		
Program/Discipline:			
Program/Discipline--Element/Subdiscipline:	TRISH--TRISH		
Joint Agency Name:		TechPort:	No
Human Research Program Elements:	None		
Human Research Program Risks:	None		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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PI Organization Type:	UNIVERSITY	Phone:	617-480-3890
Organization Name:	Icahn School of Medicine at Mount Sinai		
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City:	New York	State:	NY
Zip Code:	10029	Congressional District:	12
Comments:	NOTE: PI moved to Icahn School of Medicine at Mount Sinai from Temple University in October 2018.		
Project Type:	FLIGHT,GROUND	Solicitation / Funding Source:	TRISH--Focused Investigations
Start Date:	05/01/2018	End Date:	07/31/2021
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: TRISH		
Contact Monitor:	Contact Phone:		
Contact Email:			
Flight Program:	Pre/Post Flight		
Flight Assignment:	Shuttle specimen work NOTE: End date changed to 7/31/2021 per E. Urquieta/TRISH (Ed., 4/28/21) NOTE: End date changed to 10/31/2019 per E. Urquieta/TRISH (Ed., 5/23/19)		
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Kishore, Raj Ph.D. (Temple University) Coleman, Matthew Ph.D. (Institute for Advanced Study)		
Grant/Contract No.:	NNX16AO69A-FIP0005		
Performance Goal No.:			
Performance Goal Text:			

Task Description:	Focused Investigation Project This project aims to evaluate the potential impact of the space flight environment on the regulation of molecular pathways mediating cellular stress responses. We performed a first-of-its-kind pilot feasibility study to assess space flight-associated changes in exosomes derived from peripheral blood (PB) plasma collected 10 days before the launch (L -10) and the day of landing (R 0) from two astronauts who participated in STS-100 and STS-104 missions. Our preliminary pilot experiment results suggest that spaceflights may induce remarkable changes in the cargo of circulating plasma exosomes that may reflect alterations in multiple gene and protein pathways in various tissues and cells. This work represents a pilot/feasibility study to identify plasma exosomal miRNA as a source of blood derived epigenetic biomarker identification.
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	
Task Progress:	New project for FY2018.
Bibliography Type:	Description: (Last Updated: 03/06/2024)