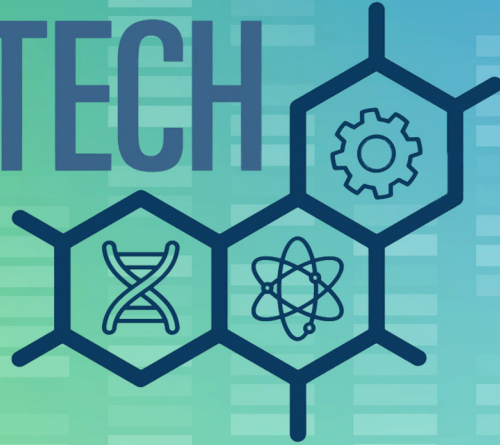


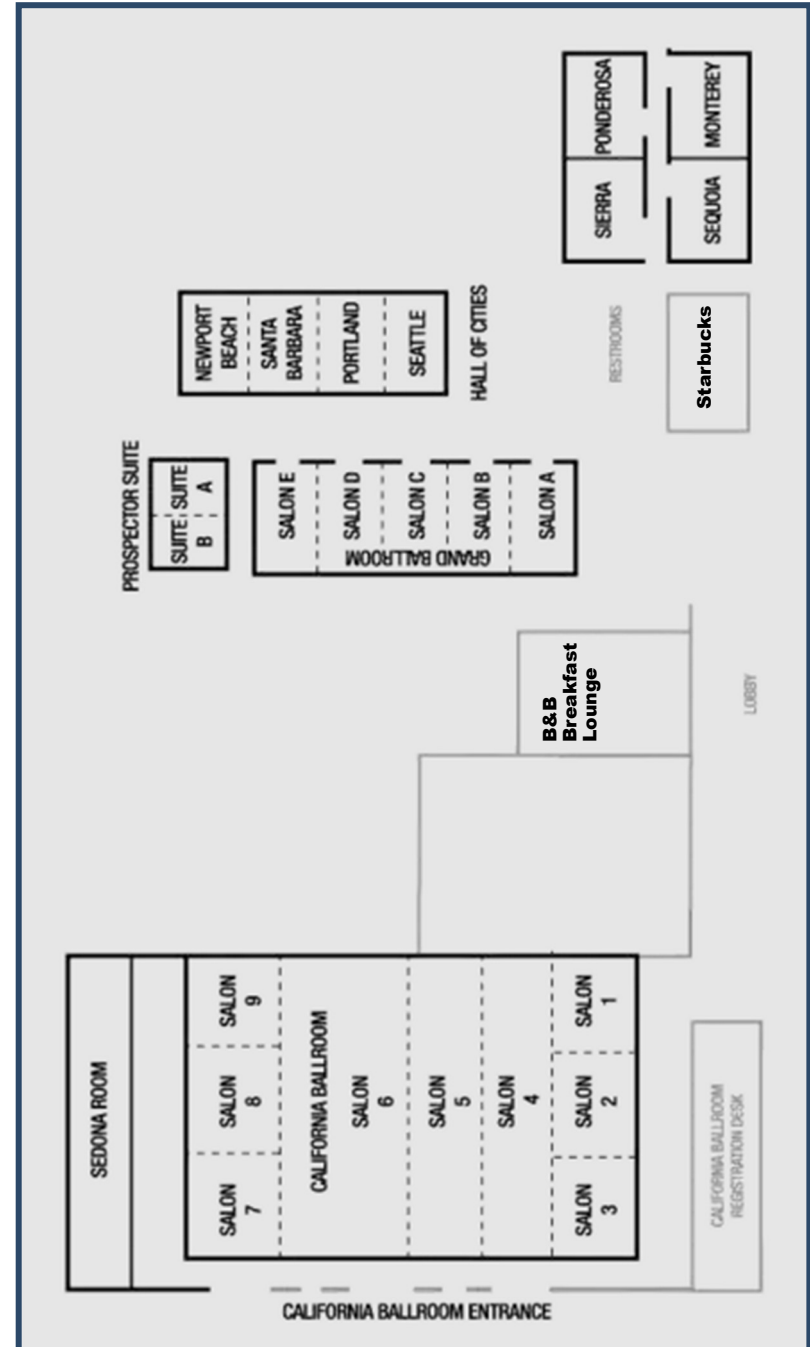
CSUBIOTECH



36th Annual CSU Biotechnology

Santa Clara, CA
January 11 - 13, 2024

SANTA CLARA MARRIOTT MAP



PROGRAM AT-A-GLANCE

The annual **CSU Biotechnology Symposium** program is designed to broaden exposure to cutting-edge biotechnologies, product-focused innovation, and the spectrum of career paths available in the life sciences. The symposium brings CSU students, faculty and administrators together, along with biotech professionals working in academia, government and industry. Faculty and administrators system-wide, along with alumni, community college colleagues, use the event to catch up, initiate collaborations, share ideas and swap lessons learned. CSUBIOTECH is excited to welcome you to the 36th Annual CSU Biotechnology Symposium!

PROGRAM AT-A-GLANCE

Thursday, January 11

1:00 - 9:00 PM	Registration & Information Desk Open	California Ballroom Foyer
1:00 - 8:00 PM	Inclusive Community for Assessment of Biochemistry and Molecular Biology Learning (ICABL) Workshop	California Ballroom 3
	Hosted by: Koni Stone (CSU Stanislaus) Kathryn McCulloch (Cal Poly Pomona) Sajith Jayasinghe (CSU San Marcos)	
2:00 - 5:00 PM	The Inventor's Patent Academy at CSUBIOTECH Sponsored by Qualcomm	California Ballroom 1-2
	Hosted by: Jackie Trischman (CSU San Marcos)	
3:00 - 5:00 PM	Artificial Intelligence in Biotechnology	Sedona Room
	Hosted by: Franz Kurfess (Cal Poly San Luis Obispo) Maria Pantoja (Cal Poly San Luis Obispo) Ilmi Yoon (San Francisco) Pleuni Pennings (San Francisco)	
6:00 - 7:30 PM	SENCERizing Your CUREs and All of Us Research Workbench	Sedona Room
	Hosted by: Janey Youngblom (CSU Stanislaus) Amy Sprowles (Cal Poly Humboldt)	

6:00 - 8:30 PM	Faculty-Industry Ideas Workshop	California Ballroom 1-2
	Hosted by: Chris Meyer (CSU Fresno) Ikhide Imumorin (CSUBIOTECH)	
	This session is for faculty only.	
7:00 - 10:00 PM	Game Night	Grand Ballroom A-C
	Pre-Symposium networking opportunity. Open to all attendees.	

Friday, January 12

7:30 AM - 7:30 PM	Registration & Information Desk Open	California Ballroom Foyer
8:30 - 10:00 AM	Welcome & Opening Plenary Session: <i>Coffee, Tea and Water service starts at 7:30 am</i>	California Ballroom 4-5
	Introduction by Ikhide Imumorin, Executive Director of CSUBIOTECH	
	Speakers: Rachael Callcut (UC Davis) Laurel Reik (UC San Diego)	
10:15 AM - 12:00 PM	CSU CUREs Workshop	Sedona Room
	Hosted by: Jenny Cappuccio (Cal Poly Humboldt) Matt Escobar (CSU San Marcos) David Rhoads (CSU San Bernardino) Corin Slown (CSU Monterey Bay)	
10:15 AM - 12:00 PM	Student Workshop: Graduate School Information Session	Grand Ballroom A-C
	Session Organizers: Melissa Takahashi (CSU Northridge) David Keller (CSU Chico)	
12:00 - 1:30 PM	Lunch	California Ballroom 1-5

PROGRAM AT-A-GLANCE

Friday, January 12 (continued)

1:30 - 3:00 PM	Don Eden Graduate Student Research Award - Finalist Talks	California Ballroom 4-5
	Award Chair: Matt Brown (CSU Sacramento)	
	Award Finalists: Adam Espinoza (CSU San Bernardino) Hanna Franklin (CSU Sacramento) David Ngo (CSU Fullerton) Serena Ortiz (San José State University) Su Ozcan (San Francisco State University)	
	Session is open to all symposium participants.	
3:15 - 4:15 PM	Plenary Session: Faculty Short Talks	California Ballroom 4-5
	Hosted by: Math Cuajungco (CSU Fullerton)	
	Speakers: Wendy Lee (San José State University) Stefan Paula (CSU Sacramento) Stephanie Zaleski (CSU East Bay)	
4:15 - 5:45 PM	Faculty Grant Workshop	California Ballroom 1-3
	Hosted by: Miri VanHoven (San José State University) Chris Meyer (CSU Fresno)	
	Speakers: Frank Gomez (CSU Office of the Chancellor) Karine Gousset (CSU Fresno)	
4:15 - 5:45 PM	Faculty Session: Connecting Curriculum & Careers	Sedona Room
	Hosted by: Jackie Trischman (CSU San Marcos)	

4:15 - 5:45 PM	Student GRFP Writing Workshop: How to Get From Here to There: Graduate School Fellowship Writing Workshop	Grand Ballroom A-C
	Facilitators: Koni Stone (CSU Stanislaus) Sally Pasion (San Francisco State University)	
	Speaker: Gerson Ascencio, Stem Cell and Regenerative Medicine (SCBRM) Program Trainee NSF Graduate Research Fellow Stanford University	
6:00 - 7:30 PM	Dinner & CSUBIOTECH Awards - Honoring Martin Luther King Jr.	California Ballroom 6-9
7:30 - 9:00 PM	Friday Poster Session: Posters Numbered #1 - 121	Grand Ballroom D-E, Hall of Cities

Saturday, January 13

7:30 AM - 2:30 PM	Registration & Information Desk Open	California Ballroom Foyer
8:30 - 10:00 AM	Saturday Poster Session: Posters Numbered #122 - 242	Grand Ballroom D-E, Hall of Cities
	Coffee/tea available starting at 7:30am.	
10:15 - 11:15 AM	CSUBIOTECH Faculty Research Award Talk: Dr. Editte Gharakhanian, Professor, Department of Biological Sciences, CSU Long Beach	California Ballroom 6-9
	Talk Title: A Novel Kinase Cascade Regulates Lysosomal Fusion/Fission Dynamics in the Budding Yeast <i>S. Cerevisiae</i>	
11:30 AM - 12:30 PM	Students: Near Peer Mentoring - Alumni	California Ballroom 6-9
	The Near-Peer Mentoring Session is a chance to hear from a panel of CSU graduates who have gone on to different biotechnology-related careers. The graduates speaking in the panel will also come to lunch afterwards, so that students can join them to ask questions.	

POSTER SESSION INFORMATION

Saturday, January 13 (continued)

11:30 AM - 12:30 PM	Faculty: AI in the Classroom	Sedona
	Speaker: Sunday Peters, Associate Professor & Department Chair, Department of Animal Science, Berry College	
12:30 - 1:30 PM	Lunch	California Ballroom 6-9
1:30 - 2:30 PM	Closing Plenary with Eden, Nagel, & Poster Awards Announcements	California Ballroom 6-9
	Speaker: Sunday Peters, Associate Professor & Department Chair, Department of Animal Science, Berry College	
	Closing remarks by Ikhide Imumorin, Executive Director of CSUBIOTECH	

Sunday, January 14

7:30 - 3:00 PM	CSUBIOTECH Faculty Consensus Group Meeting	Newport Beach and Santa Barbara Rooms (Hall of Cities)
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ABOUT CSUBIOTECH

CSU Biotechnology's (CSUBIOTECH) mission is to develop a professional biotechnology workforce by mobilizing and supporting collaborative CSU student and faculty research, innovating educational practices, and partnering with the life science industry.

CSUBIOTECH provides seed grant funding, organizes an annual biotechnology symposium, sponsors curriculum development, and serves as a liaison for the CSU with government, philanthropic, educational, and biotechnology industry partners. The program involves students and faculty from Life, Physical, Computer and Clinical Science, Engineering, Agriculture, Math and Business at all 23 CSU campuses.

Poster Numbers by Category

Poster Category	Friday	Saturday
Agriculture/Biofuels/Environment	1-9	122-130
Astrobiology	10-11	
Biochemistry	12-32	131-152
Bioengineering	33-40	153-161
Clinical	41-44	162-170
Computational (Bio, Chem, Math, Eng, etc.)	45-52	171-176
Diagnostics/Imaging/Analytical	53-58	177-185
Disease (Pathogens)	59-66	186-214
Molecular Biology (Include Regulation and Genomics)	67-92	215-228
Other	93-106	215-228
Product-focused Innovation		229
Programmatic (Core, Stem Cell, Bridges, PSM)	107-108	
Proteins (Include Proteomics)	109-112	230-233
Synthetic Chemistry	113-121	234-242

Student Research Awards by Poster Number

2024 Glenn Nagel Undergraduate Research Award Finalists	# 14, 15, 54, 71, 95, 113, 114, 115, 116
2024 Don Eden Graduate Research Award Finalists	# 13, 59, 68, 69, 70



POSTER LIST

2024 Posters by Poster Number

Legend: Poster Number, Poster Title, Presenting Author Last Name(s), Faculty PI Last Name, Campus. Posters #1-121 will be presented on Friday; #122-242 on Saturday.

Complete author lists can be found at www.calstate.edu/csubiotech/symposium.

Friday Poster Session

1. The Effects of Glutaredoxins on Arabidopsis thaliana Nitrogen Signaling - Lopez, Escobar, San Marcos
2. Antimicrobial Activity of Protein Hydrolysates from Grape Seeds Intended for Color Stabilization in Winemaking - Guerrero, Porter, Los Angeles
3. Effect of Spirulina Supplementation on Body Weight, Body Weight Gain, and Feed Conversion Rate - Beckerman, Bennett, San Luis Obispo
4. Isolation of Chalcone Mutants in Caenorhabditis elegans and the Identification of Putative Genes for Chalcone Resistance - Nguyen, Jauregui, Calderon-Urrea, Fresno
5. Bacterial Numbers Indole Acetic Acid and Surfactin From Burn Lines at Little Grass Valley Reservoir - Ortiz, Regan, Blee, Chico
6. Effects of Feeding Essential Oils on Laying Hens Blood Metabolites - Moallem, Ferrenberg, Pokharel, San Luis Obispo
7. Synthesis of Anthelmintic Drugs with Increased Efficacy for Enhanced Parasite Control - Gallegos, Sabala, Arpin, Chico
8. Effects of Feeding Essential Oils and Probiotics as Feed Additives on Production Parameters & Egg Quality in Laying Hens - Ferrenberg, Moallem, Pokharel, San Luis Obispo
9. Metagenomics and metabolomics of soils associated with Salinas Valley tomato fields - Dean, Jue, Monterey Bay
10. Sulfite as a reducing agent capable of establishing proton gradients across lipid bilayers of model systems for primeval cells - Ramirez, Paula, Sacramento
11. Isolation of novel Dictyoglomus strains from US Great Basin hot springs - Vamvakas, De La Cruz, Dodsworth, San Bernardino
12. Course-Based Undergraduate Research Experience Lab: Design, Synthesis and Biological Evaluation of New Alzheimer's disease Therapeutics - Pecic, Fullerton
13. Synthesis and evaluation of novel inhibitors of MtbFDTS - Ozcan, Koehn, San Francisco
14. Application of Engineered Toluene o-Xylene Monooxygenases as Biocatalysts to Generate Human Metabolite of Chlorzoxazone - Younan, Dauz, Schara, Stanislaus
15. Understanding the Role of Phosphorylation in RNA Binding Protein Function - Anastasi, Keppetipola, Fullerton
16. Designed Multiple Ligands as Non-opioid Analgesics for Treating Chronic Pain - Yun, Duong, Pecic, Fullerton
17. Characterizing the lipid-dependency of plasma membrane and extracellular HSPA1A - Badolian, Nikolaidis, Fullerton
18. Identification of Endogenous Metabolic Substrates of the AcrABZ-ToIC Multidrug Efflux Pump of Escherichia coli - Cauilan, Ruiz Rueda, Northridge
19. Naphthoquinones as Inhibitors of the Sarco/Endoplasmic Reticulum Calcium ATPase - Johnson, Paula, Sacramento
20. Role of Glycosylation in Maintaining the Structure and Function of Human Apolipoprotein E. - Garcia, Valdez, Narayanaswami, Long Beach
21. Determine Substrate-Binding Induced Conformational Changes in MFS Transporter Using Site-Directed Alkylation and In-Gel Fluorescence - Mostafa, Mercado, Jiang, San Bernardino

POSTER LIST

22. Purification of the enzyme acetylcholinesterase from the marine gastropod Tritonia diomedea - Catbagan, Sommerhalter, East Bay
23. Elimination of an intra-molecular salt bridge in the C-terminal domain of apoA-I did not prevent self-association - Vo, Weers, Long Beach
24. Investigating the Mechanism of Action of SC66 – A Small Molecule Modulator of Protein Kinase B - Bhattacharya, Bhandari, Long Beach
25. Analyzing Cancer-Associated Mutations in the Retinoblastoma Protein Based on Protein Crystal Structure and Thermostability - Ruiz-Rivera, Burke, San Bernardino
26. Investigating RNA Molecule Clusters Using Complementary DNA Oligos - Dhaliwal, San Diego
27. Inhibition of Pinene Synthase by Mg²⁺ - Nguyen, Johnsen, Savage, Sacramento
28. Ubiquitous knockdown of a Cytochrome P450 family member in D.melanogaster and its effects on aggression behavior - Foster, Bauer, Sacramento
29. Increased intracellular pH promotes cell death in the developing Drosophila eye - Wong, Soriano, Grillo-Hill, San José
30. Single-Particle Studies of the Disassembly of Hepatitis B Virus Capsids in GuHCl - Villarreal, San Diego
31. Exploring the Effects of a Neurotoxic on Neurodegenerative Diseases: Investigating the Impact on Fruit Flie - Gill, Fresno
32. Determination of Thermolysis Efficacy via ImageJ Analysis - Ding, Wen, Los Angeles
33. Investigation of Brain Activity while Listening to Music using Brain Control Interface (BCI) - Kulhandjian, Hovhannisyán, Fresno
34. Parameters Enhancing Biological Hydrogen Production from Food Waste Batch Anaerobic Digestors using Batch Experiments - Duong, Asvathanagul, Long Beach
35. Discovering Electroencephalogram Biomarkers of Lennox-Gastaut Syndrome through Unsupervised Time-Frequency Image Analysis - Hu, Long Beach
36. Testing the Binding Affinity of the LXW7 Ligand-Modified Expanded Polytetrafluorethylene - Garcia, Mulligan, Sacramento
37. EMOTE: A Wearable Device for Emotion Estimation and Classification - Romero, Avendano, Salem, Sonoma
38. The Impact of LVAD Outflow Graft Diameter on Flow in the Aortic Arch - Mennie, May-Newman, San Diego
39. Foot controller and haptic feedback systems for below-the-elbow prosthetic arms - Funes Alfaro, Hoff man, Bishay, Northridge
40. Detecting 3D morphological aspects of the fallopian tube from micro-CT images that are needed in Finite element modeling and analysis of the tissue for fertility research - Nolasco, Azadi, San Francisco
41. Characterization and Whole Genome Sequencing a carbapenem-resistant Aeromonas veronii environmental isolate carrying three β -lactamase genes - Estrada, Ruiz Rueda, Northridge
42. At-Home Patient Self-Breath Data Collection with a Sensor Device for Diabetes Study - Naser, Shrestha, Sonoma
43. Liraglutide, a glucagon-like peptide-1 (GLP-1) receptor agonist, does not affect the expression of methamphetamine preference in adolescent male and female rats. - Nguyen, Lin, Zavala, Long Beach
44. Activation of 5-HT_{1B} Receptors with Zolmitriptan on the Acquisition of Ethanol Preference in Adolescent Female Sprague-Dawley Rats - Moore, Siu, Zavala, Long Beach
45. Hip-Knee-Ankle-Foot Orthoses (H-KAFO) for Physical Rehabilitation of Patients with Reduced Limb Mobility - Hernandez, Le, Robson, Fullerton

POSTER LIST

46. Creating Non-Anthropomorphic Hands for Human-Like Tasks Using Control-Oriented Naturalistic Kinematic Models - Hernandez, Ledesma, Robson, Fullerton
47. Using Convolutional Neural Networks for the Early Detection and Classification of Pneumonia in Chest X-Ray Images - Ratan, Kurfess, San Luis Obispo
48. First-principles prediction of wavelength-dependent product quantum yields of a second-generation molecular nanomotor. - Menkel-Lantz, Long Beach
49. A Large Language Model Powered Pipeline for Knowledge Graph Creation from Chronic Pain Medical Text - Lin, Davidson, San Luis Obispo
50. Investigating the Role of Elastin-Like Polypeptide (ELP) and ELP-PEI Copolymer in Scaffold Design for Enhanced Tissue Engineering - Singla, Adibi, San Diego
51. Computational Modeling of Magnesium Ions around Escherichia Coli 70S Using 3D Reference Interaction Site Model of Molecular Solvation - York Van Elslande, Luchko, Northridge
52. Optimizing Characterization of Switch-Like Regions in SIRT1 - Nguyen, Bellinghausen, Lustig, San José
53. Development of Advanced Analytical Laboratory Term Projects Focused on Metal Organic Framework Characterization and Applications - Dixon, Sacramento
54. Development of a Plasmonic Electrochemical Microscopy System for the Enhanced Sensing of Neurotransmitters - Groysman, Wang, Los Angeles
55. X-ray fluorescence and x-ray attenuation measurements of a primary incisor tooth slice - Awad, Gherase, Fresno
56. Cytotoxicity of Nanoplastics in SH-SY5Y Neuroblastoma Cells - Pham, Tran , Wang, Los Angeles
57. Novel bacterial lineages discovered when a Human Oral Microbiome is treated with CRISPR/Cas9 - Velasco, Ouverney, San José
58. A two-dimensional K-shell x-ray fluorescence model applied to strontium measurements in a lamb bone sample - Hematillake, Gherase, Fresno
59. Characterization of a New Domestic Feline Macrophage Cell Line to Study Feline Coronavirus - Espinoza, Erickson, Newcomb, San Bernardino
60. Inhibiting iron acquisition in uropathogenic Escherichia coli - Athens, Marin, Yep, San Luis Obispo
61. Chemical and Functional Characterization of postbiotics from Lactocaseibacillus rhamnosus CRL 2244 with Antimicrobial Activity against Carbapenem-Resistant Acinetobacter baumannii - Mcmanus, Gasca, Salzameda, Fullerton
62. Oxygens impacts sporulation of the gut commensal bacterium Paraclostridium bifermentans - Fontaine, Lopez, Sacramento
63. Efficacy of Antimicrobial Blue Light for Inhibiting Candida albicans Growth in Vulvovaginal Candidiasis Model - Cruz, Tagayuna, Park, Los Angeles
64. Determining whether the Spike/CD4 interaction correlates with enhanced pathogenesis of SARS-CoV-2 - Anderson, Ramirez, Long Beach
65. The role of Complement Receptors in neutrophil like cells' killing of Trichomonas vaginalis. - Romero, Mercer, Pomona
66. Variation in Cardueline finches' constitutive innate immune response against Salmonella - Biehler, Fresno
67. Comparison of Eelgrass Population Origin and Genomic Variation Using Triple Restriction-Enzyme Associated DNA Sequencing - Paguio, Cohen, San Francisco
68. Uncovering the Mechanisms of Gene Amplification by Investigating the Roles of Various DNA Double-strand Break Repair Elements in Acinetobacter baylyi - Franklin, Reams, Sacramento
69. Nav1.1 and Nav1.6 play unique and essential roles in muscle spindle afferent function in adult mice - Ortiz, Wilkinson, San José
70. Reversal of plazomicin resistance by silver ions: a new hope against multidrug resistant infections - Ngo, Tolmasky, Fullerton
71. An ABC transporter confers resistance to beta-lactams, phenazines, and sodium dodecyl sulfate (SDS) in the alpha-proteobacterium Sinorizobium meliloti - Pendar, Christensen, Chen, San Francisco
72. Molecular mechanisms associated with clinical mastitis in dairy cattle - Chen, Abo Ismail, San Luis Obispo
73. Duplication of and variation in succinate dehydrogenase affects response to stress in willow beetles - Brasil, Sonoma
74. Investigating the Role of Mismatch Repair on CCTG DNA Repeat Instability - Qaddourah, San Marcos
75. Assessing temperature dependence of developmental delay frequencies within intra-species hybrids of Caenorhabditis briggsae - Grieco, Ross, Fresno
76. High-quality RNA Extraction from the Acid-fast Bacterium Mycolicobacterium smegmatis, a model organism for Mycobacterium tuberculosis - Dzul, Porter, Los Angeles
77. Repression of multiple antibiotic resistance (mar) operon of Escherichia coli by cellular metabolites - Segundo, Ruiz Rueda, Northridge
78. Ethanol interacts with mutations in parkin to damage the central nervous system during Drosophila development - Sanghera, Almassi, French, San José
79. Using a Genetic Circuit to Understand the Antibiotic Resistance Mechanism of small RNA MicF - Opel, Sariles, Takahashi, Northridge
80. Identifying Potential Alzheimer's Disease Biomarkers Beyond Amyloid-Beta and Tau - Cai, Majmudar , Wesley, San José
81. Investigating if the small RNA gene SmelC647 is transcriptionally regulated by ExoS/ChvI two-component signaling in Sinorhizobium meliloti - Cruz, Chen, Fullerton
82. Interferon regulatory factor-1: a candidate inhibitor of mammalian cardiomyocyte proliferation - Young, Eugenio Quan, Payumo, San José
83. Evolution of heat shock 70 proteins in Willow leaf beetles - Lapier , Lapier, Sonoma
84. Regulation of Intestinal Stem Cells and longevity by the nuclear envelope protein Klaroid (Koi) - Cano, Asturias, Loza-Coll, Northridge
85. Investigating the lysogenic cycle of STIV viruses - Aguilar, Snyder, Pomona
86. Understanding the genetic underpinnings of complex flowers of Delphinium - Alcaraz Echeveste, Pandher, Sharma, Pomona
87. Roles of the Androgen Receptor and Age on Locomotor Activity and Anxiety-Like Behaviors in Mice - Blanco, Long Beach
88. Investigating one carbon metabolic pathway in HER2-positive breast cancer - Hernandez-Hernandez, Bush , Fresno
89. Octopamine regulates sleep and context-dependent arousal via distinct neural pathways - Sundaramurthi, Sitaraman, East Bay
90. Investigating the role of bantam microRNA in promoting Drosophila muscle precursor homeostasis - Moulton, Cabezas, Macabenta, Monterey Bay

POSTER LIST

91. Studying the Effects of Genistein on the *Saccharomyces cerevisiae* Cell Cycle - Alas, Dixon, Pomona
92. The molecular clock is necessary for downregulation but not upregulation of sleep drive in the *Drosophila* model - Hsu, Fresno
93. Incorporating a research-based laboratory project into the General Chemistry II Course - Jaison, Cruz, Liu, Sacramento
94. Antibiotic and Food Preservative Cross-Resistance in Bacteria - Hodge, Russell, VanderKelen, San Luis Obispo
95. Investigating autoxidation contributions to the catecholase-like activity of copper-containing enzyme mimics - Cruz, Caparros, Radlauer, San José
96. Effects of simultaneous inhibition of fatty acid amide hydrolase and soluble epoxide hydrolase on migraine pain in rats - Gunari, Carr, Kandasamy, East Bay
97. Functionalizing the Surface of PTFE with Primary Amine Groups: Can it Be Done Using Plasma Surface Modification? - Jawad, Hawker, Fresno
98. Rheological characterization of environmental plastics degradation - Eby, Jensen, Sacramento
99. The effects of larval wing disc tissue damage in the hornworm, *Manduca sexta*, on body allometry in the adult - Silva, Navarro, Fuse, San Francisco
100. Impact of adolescent nicotine exposure on methamphetamine reward - Richie, Uribe, Crawford, San Bernardino
101. Erasing fearful memories: Post-conditioning lesions to the perirhinal cortex attenuates retrieval of the fear memory. - Porter, Furtak, Sacramento
102. The role of PAR-3 in Intestinal Plasticity and Repair - Varanasi, Ephrem, Pickett, San José
103. Examining the community composition of heterotrophic and autotrophic unicellular plankton off the coast of southern California over day and night cycles - Hinz, San Marcos
104. Molecular and neural basis of egg laying decision making - Lee, Sitaraman, East Bay
105. Assessing the effects of luteolin on reducing zinc-induced hyperphosphorylation of tau and its impacts on behavior in a fruit fly model of Alzheimer's Disease - Her, Lent, Fresno
106. Phenotypic adaptation of the Virginia opossum to an island environment - Katnik, Loney, Nigenda Morales, San Marcos
107. Absence of Nitric Oxide (NO) signaling inhibits migratory muscle precursor progenitor cell migration from somites to wing buds in the chicken embryo. - Velasco, Denetclaw, San Francisco
108. Characterization of Genomic Changes During Human Adipogenesis - Wang, Zhao, Pomona
109. Role of DUF647 Containing Proteins in Vitamin B6 Homeostasis - Hassmer, He, San Francisco
110. Optimization of a nuclear export assay for the RNA binding protein PTBP1 - Hernandez, Scanlon, Miyamoto, Fullerton
111. Mutation of acid stress chaperone HdeB at a key dimer interface site leads to stabilization and structural perturbation, with functional implications - Georgian, Bautista, Crowhurst, Northridge
112. The Curli Accessory Protein CsgC May Be a Thermostable Protein - Nitunga, Spears-Cahill, Jayasinghe, San Marcos
113. Synthesis of Ether Containing Molecules as Building Blocks for Anti-Viral Sulfoglycopolymers - Milam, McReynolds, Sacramento
114. Gold-catalyzed SN1-type reaction of diols to tetrahydrofurans and tetrahydropyrans - Lovato, Grier, Iafe, San Marcos

115. Mix-Valent Diiron Model Complexes for Active Sites in Redox-Active Metalloenzymes - Blauer, Du, San Marcos
116. Investigations into the First Total Synthesis of Lorneic Acids C and D - Kreeger, Lucero, Sacramento
117. Synthesis and Antiproliferative Evaluation of Chalcones Inspired by Licochalone A in Cancer Cell Models - Ocegüera, Gonzalez, Chen, Fresno
118. The Synthesis of Novel Glycodendrimers for Inhibition of HIV - Hopper, McReynolds, Sacramento
119. Microwave-assisted, gold-catalyzed synthesis of benzotriazole-substituted compounds - Llamas, Iafe, San Marcos
120. Total Synthesis of Palmyramide A and the Parallel Biological/Spectroscopic comparison of a Sample of PAL A Isolated from Cyanobacteria from the Palmyra Atoll in the Pacific Ocean - Gonzalez, Bergdahl, San Diego
121. Reactivity of N-heterocyclic carbene nickel complexes with captured CO₂ - Gaynes, Nguyen, Stieber, Pomona

Saturday Poster Session

122. Bioprospecting for multi-functional cellulases in the cow rumen microbiome - Ponce, Dietrich, Escobar, San Marcos
123. Effects of Spirulina Supplementation on Carcass Weight, Visual Appearance, and Meat Quality of Broilers - Patel, Kang, San Luis Obispo
124. Exploring Nematicidal Chalcones Mode of Action (MOA) in *Caenorhabditis elegans*. - Kandi, Wharry, Calderon-Urrea, Fresno
125. Rapid Molecular Identification of *Nocardia* sp to Prevent Development of Foaming in Wastewater Treatment - Gatica, Mendez, Ouverney, San José
126. Quantification of Amino Acids in Aquilegia Nectar by High Performance Liquid Chromatography- Tandem Mass Spectrometry - Camacho, Miller-Schulze, Sacramento
127. Cultivating Novel High-lipid and High-protein Producing Strains of *Chlamydomonas reinhardtii* as a Fish Food Alternative in Aquaculture - Xia, Cohen, Fullerton
128. Isolation of a new *Pythium* species associated with cavity spot disease of carrots - Randhawa, Francis, Bakersfield
129. Assessing effects of different climate smart soil management practices on nitrous oxide emissions during a broccoli crop in Salinas, CA - Vasquez, Monterey Bay
130. Understanding the Cellular Manufacturing Sites for Bromoform in Seaweeds - Allen, Ramahi, He, San Francisco
131. Human Apolipoprotein A-I Self-associates at Low Concentrations - Kang, Weers, Long Beach
132. Stress-Induced lipid changes drive HSPA1A's Plasma Membrane localization - Low, Arce, Nikolaidis, Fullerton
133. Construction of a Yen1-RFP strain of *S. cerevisiae* for Investigation of Yen1 in Double Strand Break Repair - Pineda, Juman, Fischhaber, Northridge
134. The co-expression of the proto-oncogene Bcl-2 and the tumor suppressor Bax affects metabolic shifts in the brewer's yeast *Saccharomyces cerevisiae* - Willey, Buijs, Dejean, Fresno
135. Development of Nanodiscs with Apolipoprotein E3 for Enzyme Replacement Therapy of Acid Sphingomyelinase for the Treatment of Niemann-Pick Disease - Metkar, Narayanaswami, Long Beach
136. Method development of surface plasmon resonance microscopy with live bacteria to assess antimicrobial agents: accessing viability and optimizing bacteria load - Chan, Porter, Los Angeles
137. Sodium Salicylate Differentially Regulates the Unfolded Protein Response in a Colorectal Cancer Cell Line - Tran, Tan, Bhandari, Long Beach

POSTER LIST

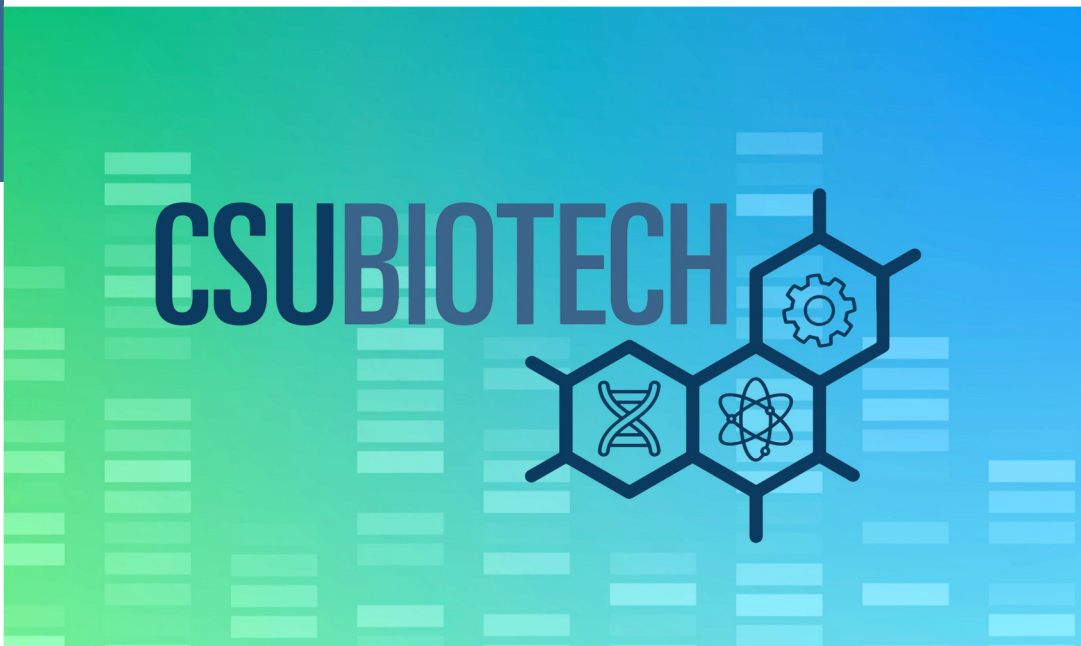
138. Understanding the structural basis for unproductive coupling of the beta2 adrenergic receptor F139A mutant with the heterotrimeric Gs protein - Shayegh, Abrol, Northridge
139. Effects of Glycosylation and Tandem Repeat Length on the Affinity of MUC1 Binding Antibodies - Cortez, Brooks, Fresno
140. Regulation of Proliferation and Cell Death by Increased Intracellular pH - Nguyen, Garcia, Grillo-Hill, San José
141. Isolation of single-stranded DNA that can detect and quantify reduced and oxidized glutathione molecules - Bravo, Halim, East Bay
142. Subcellular localization of the tail-anchored Rab GAP Gyp8 is determined by transmembrane domain hydrophobicity and is regulated by chaperone Msp1 - Connolly, Alcalá, Nickerson, San Bernardino
143. Cancer Mutations Perturb the Retinoblastoma Protein's Native Protein-Protein Interactions - Castro, Burke, San Bernardino
144. Increased histone demethylase activity in breast cancer cells by anti-cancer drug temozolomide - Hills, Bernal, Martinez, wang, Dominguez Hills
145. Determining the Role of Acetylation in Alternative pre-mRNA Splicing - Nunez, Keppetipola, Fullerton
146. Mechanistic Study of the N5-Oxide Formation in DszA - Newburg, Serrano, Vey, Northridge
147. Comparative analysis of nonribosomal peptide synthetase protein expression under control of different inducible promoters - Cummings, Watts, San Luis Obispo
148. Epitope Characterization of MUC16 Specific Monoclonal Antibodies - Manion, Oka, Brooks, Fresno
149. Knockdown of Cytochrome P450 Protein in the Ejaculatory Bulb of the fruit fly *Drosophila melanogaster* and Its Effect on Aggression - Baker, Bauer, Sacramento
150. BIOCHEMICAL DIFFERENCES BETWEEN EMBRYONIC (E) AND ADULT (A) ISOFORMS OF DREBRIN - Srapyan, Mkrtychyan, Grintsevich, Long Beach
151. Materializing Viruses from Data: ssRNA Bacteriophage Discovery via RNA folding Computation - Makasarashvili, Villarreal, Garmann, San Diego
152. Photophysical, Electrochemical, and Spectroelectrochemical Characterization of N-Confused Porphyrin in Different Alcohol Solvents - Sanchez, Aleman, Stanislaus
153. *Bacillus Subtilis* Biofilm Formation with Optical Trapping - Walter-Lakes, Quintanilla, Bezryadina, Northridge
154. Engineering Cytolethal Distending Toxin as an Anti-Tumor Agent - Hababag, Bermudes, Northridge
155. Holotomographic microscopy - a platform to investigate the role of the adhesome in endothelial cell metabolism - Noyer, Jurney, San José
156. Environmental and Microbial Dynamics in Relation to Biological Hydrogen Gas Production - Banuelos, Asvathanagul, Long Beach
157. The Effect of Outflow Graft Diameter on Aortic Root Flow - Harkness, May-Newman, San Diego
158. Survival of phi-6 genotypes in acidic environments - Gomathinayagam, Singhal, San José
159. Foot controller and haptic feedback system for application in a prosthetic arm - Funes Alfaro, Hoffman, Bishay, Northridge
160. Geometry characterization of heart valve leaflets using patient-specific cardiac-resolved CT images. - Ayala, Suh, Long Beach
161. Hypoxia, Matrigel Density, and VEGF Gradients Affect Endothelial Network Formation within Microfluidic Platforms - Adams, McCormick, Heylman, San Luis Obispo
162. Characterizing Sequencing Artifacts in Next-Generation Sequencing Platforms - Zhou, Lee, San José
163. Wildlife Population Sampling with Drones and Convolutional Neural Networks - Marsh, Kurfess, San Luis Obispo
164. Exploration of Hydrogen Bond Networks in BIV TAR-Tat Wild Type and Mutants - Quiroz, Lustig, San José
165. Using Mathematical Modeling to Understand How Sleep Quality and Physical Activity Influence Pregnancy Outcome - Huynh, San Diego
166. Automated Design of Nanoscale 3D DNA Meshes - Gonzalez, Mohammed, San José
167. Computational Studies and Synthesis of Novel Nucleoside Analogues as potential therapeutics for Pancreatic Cancer - Drobshoff, Khosroabadi, Awad, Channel Islands
168. Synthesis and in silico evaluation of novel cytidyl arylsulfonamides as potential anticancer therapeutics targeting ribonucleotide reductase - Leonard, Gonzalez, Awad, Channel Islands
169. Neoantigen Population Dynamics in Ovarian Tumor Cell Populations - Amezcua, Jue, Monterey Bay
170. Newly Synthesized Single-nanometer Iron Oxide Nanoparticles: A Comprehensive Analysis from Simulation to Spectroscopic Studies to MRI Applications - Ali, Wei, Fresno
171. Determination of strontium concentrations in a primary molar tooth using X-ray fluorescence measurements and a two-dimensional K-shell XRF model - Sugimoto, Gherase, Fresno
172. Characterizing neural crest-specific tubulin subunits during development - Diaz, Porter, Los Angeles
173. Developing a point of care diagnostic tool for pathogenic fungal infections - Lamont, Davidson, San Luis Obispo
174. Development of an Unbiased Cell Enumeration Protocol Using ImageJ - Soriano, Porter, Los Angeles
175. X-ray attenuation measurements of a fibrous breast tissue phantom - Briggs, Gherase, Fresno
176. Measuring Intercellular Junction Organization Using a New Python Algorithm - Homez, Zaroo, Adams, San José
177. Wastewater-based surveillance of SARS Coronavirus-2 prevalence and variant analysis in the Chico State University student resident hall population - Tuttle, Cline, Chico
178. Influenza NP-PB2 interaction as a viable target to inhibit influenza replication. - Vanegas, Ramirez, Newcomb, San Bernardino
179. The effects of oxygen on isolated strains of *Paraclostridium bifermentans* - Garcia, Lopez, Sacramento
180. Pneumolysin-induced PMN transmigration and disruption of airway epithelium adherens junctions - Kaur, Carozza, Adams, San José
181. Molecular and Serological Detection of *Rickettsia* species phylotype G022 in the Blood of Domestic Dogs in Northern California - Woronchuk, Zhong, Humboldt
182. Avian influenza virus surveillance in wild waterfowl in the Sacramento Valley - Huit, Cline, Chico
183. Characterizing the role of Annexin A2 in HIV-1 Nef activity - Carrillo, Ramirez, Long Beach
184. Phylogenetic Approach to Understand the Evolution of Drug Resistance in *Mycobacterium Tuberculosis* - Flores, Pennings, San Francisco
185. Leukocyte profiles and bloodborne parasites as a predictor of condition in a songbird - Cabrera, Fresno
186. Chromosome organization in human adult endothelial cells - Morales, Quintero Plancarte, Hua, Sonoma
187. Measuring the Efficacy of Hermaphrodite Self-sperm Depletion in *Caenorhabditis briggsae* - Reyes Barajas, Ross, Fresno



POSTER LIST

188. Olfactory synapses are modulated by odor training and sleep in *Caenorhabditis elegans*. - Bykov, Guillen, VanHoven, San José
189. Investigating Conserved Gene Function Between *Caenorhabditis elegans* and *Pristionchus pacificus* - Martinez, Hong, Northridge
190. Genome-wide Association Study for Fertility traits at First Calving in Dairy Cattle - Seto, Abo Ismail, San Luis Obispo
191. Investigating the role of transcription on CCTG DNA repeat large-scale contractions - Mande, Stanislaus
192. Investigating the role for Rbp2 in regulating the circadian clock in the cyanobacterium *Synechococcus elongatus* - Ngo, Teves, Cohen, Los Angeles
193. Effect of Sympathetic Neurotransmitters on Muscle Spindle Afferent Sensitivity to Muscle Stretch in Adult Mice - Parghi, Andrade, Wilkinson, San José
194. Roles for ClpX in regulating circadian control of cell division in cyanobacteria - Prado Martinez, Cohen, Los Angeles
195. The Role of the Transcription Factor AcrR as a Regulator of Metabolism in *Escherichia coli* - Czarnicka, Ruiz Rueda, Northridge
196. Ethanol interacts with Alzheimer's Disease-causing mutations to exacerbate central nervous system defects in a fly model of Fetal Alcohol Syndrome - Filardo, Flores Tapia, French, San José
197. Does silencing specific genes alter salt tolerance in the plant *Arabidopsis thaliana*? - Arroyo, Alamillo, López, San Bernardino
198. The Oct-1, Ets-1, and SP1 Transcription Factors Likely Drive the Expression of RNA Polymerase III Subunit B Gene (POLR3B) - Gutierrez-Garcia, Malone, Northridge
199. Determining the effect of Dextrose and Fructose on Polyhydroxybutyrate Depolymerase Activity in *Bacillus infantis* - Lu, Vanderkelen, San Luis Obispo
200. Characterization of a centromeric diminished zone, devoid of major satellite sequences, along the centrosome axis in mouse embryonic fibroblast cells - Quecan, Malik, Hua, Sonoma
201. An Evolutionary Conserved Sp1 Site Likely Drives Expression of the UVRAG Gene - Ochoa, Malone, Northridge
202. Towards investigating the role of ras related dexamethasone-induced 1 (Rasd1) in mammalian cardiomyocyte cell division - Dave, Payumo, San José
203. Using CRISPR-Cas9 genome editing to identify misregulated signaling proteins responsible for a cellular transport defect in yeast - Schwarz, O'Connell, Nickerson, San Bernardino
204. Genomic evolution of phi-6 Cystovirus undergoing different heat shock treatments - Nayeem, Pour Bahrami, Singhal, San José
205. The Effects of Phytocannabinoids on *Drosophila melanogaster* Midgut Homeostasis and Lifespan - Illescas, Vidal, Loza-Coll, Northridge
206. The Development of a High-Throughput Screening Method for STIV1 Viral Mutants - Hebbert, Snyder, Pomona
207. Abnormal expression levels of myelination-related genes in the brains of Tmem163 knockout mice parallel rare human diseases - Marentes, Montoya, Cuajungco, Fullerton
208. Development and implementation of CRISPR/Cas9 gene editing for methylotrophic bacteria - Vysotska, Kotipalli, Skovran, San José
209. GABA mediates a rapid escape response in a *C. elegans* chemosensory circuit - Garcia, Soohoo, VanHoven, San José
210. The impact of sodium bicarbonate on alkenone production in haptophytes - Fernandez, Read, San Marcos
211. The compounds HEBP, and IP6 showed effects as possible inhibitors of calcification while sodium polyphosphate did not impact calcification at the concentrations tested. - Zavala, Read, San Marcos
212. Manganese Oxidation of *Pseudomonas putida* GB-1 at Two Different Temperatures - Fox, Allen, Geszvain, Chico
213. Effects of Captivity on the Cloacal Microbiome of the Dark-eyed Junco (*Junco hyemalis*) - Peterson, Watkins, Van Laar, Stanislaus
214. Interplay of MICOS complex across aging causes differential expression of mitochondria in *Drosophila melanogaster* - Raub, Riggs, San Francisco
215. Simultaneous inhibition of fatty acid amide hydrolase and soluble epoxide hydrolase inhibits acute inflammatory pain in rats - Chacon, Khoja Herawi, Kandasamy, East Bay
216. Towards an oxygen-release postoperative oral wound patch: encapsulating peroxide using plasma enhanced chemical vapor deposition - McFall, Hawker, Fresno
217. Electrical guidance of human vascular endothelial progenitor cells and angiogenesis in vitro - Shergill, Mulligan, Sacramento
218. Fentanyl and morphine cross-sensitization in adult and adolescent rats - Sanchez, Lujan, Crawford, San Bernardino
219. Wildfire Mitigation Influence on Fuels and Flora in the California Home Ignition Zone - Benterou, San José
220. Identifying Nectar-Inhabiting Microbes from Two *Aquilegia* Species - Huynh Van, Jaraba, Olsan, Sacramento
221. PARACRINE SIGNALING OF MESENCHYMAL STEM CELLS EXPRESSING FIBROUS DYSPLASIA PHENOTYPE - Runarsdottir, Mulligan, Sacramento
222. Mice with a loss of sirtuin 4 have elevated plasma insulin levels after a mixed nutrient challenge - Do, Luong, Huynh, San José
223. Comparison of the Reference Culturing Method and an Antibody Base Rapid Test for the Detection of *Listeria monocytogenes* - Duenas Alejandro, Pomona
224. DNA major versus minor groove occupancy of monomeric and dimeric crystal violet derivatives. Toward structural correlations - Mirzakhaniah, khoury, Minehan, Northridge
225. Comparison of HER/ErbB gene family and protein isoform expression in breast cancer brain metastasis using a 3D cell culture model - Gangadharan, Bush, Fresno
226. Photophysical and NMR study in the Hydrogen-bonding interactions between NCTPP and Alcohol Molecules - Mojica, Anderson, Alemán, Stanislaus
227. Modeling Parkinson's Disease Through the Enteric Nervous System of *Drosophila melanogaster* using Alpha-Synuclein - Dadawalla, Lent, Fresno
228. Exploring Gene Expression changes in *Drosophila melanogaster* treated with 50µM and 1µM Bisphenol A - DeBaets, Lee, San José
229. Characteristics of Solid State Nanopores and Genomic Mapping using Single Strand Binding Protein - Corona, Klotz, Long Beach
230. Identifying Amino Acids That Regulate Shuttling Between the Nucleus and Cytoplasm in an RNA-Binding Domain of the PTBP1 Protein - Uy, Miyamoto, Fullerton
231. Investigating the role of two highly conserved residues in the activity of acid protective chaperone HdeB - Bautista, Georgian, Crowhurst, Northridge
232. C-Terminal Hydrophobic Residues of CsgF may Play an Important Role in Bacterial Curli Formation - Enuslay, Lopez, Jayasinghe, San Marcos

- 233. Asp53 of cAMP receptor protein has a role in preventing transcriptional activation in the absence of cAMP - Carranza, Lam, Youn, Fresno
- 234. Development of JJ-450-Based Androgen Receptor PROTACs for Prostate Cancer - Ashong, Shinkawa, Chen, Fresno
- 235. Amide and Ester Nutrient Linkages in Trojan Horse Anti-tumor Agents - Cortez, Arabian, Kelson, Northridge
- 236. Utilizing Dihedral Angle Control as a Strategy to Obtain Selective Diarylamine Kinase Inhibitors - Heydari, Gomez, Gustafson, San Diego
- 237. Utilizing Conformational Control as a Filter to Obtain Selective 3-Aryl Pyridone Kinase Inhibitors - Heydari, Roberts, Gustafson, San Diego
- 238. Coumarin-Carbamates as Potential Inhibitors of Acetylcholinesterase - Garcia, Arpin, Chico
- 239. Biological Evaluation and Chemical Synthesis of Carmaphycin "War-heads" as Potential Treatments Against Trichomonas Vaginalis and Various Cancers - Cordero, Duke, Bergdahl, San Diego
- 240. Synthesis of chiral dioxanes and their potential medicinal applications - Hoy, Ball, Chico
- 241. Structural determination of N-heterocyclic carbene nickel catalysts and precursors - Wolfarth, Marr, Stieber, Pomona
- 242. Evaluating Cross-Coupling Reactions to Prepare Dihydrobenzofuran Therapeutics - Araujo, Thai, Wahlman, Long Beach



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