CRITICAL PATH ROADMAP	PRIMARY			NASA OBPR - TASK BOOK Year Experiment Was Listed in Book									
DISCIPLINE(S)  Clinical Capabilities;	SPECIES / TYPE	SPACE FLIGHT EXPERIMENT TITLE	1995	1996	r Exper 1997	1998	Was Lis 1999	2000	300k 2001	2002			
	Air	Analysis of Volatile Organic Compounds on Mir Station	1995	1996	1997		1999						
Environmental Health;													
Advanced Life Support Clinical Capabilities;	Air	Trace Chemical Contamination;	1995	1996									
Environmental Health;	7111	Trace Chemical Contamination of Spacecraft Air	1773	1,,,0									
Advanced Life Support													
Clinical Capabilities;	Air	Electronic Nose				1998							
Advanced Life Support Clinical Capabilities;	Animal	Effects of Circadian Rhythms on Decompression Outcome								2002			
Human Behavior & Performance;	Allillai	Effects of Circadian Knythins on Decompression Outcome								2002			
Cardiovascular Alterations													
Clinical Capabilities;	Animal	Intermittent Administration of Parathyroid Hormone: Countermeasure for Loss of Bone			1997	1998							
Bone Loss Clinical Capabilities;	Animal	Mass and Strength During Spaceflight								2002			
Cardiovascular Alterations	Animal	Soluble guanylyl cyclase knock-out model								2002			
Clinical Capabilities	Human	Advanced Ultrasonic Diagnosis in Microgravity								2002			
Clinical Capabilities;	Human	Assessment of Autonomic and Gastric Function During Spaceflight, Entry and Landing	1995	1996									
Cardiovascular Alterations	**				400=	1000	1000						
Clinical Capabilities; Neurovestibular Adaptation	Human	Bioavailability and Performance Effects of Promethazine During Space Flight			1997	1998	1999						
Clinical Capabilities;	Human	Bioavailability and Performance Effects of Promethazine During Spaceflight								2002			
Neurovestibular Adaptation	11411411	Brown and 1 crossmance Enterts of 1 tolleaning by according to								2002			
Clinical Capabilities	Human	Bioluminescent Bioreporter Integrated Circuits for Monitoring Spacecraft Environments							2001				
and the law	**												
Clinical Capabilities; Human Behavior & Performance	Human	Clinical Trial of Melatonin as Hypnotic for Neurolab Crew	1995	1996	1997	1998	1999	2000					
Clinical Capabilities:	Human	Evaluation of Skeletal Muscle Performance and Characteristics (9400411) (NASA-Mir	1995	1996	1997								
Muscle Alterations & Atrophy		Phase1B)											
Clinical Capabilities;	Human	Evaluation of Skeletal Muscle Performance and Characteristics (SLM-1A)	1995	1996									
Muscle Alterations & Atrophy	11	Parketin (Theorem Lein D. L. D. C. C. C.	100	100	100-	100-	100						
Clinical Capabilities;	Human	Evaluation of Thermoregulation During Long Duration Spaceflight	1995	1996	1997	1998	1999						
Cardiovascular Alterations Clinical Capabilities;	Human	Evaluation of Thermoregulation During Short-Duration Space Flight		1996	1997	1998	1999						
Cardiovascular Alterations	Tuman	Evaluation of Thermoregulation During Short Datation Space (Tight		1,,,0	1,,,,	1,,,0	1,,,,						
Clinical Capabilities;	Human	Flight-Induced Changes in Immune Defenses			1997	1998	1999	2000	2001	2002			
Immunology, Infection & Hematology													
Clinical Capabilities;	Human	Fluid and Electrolyte Homostasis and its Regulation	1995	1996									
Food & Nutrition; Cardiovascular Alterations													
Clinical Capabilities;	Human	Foot Reaction Forces During Space Flight				1998	1999	2000	2001	2002			
Bone Loss;	Tuman	1 oot Reaction 1 orces During Space 1 light				1770	1)))	2000	2001	2002			
Muscle Alterations & Atrophy													
Clinical Capabilities;	Human	Gastrointestinal Function During Extended Duration In Space;			1997	1998	1999	2000	2001	2002			
Food & Nutrition		Gastrointestinal Function During Extended Duration Space Flights											
Clinical Capabilities;	Human	Incidence of Latent Virus Shedding During Space Flight			1997	1998	1999	2000	2001	2002			
Immunology, Infection & Hematology Clinical Capabilities;	Human	Individual Susceptibility to Postflight Orthostatic Hypotension;			1997	1998	1999	2000	2001	2002			
Cardiovascular Alterations	Tuman	Individual Susceptibility to Post-Spaceflight Orthostatic Intolerance: Contributions of			1,,,,	1,,,0	1,,,,	2000	2001	2002			
		Gender-Related and Microgravity-Related Factors											
Clinical Capabilities;	Human	Iron Absorption and Metabolism During Space Flight					1999	2000	2001				
Food & Nutrition													
Clinical Capabilities;	Human	Maximal Aerobic Capacity Using Graded Bicycle Ergometry	1995	1996									
Cardiovascular Alterations Clinical Capabilities;	Human	Measurement of Energy Expenditures during Spaceflight Using the Doubly Labeled Water	1995	1996	1997	1998							
Food & Nutrition;	Tuman	Method	1))3	1770	1997	1776							
Muscle Alterations & Atrophy													
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 Physiological Response During Descent on the Space Shuttle	1995 1995	1996									
Clinical Capabilities; Cardiovascular Alterations	Human	r nysiological response During Descent on the space shuttle	1995	1996									
Clinical Capabilities;	Human	Promoting Sensorimotor Response Generalizability During Inflight Treadmill Exercise: A					1999	2000	2001	2002			
Neurovestibular Adaptation		Countermeasure to Mitigate Locomotor Dysfunction After Long-Duration Space Flight;											
		Promoting Sensorimotor Response Generalizability: A Countermeasure to Mitigate											
		Locomotor Dysfunction After Long- Duration Spaceflight											
Clinical Capabilities;	Human	Protein and Energy Status During Long-Term Space Flight					1999	2000					
Food & Nutrition;	- 70111011	Division Datas Datas Dong Term Space Figure					1777	2000					
Muscle Alterations & Atrophy													
Clinical Capabilities;	Human	Protein Metabolism During Long Term Space Flights	1995	1996	1997	1998	1999						
Food & Nutrition;													
Muscle Alterations & Atrophy Clinical Capabilities;	Human	Protein Metabolism During Space Flight (SLS-1 and SLS-2)	1995	1996									
Food & Nutrition	Tunidii	rotem rictationsin During Space Figur (SES-1 and SES-2)	1993	1990									
Clinical Capabilities;	Human	Protein Turnover During Space Flight			1997	1998	1999	2000	2001	2002			
Food & Nutrition;													
Muscle Alterations & Atrophy													
Clinical Capabilities;	Human	Renal Stone Risk Assessment	1995	1996									
Food & Nutrition; Bone Loss													
Clinical Capabilities;	Human	Renal Stone Risk During Long Duration Space Flight	1995	1996	1997	1998	1999						
Food & Nutrition;		a de la companya de l	2773		-,,,	2,70							
Bone Loss													
Clinical Capabilities;	Human	Renal Stone Risk During Space Flight: Assessment and Countermeasure Validation			1997	1998	1999	2000	2001	2002			
Bone Loss	11	Contributed and Description Charles and Description					100	0000	200	40			
Clinical Capabilities;	Human	Space Flight-Induced Reactivation of Latent Epstein-Barr Virus					1999	2000	2001	2002			
Immunology, Infection & Hematology	Human	Test of Midodrine as Countermeasure against Postflight Orthostatic Hypotension								2002			
Clinical Canabilities:		1 - Co. C Godine de Countermeasure against i Ostright Offilostatic Hypotension								2002			
Clinical Capabilities; Cardiovascular Alterations	Tuman												
Clinical Capabilities; Cardiovascular Alterations Clinical Capabilities;	Human	The Role of Intracranial Pressure in Space Adaptation Syndrome					1999	2000	2001	2002			

CRITICAL PATH ROADMAP DISCIPLINE(S)	PRIMARY SPECIES /		NASA OBPR - TASK BOOK Year Experiment Was Listed in Book								
	TYPE	STAGE PERSON EM EMPLEY THEE	1995		1997				2001	2002	
Clinical Capabilities;	Human	Validation of Centrifugation as a Countermeasure for Otolith Deconditioning During						2000	2001	2002	
Cardiovascular Alterations;		Space Flight									
Neurovestibular Adaptation											
Clinical Capabilities;	Human	Viral Reactivation	1995	1996	1997	1998					
Immunology, Infection & Hematology											
Clinical Capabilities;	Human	A Low Intensity Mechanical Countermeasure to Prohibit Osteoporosis in Astronauts								2002	
Bone Loss;		During Long-Term Spaceflight									
Muscle Alterations & Atrophy											
Clinical Capabilities;	Microbe	A Comprehensive Characterization of Microorganisms and Allergens in Spacecraft						2000	2001	2002	
Immunology, Infection & Hematology;		Environment									
Environmental Health											
Clinical Capabilities;	Microbe	Automated Use of DNA Probes for Rapid Detection of Bacteria in Water			1997	1998	1999	2000			
Environmental Health;											
Advanced Life Support											
Clinical Capabilities;	Microbe	Bacterial Physiology and Virulence on Earth and in Microgravity				1998	1999	2000	2001	2002	
Immunology, Infection & Hematology;											
Environmental Health											
Clinical Capabilities;	Microbe	Effect of Spaceflight on Microbial Gene Expression and Virulence								2002	
mmunology, Infection & Hematology											
Clinical Capabilities;	Microbe	Space Flight Effects on Fungal Growth, Metabolism and Sensitivity to Antifungal Agents;			1997	N/A	1999	2000	2001	2002	
Immunology, Infection & Hematology;		Space Flight Effects on Fungal Growth, Metabolism and Sensitivity to Antifungal Drugs									
Environmental Health											