

Fiscal Year:	FY 2020	Task Last Updated:	FY 03/09/2020
PI Name:	Jansson, Janet Ph.D.		
Project Title:	Dynamics of Microbiomes in Space (DynaMoS)		
Division Name:	Space Biology		
Program/Discipline:			
Program/Discipline--Element/Subdiscipline:			
Joint Agency Name:		TechPort:	No
Human Research Program Elements:	None		
Human Research Program Risks:	None		
Space Biology Element:	(1) Microbiology		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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Zip Code:	99354-1793	Congressional District:	4
Comments:			
Project Type:	FLIGHT,GROUND	Solicitation:	2018 Space Biology (ROSBio) NNH18ZTT001N-FG. App B: Flight and Ground Space Biology Research
Start Date:	02/07/2020	End Date:	02/06/2023
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 KSC
Contact Monitor:	Freeland, Denise	Contact Phone:	321-867-5878
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Flight Program:			
Flight Assignment:			
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Hixson, Kim Ph.D. (Battelle Memorial Institute) Jansson, Christer Ph.D. (Battelle Memorial Institute) McClure, Ryan Ph.D. (Battelle Memorial Institute) Rivas-Ubach, Albert Ph.D. (Battelle Memorial Institute) Song, Hyun-Seob Ph.D. (Battelle Memorial Institute)		
Grant/Contract No.:	Department of Energy IAA		
Performance Goal No.:			
Performance Goal Text:			

Task Description:	We propose to examine the population dynamics and community interactions of naturally co-adapted soil microbial consortia using multi-omics analysis, correlative molecular networking and metagenomics-based metabolic modeling, and compare results between the International Space Station (ISS) and ground control at Kennedy Space Center (KSC). We hypothesize that the selection pressure (altered atmospheric gas composition, microgravity, and increased radiation) imposed by the space-station environment will alter both the microbial community population dynamics and the metabolic interactions between specific microbial community members.
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	
Task Progress:	New project for FY2020.
Bibliography Type:	Description: (Last Updated:)