

<b>Fiscal Year:</b>	FY 2020	<b>Task Last Updated:</b>	FY 03/09/2020
<b>PI Name:</b>	Jansson, Janet Ph.D.		
<b>Project Title:</b>	Dynamics of Microbiomes in Space (DynaMoS)		
<b>Division Name:</b>	Space Biology		
<b>Program/Discipline:</b>			
<b>Program/Discipline-- Element/Subdiscipline:</b>			
<b>Joint Agency Name:</b>		<b>TechPort:</b>	No
<b>Human Research Program Elements:</b>	None		
<b>Human Research Program Risks:</b>	None		
<b>Space Biology Element:</b>	(1) Microbiology		
<b>Space Biology Cross-Element Discipline:</b>	None		
<b>Space Biology Special Category:</b>	None		
<b>PI Email:</b>	<a href="mailto:janet.jansson@pnnl.gov">janet.jansson@pnnl.gov</a>	<b>Fax:</b>	FY
<b>PI Organization Type:</b>	GOVERNMENT	<b>Phone:</b>	509-375-3982
<b>Organization Name:</b>	Battelle Memorial Institute (Pacific Northwest National Laboratory)		
<b>PI Address 1:</b>	Biological Sciences Division, Earth and Biological Sciences		
<b>PI Address 2:</b>	902 Battelle Blvd, PO Box 999, MSIN J4-18		
<b>PI Web Page:</b>			
<b>City:</b>	Richland	<b>State:</b>	WA
<b>Zip Code:</b>	99354-1793	<b>Congressional District:</b>	4
<b>Comments:</b>			
<b>Project Type:</b>	FLIGHT,GROUND	<b>Solicitation / Funding Source:</b>	2018 Space Biology (ROSBio) NNH18ZTT001N-FG. App B: Flight and Ground Space Biology Research
<b>Start Date:</b>	02/07/2020	<b>End Date:</b>	02/06/2023
<b>No. of Post Docs:</b>		<b>No. of PhD Degrees:</b>	
<b>No. of PhD Candidates:</b>		<b>No. of Master' Degrees:</b>	
<b>No. of Master's Candidates:</b>		<b>No. of Bachelor's Degrees:</b>	
<b>No. of Bachelor's Candidates:</b>		<b>Monitoring Center:</b>	NASA KSC
<b>Contact Monitor:</b>	Freeland, Denise	<b>Contact Phone:</b>	321-867-5878
<b>Contact Email:</b>	<a href="mailto:Denise.E.Freeland@nasa.gov">Denise.E.Freeland@nasa.gov</a>		
<b>Flight Program:</b>			
<b>Flight Assignment:</b>			
<b>Key Personnel Changes/Previous PI:</b>			
<b>COI Name (Institution):</b>	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 )		
<b>Grant/Contract No.:</b>	Department of Energy IAA		
<b>Performance Goal No.:</b>			
<b>Performance Goal Text:</b>			

<b>Task Description:</b>	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.
<b>Rationale for HRP Directed Research:</b>	
<b>Research Impact/Earth Benefits:</b>	
<b>Task Progress:</b>	New project for FY2020.
<b>Bibliography Type:</b>	Description: (Last Updated: )