

ASDRP 2020 Research Expo & Symposium Presenter Schedule

Time	Room	Department	Project Title	Description	Advisor	Authors
1:30-1:45	5	Biological, Human, and Life Sciences	Alzheimer's Polyphenol Study via Peppermint Stress responses	This study is in peppermint plants which produce a chemical called polyphenols which are used in studies to combat Alzheimer's disease. This group is trying to drought stress the plants as well as apply plant hormones during stress to see if there is a higher production of polyphenol for Alzheimer's studies.	Suresh	WilliamLeung BhaktiParmar IshantGoel IshikaKolluru NishaAnadure
1:45-2:00	5	Computer Science & Engineering	Radio Astronomy	Using generally available, low-cost satellite receivers to construct instrumentation used to interrogate the portion of the electromagnetic spectrum to look for signals indicating emission spectra of galactic [Milky Way] objects including, but not limited to molecular Hydrogen, dark molecular H2O clouds & Pulsar objects.	Downing	
2:00-2:15	5	Computer Science & Engineering	Sports Prediction		Rao	Saarth Eshan Darren
2:15-2:30	5	Computer Science & Engineering	Atomic Clocks for Dark matter detection	We develop a Python wrapper around a popular relativistic atomic structure code and as a proof of principle we evaluate the sensitivity of neutral radium clocks to X17-like dark matter.	Leung	
2:45-3:00	5	Computer Science & Engineering	Voynich Manuscript	Using machine learning to analyze a medieval manuscript written in an unknown source language, using an unknown character set, for evidence of known words &/or phrases	Downing	
2:45-3:00	5	Biological, Human, and Life Sciences	Effects of Caloric Restriction on Mitochondrial Function in <i>Saccharomyces Cerevisiae</i>	Caloric restriction is a natural dietary intervention that has been shown to increase lifespan, regulate oxidative stress, and reduce chronic inflammation. Here, we explored the dose-dependent effects of calorie restriction on mitochondrial function in <i>Saccharomyces Cerevisiae</i> using an acetic acid stress-induced model.	Le	Nishant Chadha, Angela Jiao , Nambita Sahai*, Aditi Venkatraman*, Aditya Mittal*
3:00-3:15	5	Computer Science & Engineering	nicotine withdrawal & COVID-19	The relationship between nicotine withdrawal & COVID-19	Rao	Aryaman Ayaan Yamuna David
3:15-3:30	5	Biological, Human, and Life Sciences	Genetic Characterization and Comparison of Stress Responses between a crop species and an invasive species: Radish and Wild Radish	The experiment is to stress crop plants and invasive, drought-tolerant plants to compare the stress responses via hydrogen peroxide measurements. This research is used to determine how invasive plants steel themselves against stress and how hydrogen peroxide levels contribute to this resistance to abiotic stressors.	Suresh	AanyaBhatia AngelinaChen GauthamSudhakar JustinHo TarunSrivatsan
3:30-3:45	5	Biological, Human, and Life Sciences	Administration of Extracted Drugs such as Quercetin to Alzheimer's A β -toxic <i>C. Elegans</i>	Inhibition of acetylcholinesterase (AChE) is the common approach to manage Alzheimer's Disease. Quercetin, a flavonoid, is found to have anticholinesterase properties which is helpful when treating AD. Here we will isolate Quercetin and test it's effect on Alzheimer's A β -toxic <i>C. elegans</i> and compare it to a AD drug, Memantine.	Gandhi	YuvrajTran