

CRITICAL PATH ROADMAP DISCIPLINE(S)	PRIMARY SPECIES / TYPE	SPACE FLIGHT EXPERIMENT TITLE	NASA OBPR - TASK BOOK							
			Year Experiment Was Listed in Book							
			1995	1996	1997	1998	1999	2000	2001	2002
Clinical Capabilities; Environmental Health; Advanced Life Support	Air	Analysis of Volatile Organic Compounds on Mir Station	1995	1996	1997	1998	1999			
Clinical Capabilities; Environmental Health; Advanced Life Support	Air	Trace Chemical Contamination; Trace Chemical Contamination of Spacecraft Air	1995	1996						
Clinical Capabilities; Advanced Life Support	Air	Electronic Nose				1998				
Clinical Capabilities; Human Behavior & Performance; Cardiovascular Alterations	Animal	Effects of Circadian Rhythms on Decompression Outcome								2002
Clinical Capabilities; Bone Loss	Animal	Intermittent Administration of Parathyroid Hormone: Countermeasure for Loss of Bone Mass and Strength During Spaceflight			1997	1998				
Clinical Capabilities; Cardiovascular Alterations	Animal	Soluble guanylyl cyclase knock-out model								2002
Clinical Capabilities	Human	Advanced Ultrasonic Diagnosis in Microgravity								2002
Clinical Capabilities; Cardiovascular Alterations	Human	Assessment of Autonomic and Gastric Function During Spaceflight, Entry and Landing	1995	1996						
Clinical Capabilities; Neurovestibular Adaptation	Human	Bioavailability and Performance Effects of Promethazine During Space Flight			1997	1998	1999			
Clinical Capabilities; Neurovestibular Adaptation	Human	Bioavailability and Performance Effects of Promethazine During Spaceflight								2002
Clinical Capabilities	Human	Bioluminescent Bioreporter Integrated Circuits for Monitoring Spacecraft Environments							2001	
Clinical Capabilities; Human Behavior & Performance	Human	Clinical Trial of Melatonin as Hypnotic for Neurolab Crew	1995	1996	1997	1998	1999	2000		
Clinical Capabilities; Muscle Alterations & Atrophy	Human	Evaluation of Skeletal Muscle Performance and Characteristics (9400411) (NASA-Mir Phase1B)	1995	1996	1997					
Clinical Capabilities; Muscle Alterations & Atrophy	Human	Evaluation of Skeletal Muscle Performance and Characteristics (SLM-1A)	1995	1996						
Clinical Capabilities; Cardiovascular Alterations	Human	Evaluation of Thermoregulation During Long Duration Spaceflight	1995	1996	1997	1998	1999			
Clinical Capabilities; Cardiovascular Alterations	Human	Evaluation of Thermoregulation During Short-Duration Space Flight		1996	1997	1998	1999			
Clinical Capabilities; Immunology, Infection & Hematology	Human	Flight-Induced Changes in Immune Defenses			1997	1998	1999	2000	2001	2002
Clinical Capabilities; Food & Nutrition; Cardiovascular Alterations	Human	Fluid and Electrolyte Homostasis and its Regulation	1995	1996						
Clinical Capabilities; Bone Loss; Muscle Alterations & Atrophy	Human	Foot Reaction Forces During Space Flight				1998	1999	2000	2001	2002
Clinical Capabilities; Food & Nutrition	Human	Gastrointestinal Function During Extended Duration In Space; Gastrointestinal Function During Extended Duration Space Flights			1997	1998	1999	2000	2001	2002
Clinical Capabilities; Immunology, Infection & Hematology	Human	Incidence of Latent Virus Shedding During Space Flight			1997	1998	1999	2000	2001	2002
Clinical Capabilities; Cardiovascular Alterations	Human	Individual Susceptibility to Postflight Orthostatic Hypotension; Individual Susceptibility to Post-Spaceflight Orthostatic Intolerance: Contributions of Gender-Related and Microgravity-Related Factors			1997	1998	1999	2000	2001	2002
Clinical Capabilities; Food & Nutrition	Human	Iron Absorption and Metabolism During Space Flight					1999	2000	2001	
Clinical Capabilities; Cardiovascular Alterations	Human	Maximal Aerobic Capacity Using Graded Bicycle Ergometry	1995	1996						
Clinical Capabilities; Food & Nutrition; Muscle Alterations & Atrophy	Human	Measurement of Energy Expenditures during Spaceflight Using the Doubly Labeled Water Method	1995	1996	1997	1998				
Clinical Capabilities	Human	Otoacoustic Hearing Assessment of Space Station Crews								2002
Clinical Capabilities	Human	Physiologic Alterations and Pharmacokinetic Changes during Spaceflight	1995	1996						
Clinical Capabilities	Human	Physiologic and Pharmacokinetic Changes During Space Flight	1995							
Clinical Capabilities; Cardiovascular Alterations	Human	Physiological Response During Descent on the Space Shuttle	1995	1996						
Clinical Capabilities; Neurovestibular Adaptation	Human	Promoting Sensorimotor Response Generalizability During Inflight Treadmill Exercise: A Countermeasure to Mitigate Locomotor Dysfunction After Long-Duration Space Flight; Promoting Sensorimotor Response Generalizability: A Countermeasure to Mitigate Locomotor Dysfunction After Long- Duration Spaceflight					1999	2000	2001	2002
Clinical Capabilities; Food & Nutrition; Muscle Alterations & Atrophy	Human	Protein and Energy Status During Long-Term Space Flight					1999	2000		
Clinical Capabilities; Food & Nutrition; Muscle Alterations & Atrophy	Human	Protein Metabolism During Long Term Space Flights	1995	1996	1997	1998	1999			
Clinical Capabilities; Food & Nutrition	Human	Protein Metabolism During Space Flight (SLS-1 and SLS-2)	1995	1996						
Clinical Capabilities; Food & Nutrition; Muscle Alterations & Atrophy	Human	Protein Turnover During Space Flight			1997	1998	1999	2000	2001	2002
Clinical Capabilities; Food & Nutrition; Bone Loss	Human	Renal Stone Risk Assessment	1995	1996						
Clinical Capabilities; Food & Nutrition; Bone Loss	Human	Renal Stone Risk During Long Duration Space Flight	1995	1996	1997	1998	1999			
Clinical Capabilities; Bone Loss	Human	Renal Stone Risk During Space Flight: Assessment and Countermeasure Validation			1997	1998	1999	2000	2001	2002
Clinical Capabilities; Immunology, Infection & Hematology	Human	Space Flight-Induced Reactivation of Latent Epstein-Barr Virus					1999	2000	2001	2002
Clinical Capabilities; Cardiovascular Alterations	Human	Test of Midodrine as Countermeasure against Postflight Orthostatic Hypotension								2002
Clinical Capabilities; Cardiovascular Alterations	Human	The Role of Intracranial Pressure in Space Adaptation Syndrome					1999	2000	2001	2002

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Clinical Capabilities; Cardiovascular Alterations; Neurovestibular Adaptation	Human	Validation of Centrifugation as a Countermeasure for Otolith Deconditioning During Space Flight						2000	2001	2002
Clinical Capabilities; Immunology, Infection & Hematology	Human	Viral Reactivation	1995	1996	1997	1998				
Clinical Capabilities; Bone Loss; Muscle Alterations & Atrophy	Human	A Low Intensity Mechanical Countermeasure to Prohibit Osteoporosis in Astronauts During Long-Term Spaceflight								2002
Clinical Capabilities; Immunology, Infection & Hematology; Environmental Health	Microbe	A Comprehensive Characterization of Microorganisms and Allergens in Spacecraft Environment						2000	2001	2002
Clinical Capabilities; Environmental Health; Advanced Life Support	Microbe	Automated Use of DNA Probes for Rapid Detection of Bacteria in Water			1997	1998	1999	2000		
Clinical Capabilities; Immunology, Infection & Hematology; Environmental Health	Microbe	Bacterial Physiology and Virulence on Earth and in Microgravity				1998	1999	2000	2001	2002
Clinical Capabilities; Immunology, Infection & Hematology	Microbe	Effect of Spaceflight on Microbial Gene Expression and Virulence								2002
Clinical Capabilities; Immunology, Infection & Hematology; Environmental Health	Microbe	Space Flight Effects on Fungal Growth, Metabolism and Sensitivity to Antifungal Agents; Space Flight Effects on Fungal Growth, Metabolism and Sensitivity to Antifungal Drugs			1997	N/A	1999	2000	2001	2002