

CRITICAL PATH ROADMAP DISCIPLINE(S)	PRIMARY SPECIES / TYPE	GROUND EXPERIMENT TITLE	NASA OBPR - TASK BOOK							
			Year Experiment Was Listed in Book							
			1995	1996	1997	1998	1999	2000	2001	2002
Food & Nutrition; Radiation Effects; Clinical Capabilities	Animal	Countermeasures for Space Radiation Biological Effects								2002
Food & Nutrition	Animal	Fatness, Food Intake and Hypergravity: Mechanisms of Regulation				1998	1999	2000		
Food & Nutrition	Animal	Fatness, Food Intake and Hypergravity: Responses of Regulatory Genes					1999			
Food & Nutrition; Muscle Alterations & Atrophy	Animal	Glucose Kinetics and Muscle Atrophy (This Task began in FY2000)					1999	2000	2001	2002
Food & Nutrition; Bone Loss	Animal	Glucose-dependent Insulinotropic Peptide as an Osteoprotective Agent during Space Flight							2001	2002
Food & Nutrition; Cardiovascular Alterations	Animal	Neural Control Mechanisms and Body Fluid Homeostasis	1995	1996	1997	1998				
Food & Nutrition; Radiation Effects; Clinical Capabilities	Animal	Nutritional Countermeasures to Radiation Exposure							2001	2002
Food & Nutrition; Immunology, Infection & Hematology	Animal	Nutritional Immunomodulation in Microgravity: Application of Ground-based In Vivo and In Vitro Bioreactor Models to Study Role and Mechanisms of Supplemental Nucleotides							2001	2002
Food & Nutrition; Bone Loss; Clinical Capabilities	Animal	Role of Vitamin E in Preventing Oxidative Damage to Bone in Near Weightlessness; The Role of Vitamin E in Preventing Oxidative Damage to Bone in Near Weightlessness and its Effects on Bone Quality During Recovery (This Task began in FY2000)					1999	2000	2001	
Food & Nutrition; Bone Loss	Human	Dietary Oxalate and Stone Risk			1997	1998	1999			
Food & Nutrition; Clinical Capabilities	Human	Impact of Microgravity on Drug and Nutrient Absorption (This Task began in FY2000)					1999	2000	2001	2002
Food & Nutrition; Clinical Capabilities	Human	Intestinal Adaptation in Microgravity Drug and Nutrient Adsorption		1996	1997	1998				
Food & Nutrition; Clinical Capabilities; Muscle Alterations & Atrophy	Human	Measurement of Body Composition For Nutrition Assessment in Microgravity				1998	1999	2000		
Food & Nutrition; Clinical Capabilities; Muscle Alterations & Atrophy	Human	Nutritional Interventions to Improve Muscle Protein Metabolism During Stress (This Task began in FY2000)					1999	2000	2001	2002
Food & Nutrition; Muscle Alterations & Atrophy	Human	Skeletal Muscle Response to Bed Rest and Cortisol Induced Stress							2001	2002
Food & Nutrition; Advanced Life Support	Plant	Cost Optimization of Food Preparation for Lunar and Planetary CELSS Stations			1997	1998	1999	2000		
Food & Nutrition; Advanced Life Support	Plant	Designing an Advanced Food Processing System for Long Duration Space Travel				1998				
Food & Nutrition; Advanced Life Support	Plant	Development of Extrusion Processes and Food Products to be Used in ALSS; Development of Extrusion Processes and Food Products to be Used in an ALSS				1998	1999	2000	2001	
Food & Nutrition; Advanced Life Support	Plant	Extruder Design and Miniaturization; Extrusion Design and Miniaturization					1999	N/A	2001	
Food & Nutrition; Advanced Life Support	Plant	Food Processing Research and Technology Development						2000	2001	2002
Food & Nutrition; Advanced Life Support	Plant	Food Technology and Utilization					1999	2000		
Food & Nutrition; Advanced Life Support	Plant	Food Technology Utilization							2001	2002
Food & Nutrition; Advanced Life Support	Plant	Genetic and Environmental Influences on the Nutritive Value of Spinach, Spinacia oleracea, for Humans						2000		
Food & Nutrition; Advanced Life Support	Plant	NASA Food Technology Commercial Space Center							2001	2002
Food & Nutrition; Advanced Life Support	Plant	NSCORT: BIOREGENERATIVE LIFE SUPPORT - Biomass Productivity and Sustainability of Bioregenerative Life Support Systems	1995	1996	1997					
Food & Nutrition; Environmental Health; Advanced Life Support	Plant	NSCORT: Bioregenerative Life Support		1996	1997	1998				
Food & Nutrition; Advanced Life Support	Plant	Prediction Of Processing Parameters Of Wheat-Based Food Products With Varying Compositions								2002
Food & Nutrition; Advanced Life Support	Plant	Quality Evaluation of ALS Hydropoinc Tomatoes for their Suitability for Fresh Consumption and Further Processing; Quality Evaluation of ALS Hydroponic Tomatoes for Their Suitability for Fresh Consumption and Processing				1998	1999	2000	2001	