

ASDRP 2020 Research Expo & Symposium Presenter Schedule

Time	Room	Department	Project Title	Description	Advisor	Authors
1:30-1:45	6	Computer Science & Engineering	COVID-19 and symptoms		Rao	Aadhi Aditya Megan Rohan Henry
1:45-2:00	6	Chemistry, Biochemistry & Physics	Computational Investigation of Berberine Derivatives and their Binding Affinities to Anti-Parallel DNA G-Quadruplex	Berberine has been demonstrated to have a range of medicinal properties; three classes of berberine were designed and screened against antiparallel DNA G-Quadruplex structures, which are associated with cancer.	Brah	Jiya Bhatia*, Rahul Rajeev*, Jagannath Prabhakaran*, Brian Cisto, Carina Chen
2:00-2:15	6	Computer Science & Engineering	Astrophysics Title: COMPREHENSIVE HABITABILITY INDEX (CHI)	We present the Comprehensive Habitability Index (CHI), which considers multiple exoplanetary features not only able to determine a planet's similarity to Earth, but also its potential to serve mankind with its resources, location, and safety.	McMahan	Luke Ponsen, Nick Falk, Kenneth Ng, Arnab Srivastava, Samyak Ghevaria, Adarsh Bulusu
2:15-2:30	6	Chemistry, Biochemistry & Physics	Synthesis and In-silico Screening of a Library of Eugenol Analogs as Potential Neuroactive GABA Receptor Ligands	Eugenol, a natural allylbenzene small molecule, is notable because of its biological properties, including its potential against neuroactive GABAA receptor ligands which affect epilepsy. Through the synthesis of several eugenol analogs and a computational screen against the $\alpha 1\beta 2\gamma 2$ GABAA receptor protein, we explored novel mechanisms of action in attenuating neurological diseases.	Njoo	Aashi Shah*, Amanda Pang*, Asavari Gowda, Pranjal Verma, Priya Chanda, Shamita Bhattacharjee, Heidi Wang
2:45-3:00	6	Chemistry, Biochemistry & Physics	Design, <i>in silico</i> screening, and chemical synthesis of rilpivirine analogs as novel non- nucleoside reverse transcriptase inhibitors (NNRTIs)	NNRTIs, or non nucleoside reverse transcriptase inhibitors, are allosteric inhibitors of the reverse transcriptase enzyme in HIV. Although there are no current cures, treatments, including NNRTIs, are currently available. Previous NNRTIs include rilpivirine; our group designed a library of rilpivirine analogs and performed computational screening and chemical synthesis to test the activity of possible NNRTIs.	Njoo	Jeslyn Wu, Charissa Luk, Aishwarya Yuvaraj, Catherine Zhou, Aashi Shah, Neha Mandava, Shamita Bhattacharjee, Riya Abiram
3:00-3:15	6	Computer Science & Engineering	FRB	Using generally available, low-cost mobile devices [RaspberryPis] to form an Internet of Things [IoT] network of instrumentation to look for signals in the 1GHz range evidencing an FRB event.	Downing	
3:15-3:30	6	Biological, Human, and Life Sciences	Decision-Making: The Effects of the Advisor's Age, Gender, and Relationship to the Decision-Maker	Research has found mixed results on how age, gender, and relationship of the advisor to the decision-maker effect the likelihood of individuals accepting advice. This study seeks to add clarity to literature about which factors of the advice-giver influence the decision-maker, while controlling for personal relationships with the hypothetical advice-giver.	Hakinson	Kaylee Wei, Sunandhita Vempati, Rucha Kulkarni, Nikhil Kichili, Samardh Kanugula
3:30-3:45	6	Chemistry, Biochemistry & Physics	Synthesis and <i>In-silico</i> studies of Benfotiamine Prodrug Derivatives.	Benfotiamine, a synthetic S-acyl derivative of thiamine effective inhibitor of advanced glycation endproducts has poor bioavailability. Our study aimed at synthesizing the prodrug derivatives of benfotiamine utilizing Schiff base reactions and investigating pharmacokinetic profiles by employing various computational tools.	Renganathan	Ayush Mishra, Shreya Daschoudhary, Brandon Sun, Ryan Wu