INNOVATION SCHOLARS

working at the intersection of science, healthcare & entrepreneurship

2025-2026 PROJECT LIST

Campus Liaison and Campus Mentors: Please rank your top 8 projects (#1 = favorite)

This year, there will be 7 Mayo Clinic projects, 2 NASA projects, and 5 projects from Companies

		TITLE	SKILLSET/INTERESTS	YOUR RANKING
MAYO CLINIC	1	Predicting therapeutic response to immune checkpoint inhibitors using three unique biomarkers in mesothelioma patients	Biochemistry, molecular biology immunology, statistics, business, market research, financial analysis, computer science	
	2	Using carnosine dipeptidase 1 (CNDP1) as a biomarker in CSF for multiple sclerosis	Neuroscience, statistics, business, physiology, biochemistry, market research, machine learning	
	3	Prognostic gene signature to guide patient treatment decisions in castration-resistant prostate cancer (CRPC) care when resistant to standard of care	Genetics/genomics, physiology, business, statistics, cancer biology, machine learning	
	4	3D Printing custom bras to account for natural variations, post-surgical changes, and uneven chest walls	Anatomy, computer science, business, market analysis, economics, entrepreneurship, manufacturing	
	5	Software for selective and non-destructive anonymization of facial data in medical radiology images	Computer science, data privacy, business, bioethics, medical education, economics, market research	
	6	Clinical decision support tool using AI to categorize patterns of abnormal growth in children	AI, machine learning, child development, statistics, bioethics, anatomy	
	7	Internal hernia detection after initial surgery via radiopaque embedded sutures	Anatomy, bioethics, market analysis, business, financial analysis	
	8	Use of therapeutic plasma exchange before targeted therapies (e.g., antibody-drug conjugates, CAR-T cell therapy) to improve response	Immunology, physiology, economics, financial analysis, business, cell/molecular biology, biochemistry	
	9	Use of engineered extracellular vesicles and mesenchymal stem cells (MSCs) to treat spinal cord injury and degenerative disc disorder	Cell/molecular biology, neuroscience, regenerative medicine, business, financial analysis, bioethics	

***Note**: All campus mentors and team members must be US citizens to work on a NASA project*

NASA	**10**	Polymer Nanofiber-Based Reversible Nano-Switch/ Sensor Schottky Diode Device: Novel microsensor signals presence of toxic gases or ultraviolet radiation https://technology.nasa.gov/patent/LEW-TOPS-111	Biochemistry, physics, physiology, business, market research, economics, entrepreneurship, occupational safety	
	11	Polymer Electrolyte-Based Ambient Temperature Oxygen Microsensor: Allows fire, fuel-leak, and personal-protection monitoring in a variety of environments https://technology.nasa.gov/patent/LEW-TOPS-79	Biochemistry, physics, physiology, business, market research, economics, entrepreneurship, occupational safety	
	12	Portable Unit for Metabolic Analysis (PUMA): Detects hypoxia to ensure health and safety of astronauts, pilots, divers, miners, first responders, etc. https://technology.nasa.gov/patent/LEW-TOPS-16	Biochemistry, physics, physiology, business, market research, economics, entrepreneurship, occupational safety	

BIOTECH COS.	**13**	Patient monitor system integrated into Egg Medical's EggNest product line Egg Medical https://eggmedical.com/	Biophysics, engineering, occupational safety, market research, business, financial analysis, manufacturing, human factors, health education, behavioral science	
	14	YourSteps Health, A Pediatric Rehabilitation Platform: U.K. Commercialization Plan YourSteps Health, Inc https://yourstepshealth.com/	Market research, international markets, business, financial analysis, health equity/access, health education, entrepreneurship, child development	
	15	Cell-based therapies to treat liver disease Cytotheryx https://cytotheryx.com/	Physiology, business, market research, economics, cell biology, immunology, financial analysis, bioethics	
	16	Exploring the Feasibility of Expanding Collaborating Docs Services to Pharmacists Collaborating Docs https://collaboratingdocs.com/	Healthcare delivery, healthcare access and equity, business, economics, market research, statistics, health education, entrepreneurship, bioethics	
	17	Advancing Behavioral Health Access Through Collaborative Consumer Technology Cantata Health Solutions https://cantatahealth.com/	Market research, digital health, behavioral health, marketing, communication, healthcare access and equity, psychology, business, human development, entrepreneurship, statistics, health education, ethics	