

Luis Carvajal-Carmona appointed Associate Vice Chancellor for the Office of Academic Diversity



Congratulations to Dr. Luis Carvajal-Carmona for his appointment as Associate Vice Chancellor for the Office of Academic Diversity, an influential role in the Diversity, Equity, and Inclusion office. The office seeks to empower faculty equity leaders, elevate the work of diverse faculty as they solve global problems, support equitable ecosystems for student opportunity, and model equity inclusion in higher education.

Read the full announcement » [Vice Chancellor Renetta G. Tull announces new leadership.](#)

BMM-EEOP Faculty Mentorship Program

As we shared in our previous issue, three undergraduate students enrolled in the BMM-EEOP Faculty Mentorship Program have been paired with faculty members. They will be paid thanks to funding from the [Office for Health Equity, Diversity, and Inclusion](#). The students will be working for two quarters in their labs, starting this month, and are excited about this opportunity.

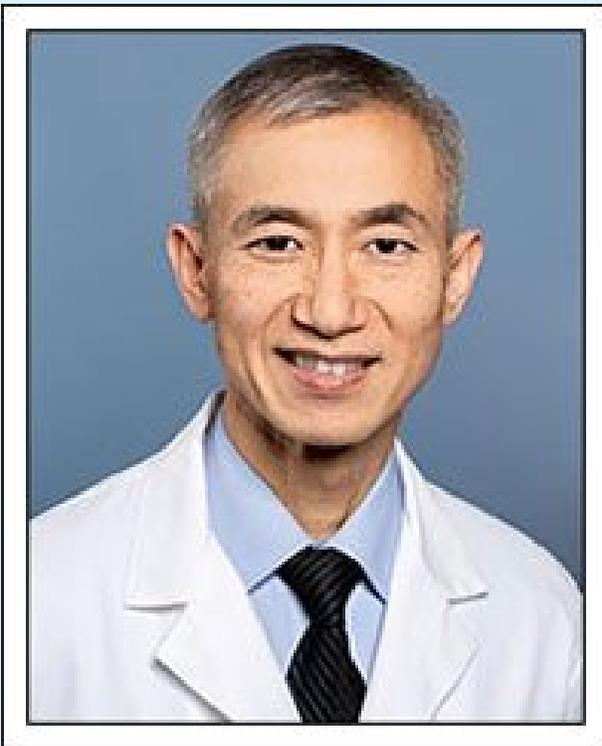




As seen from left to right, Bryan Correa Gonzalez (Biological Sciences), Madelynn Yung (Neurobiology, Physiology, and Behavior), and Natalie Chrisman (Biological Sciences), and their faculty mentors, Dr. Alan Lombard, Dr. Flora Tassone, and Dr. Jeremy Chien, respectively.

An Interview with Dr. Jeremy Chien

This month, we spoke with Dr. Jeremy Chien about his professional journey, his research, collaborations with faculty, and more.



Tell us about you and your journey.

I grew up in Burma and came to the U.S. after grade school. I completed my college studies at Pittsburg State University (Kansas) and my Ph.D. studies in Reproductive Physiology at the University of Kansas Medical Center. After receiving postdoctoral training at Mayo Clinic (Minnesota), I continued my research career there as an Assistant Professor. I went back to my alma mater, University of Kansas, to conduct research in ovarian cancer prior to arriving at UC Davis.

What is the most important project that your lab is working on?

Our primary focus is to understand mechanisms of treatment resistance in ovarian cancer, to develop new screening methods for early detection of ovarian cancer, and to develop new therapies targeting critical pathways contributing to cancer progression and treatment resistance. Considering that over 70% of ovarian cancer patients are diagnosed with advanced disease, we are working on developing new gene- and metabolite-based biomarkers for early detection of ovarian cancer. We are also testing new targeted therapies that exploit vulnerabilities in ovarian cancer.

What is the most exciting technology or resources that your lab has?

We are applying functional genomic and genetic studies to fill in gaps in clinical knowledge about actionable mutations in ovarian cancer. We applied CRISPR/Cas9-based genome-scale screening to identify genetic determinants of sensitivity to PARP inhibitors in ovarian cancer. We have also generated a tumor-derived cDNA expression library from patients with resistance to chemotherapy, and we are applying functional genetic screens to identify driver genes that promote cancer progression and treatment resistance. We have also generated several TP53 mutagenesis libraries to characterize the mutants that are responsive to TP53-targeting therapies. This project was recently funded by the Department of Defense Ovarian Cancer Research Program.

What type of collaborations are you looking for?

We are excited to collaborate with **Dr. Kit Lam** to generate PROTAC-based protein degraders for ovarian cancer and with **Dr. Yuanpei Li** to generate nanoparticle formulated targeted therapies to overcome ocular toxicities associated with proteostasis-targeting experimental therapeutics.

I am looking forward to working with new collaborators in the development of gene-based and metabolite-based biomarkers for early detection of ovarian cancer. I am also looking forward to providing my expertise in functional genetic screens and applied genomics in these new collaborations.

Why is this work meaningful to you?

First, my work provides me the opportunity to collaborate with others to create new knowledge with high translational potential to improve the outcomes of patients with cancers. Second, the opportunity to train new generation of cancer researchers and clinicians who are passionate about improving the outcomes of cancer patients. Third, the opportunity to help educate future medical doctors and college graduates.

What are some hobbies that you are passionate about?

I love running and hiking. I am also hoping to pick up gardening soon when I finally move into my new house!

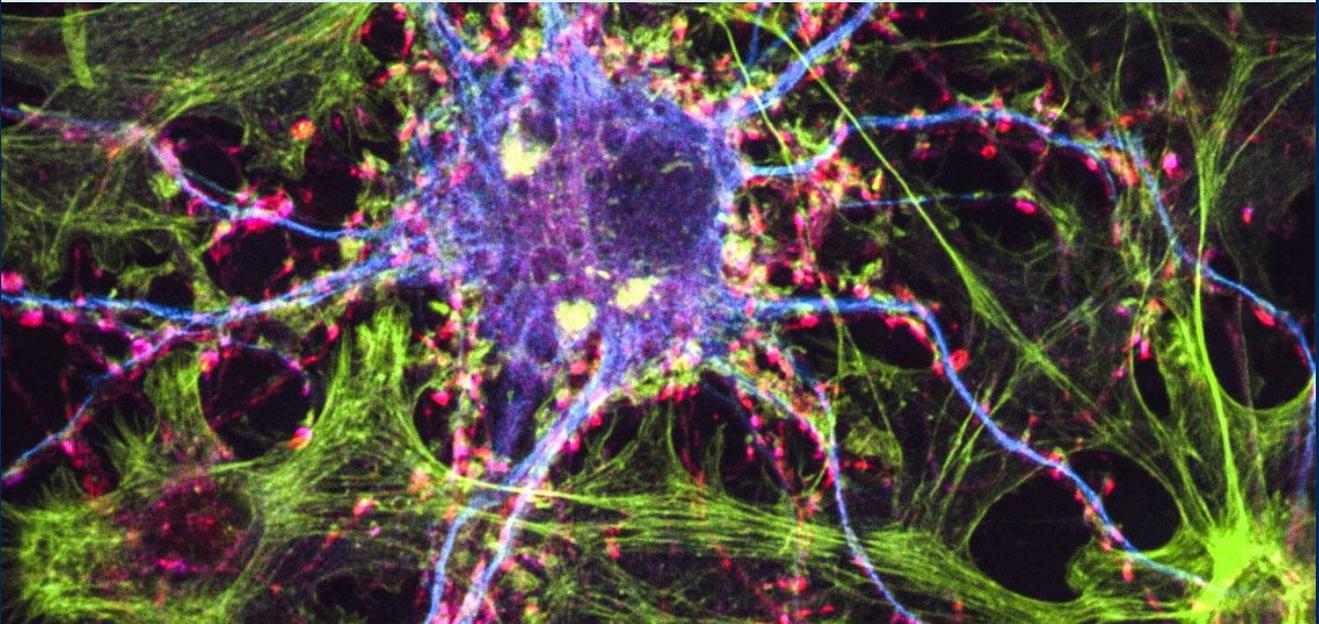
How do you support diversity, equity, and inclusion in your lab or research?

I support diversity, equity, and inclusion by affirming the values they add to my research. They create positive, supportive community and collaboration among lab

members to strive toward research discoveries and advances that will improve the outcomes of patients with cancer.

Faculty, Staff and Student Recognitions

In the News



An image of nerve cells, which the Institute of Psychedelics and Neurotherapeutics will study as a target for newly developed psychoplastogens. (Photo: Lindsay Cameron)

UC Davis launched the Institute for Psychedelics and Neurotherapeutics last month to advance research on the mechanisms of psychedelics and to apply this understanding to the development of treatments and therapeutics. Dr. [David Olson](#) is the institute's founding director. Read more » [UC Davis establishes Institute for Psychedelics and Neurotherapeutics](#).

Monica Stark covered the launch of the Institute for Psychedelics and Neurotherapeutics in [The Davis Enterprise](#), and Dr. [Olson](#) commented on his work and plans for the institute's research in that story. Read more » [UC Davis's psychedelics institute came at the right time](#).

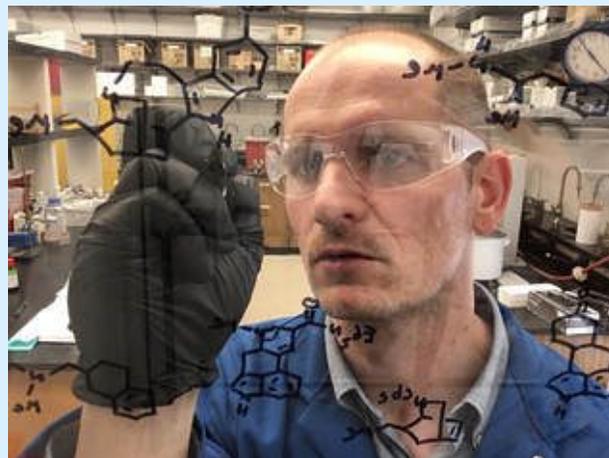
This news was also mentioned in Chancellor Gary S. May's [campus newsletter](#) and featured in [The California Aggie](#), the undergraduate newspaper of UC Davis.

The National Comprehensive Cancer Network's new Diversity, Equity, and Inclusion Directors Forum, which works to improve diversity of clinical staff representation across the nation's leading academic cancer centers, announced new leaders last month. Dr. [Luis Carvajal-Carmona](#) is a member. Read more » [Terrance Mayes, Ed.D., and Loretta Erhunmwunsee, M.D., F.A.C.S., Announced as Leaders for NCCN Forum on Equity](#).

Maxine Umeh-Garcia, who worked on several projects as a member of Dr. Colleen Sweeney's laboratory with the main theme of triple negative breast cancer, was profiled by UC Merced's Newsroom. Read more » [Alumna Credits UC Merced for Inspiring Her Interest in Cancer Research.](#)

Awards and Grants

Congratulations to Dr. [David Olson](#), honored as a Chancellor's Fellow. "Professor Olson is a trailblazer at the intersection of several scientific fields... establishing himself as a leader in the area of neuropsychiatric disease drug discovery," said Estella Atekwana, College of Letters and Science dean. Read more » [13 Honored as Chancellor's Fellow.](#)



Congratulations to Dr. [Megan Dennis](#), who was awarded a R21 grant from the National Institutes of Health and the National Institute of Neurological Disorders and Stroke for a project titled "Parallel assessment of neurodevelopment genes implicated in autism using zebrafish." The project's major goal is to narrow in on causal genes of autism with disproportionate megalencephaly.

Congratulations to Dr. [Aiming Yu](#), who was selected to serve on The American Society for Pharmacology and Experimental Therapeutics (ASPET) Publications Committee as an at-large member. His term, effective at the beginning of this year, will run through 2025. Read more » [Dr. Ai-Ming Yu Selected as Publications Committee At-Large Member.](#)

Congratulations to Gavin Traber, a [Yu Lab](#) Ph.D. candidate selected as the Journal of Pharmacology and Experimental Therapeutics Highlighted Trainee Author in January. Gavin is working to implement noncoding RNAs into new anticancer therapies using novel RNA bioengineering technologies and recombinant RNA molecules. Read the research » [RNAi-Based Therapeutics and Novel RNA Bioengineering Technologies.](#)

Congratulations to Joseph Cronin, a [Yu Lab](#) Ph.D. student in pharmacology and toxicology awarded a T32 predoctoral training grant in pharmacological sciences. This program will provide funding for a project titled "Bioengineering Novel Humanized RNA-let-7 Prodrugs to Modulate ADME Gene Expression, Anticancer Drug Exposure, and Therapeutic Outcomes." Read more » [Pharmacological Sciences \(PS\) Predoctoral Training Program.](#)

Congratulations to Dr. [Yuanpei Li](#), who along with Dr. [Andrew C. Birkeland](#) received a pilot grant from the Colorado Head and Neck Cancer SPORE Developmental Research Program for their project titled "One-component New-

chemical-entity Nanomedicine for overcoming treatment resistance in HNSCC.”
Read more » [Colorado Head and Neck Cancer SPORE](#).

Congratulations to Michelle Wong, a bioinformatics undergraduate in Dr. [Luis Carvajal-Carmona](#)'s laboratory. Michelle was awarded a \$5,000 research scholarship as a 2023 Scientist.com Ambassador. Awardees collaborate with Scientist.com to work as brand ambassadors for 9 months. Learn more about Michelle and her research » [Scientist.com STEM Research NIL Award](#).

Comings & Goings

Congratulations to newly graduated Ph.D. students: Dr. Courtney Dreyer and Dr. Michelle Hu of Dr. [Kermit Carraway](#)'s laboratory, and Dr. Daniela Soto and Dr. Colin Shew of Dr. [Megan Dennis](#)' laboratory.

Congratulations to Ye Hyun Hwang, an Integrative Genetics and Genomics student in Dr. [Flora Tassone](#)'s laboratory, for completing her master's degree last quarter. Ye Hyun is now enrolled in the Ph.D. program at UC Davis.

Dr. Yanxiao (Lisa) Jiao joined Dr. [Yuanpei Li](#)'s laboratory as a visiting scholar.

Community Outreach

Sacramento Charter High School Outreach

Sacramento Charter High School is excited to partner with the BMM department on the 2023 lecture series and summer internship program, an annual community outreach initiative led by Dr. [Kit Lam](#) and Dr. [Megan Dennis](#). Five BMM faculty members will present to students, starting this week. Sacramento Charter High School students can apply for a summer internship, and selected students will be notified of their acceptances to the program in mid-March to early April.

Conferences, Seminars and Workshops

BMM Department Seminar Series

The BMM Department Seminar Series will welcome Alexander Stegh, Ph.D., Washington University School of Medicine, St. Louis, hosted by [Aiming Yu](#), Ph.D., and Rajagopal Ramesh, Ph.D., University of Oklahoma Health Sciences Center, hosted by [Yuanpei Li](#), Ph.D., on Tuesdays in March. For more details, visit the series [webpage](#).

BMM Research in Progress Seminar Series

The BMM Research in Progress Seminar Series will host **Luis Carvajal-Carmona**, next month on Thursday, April 20, 2023. Full details about future talks can be found by visiting the seminar [calendar](#).

Integrated Biomedical Sciences Seminar Series

The Integrated Biomedical Sciences Seminar Series will host speakers on Tuesday mornings in March and April: the first on March 14, 2023 at 10 a.m., followed by seminars on March 21 and April 11. Further details about this series can be found by visiting the seminar [calendar](#).

Frontiers in Pharmacology Seminar Series

The Frontiers in Pharmacology Seminar Series features upcoming speakers throughout 2023. Zhao Wang, Ph.D., University of Texas Southwestern Medical Center, will speak next on Tuesday, March 21, 2023, at 4 p.m. To view scheduled talks, visit the series [webpage](#).

Distinguished Lecture Series in Physiology

The Distinguished Lecture Series in Physiology welcomes visiting speakers in March and April. The next seminar will be held Thursday, March 30, 2023, at 12 p.m. Further details about this series can be found by visiting the seminar [calendar](#).

Recent Publications

Berg AL, Showalter MR, Kosaisawe N, Hu M, Stephens NC, Sa M, Heil H, Castro N, Chen JJ, VanderVorst K, Wheeler MR, Rabow Z, Cajka T, Albeck J, Fiehn O, **Carraway KL 3rd**. 2023. **Cellular transformation promotes the incorporation of docosahexaenoic acid into the endolysosome-specific lipid bis(monoacylglycerol)phosphate in breast cancer.** *Cancer Lett.*

Ma W, Zeng J, **Montoya DJ**, Toomey K, Zhou C, Chen S, Liu D, Babich M, Radosevich JA, Li T. 2023. **Labyrinthin Expression Is Associated with Poor Prognosis in Patients with Non-Small-Cell Lung Cancer.** *Cancers (Basel).*

Jin LW, di Lucente J, Ruiz Mendiola U, Tang X, Zivkovic AM, **Lebrilla CB**, Maezawa I. 2023. **The role of FUT8-catalyzed core fucosylation in Alzheimer's amyloid- β oligomer-induced activation of human microglia.** *Glia.*

O'Geen H, Beitnere U, Garcia MS, Adhikari A, Cameron DL, Fenton TA, Copping NA, Deng P, Lock S, Halmai J, Villegas IJ, Liu J, Wang D, Fink KD, Silverman JL, **Segal DJ**. 2023. **Transcriptional reprogramming restores UBE3A brain-wide and rescues behavioral phenotypes in an Angelman Syndrome mouse model.** *Mol Ther.*

Tomkova M, Tomek J, Chow J, McPherson JD, Segal DJ, Hormozdiari F. 2023. **Dr.Nod: computational framework for discovery of regulatory non-coding drivers in tissue-matched distal regulatory elements.** *Nucleic Acids Research*.

Palumbo JM, Thomas BF, Budimirovic D, Siegel S, Tassone F, Hagerman R, Faulk C, O'Quinn S, Sebree T. 2023. **Role of the endocannabinoid system in fragile X syndrome: potential mechanisms for benefit from cannabidiol treatment.** *J Neurodev Disord*.

Tamayo LI, Perez F, Perez A, Hernandez M, Martinez A, Huang X, Zavala VA, Ziv E, Neuhausen SL, Carvajal-Carmona LG, Duron Y, Fejerman L. 2023. **Erratum: Cancer screening and breast cancer family history in Spanish-speaking Hispanic/Latina women in California.** *Front Oncol*.

Alvarez MRS, Grijaldo SJB, Nacario RC, Rabajante JF, Heralde FM 3rd, Lebrilla CB, Completo GC. 2023. **In silico screening-based discovery of inhibitors against glycosylation proteins dysregulated in cancer.** *J Biomol Struct Dyn*.

Alvarez MR, De Juan F, Zhou Q, Dimzon IKD, Grijaldo SJ, Sunga S, Heralde F 3rd, Lebrilla CB, Completo GC, Nacario RC. 2023. **Comparative proteomics reveals anticancer compounds from *Lansium domesticum* against NSCLC cells target mitochondrial processes.** *Cell Biochem Funct*.

Zafarullah M, Li J, Tseng E, Tassone F. 2023. **Structure and Alternative Splicing of the Antisense FMR1 (ASFMR1) Gene.** *Mol Neurobiol*.

Beitnere U, Vilanova-Cuevas B, Christian SG, Taylor C, Berg EL, Copping NA, Dindot SV, Silverman JL, Gareau MG, Segal DJ. 2023. **Unique Features of the Gut Microbiome Characterized in Animal Models of Angelman Syndrome.** *mSystems*.

Traber GM, Yu AM. 2023. **RNAi-Based Therapeutics and Novel RNA Bioengineering Technologies.** *JPET*.

Cardoso M, Maia S, Brandão A, Sahasrabudhe R, Lott P, Belter N, Carvajal-Carmona LG, Paulo P, Teixeira MR. 2022. **Exome sequencing of affected duos and trios uncovers PRUNE2 as a novel prostate cancer predisposition gene.** *Br J Cancer*.

Denti, L., Khorsand, P., Bonizzoni, P., Hormozdiari F., Chikhi R. 2022. **SVDSS: structural variation discovery in hard-to-call genomic regions using sample-specific strings from accurate long reads.** *Nat Methods*.

Yu X, Ruan M, Wang Y, Nguyen A, Xiao W, Ajena Y, Solano LN, Liu R, Lam KS. 2022. **Site-Specific Albumin-Selective Ligation to Human Serum Albumin under Physiological Conditions.** *Bioconjug Chem*.

Aishworiya R, Protic D, Tang SJ, Schneider A, Tassone F, Hagerman R. 2022. **Fragile X-Associated Neuropsychiatric Disorders (FXAND) in Young Fragile X Premutation Carriers.** *Genes (Basel)*.

Sweeney C, Lazennec G, Vogel CFA. 2022. **Environmental exposure and the role of AhR in the tumor microenvironment of breast cancer.** *Front Pharmacol.*

Solbach F, Bernardi A, Bansal S, Budamagunta MS, Krep L, Leonhard K, Voss JC, Lam KS, Faller R. 2022. **Determining structure and action mechanism of LBF14 by molecular simulation.** *J Biomol Struct Dyn.*

Open Positions

1. **Robert E. Chason Endowed Chair in Translational Research — MIND Institute.**
2. **Assistant/Associate Specialist — Yu Lab.**
3. **Assistant Specialist — Lo Lab.**
4. **Junior Specialist — Tian Lab.**
5. **Junior Specialist — Lo Lab.**
6. **Student Assistant — Jao/Dennis Lab.**

Contribute to the next issue!

Please send submissions of announcements, including new members, seminars, conferences, workshops, events, publications, grants, outreach, news, and more, for the next issue of this newsletter to Daniel Erenstein **by March 24, 2023.**

You can send questions, comments, and feedback to Daniel anytime as well. We'll be back in your inbox in April. Until then, take care! Happy New Year to you all!

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Department of Biochemistry
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