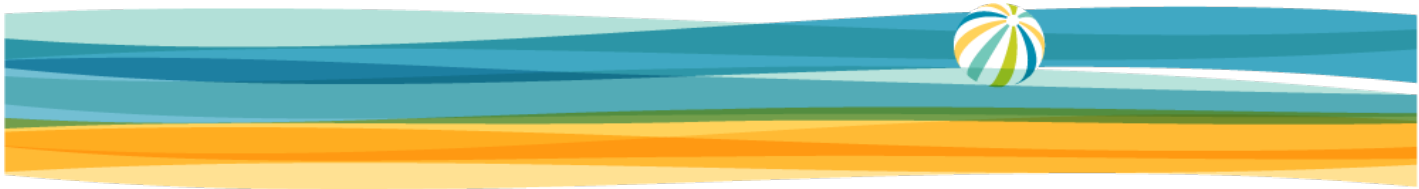


UCLA
Molecular, Cell and Developmental
Biology

Annual Research Conference

Annenberg Community Beach House, Santa Monica, CA
December 6-7, 2024



Annenberg Community Beach House

415 Pacific Coast Highway *
Santa Monica, CA, 90402 Phone:
310-458-4904

*Important: In some navigational systems the address may appear as 415 Palisades Beach Road, Santa Monica, CA.

Directions

<https://www.annenbergbeachhouse.com/visit-us/getting-here-and-parking.aspx>

The Annenberg Community Beach House is only 25 minutes mostly freeway miles from UCLA.

From Los Angeles

Take the 10 West, which will become Pacific Coast Highways when it reaches the beach. At the second traffic light, Beach House Way, turn left into the parking lot.

From Malibu

Take Pacific Coast Highway south. Turn right at Beach House Way, into the parking lot.

From Santa Monica (downtown)

Head west towards Ocean Ave. Turn left at Ocean Ave. Turn right at Moomat Ahiko Way (after Colorado/the pier entrance) which will have signs for Pacific Coast Highway. Turn left at Beach House into our parking lot.

Parking

Parking at the Annenberg will be paid for by the Department. We strongly recommend you leave campus early in order to find a parking space since it is available on a first come, first served basis. When you arrive, please check-in at our event registration table to receive your parking permit.

Weather and Driving Conditions/Traffic

You may check driving conditions through the following:

California Department of Transportation: <http://www.dot.ca.gov/cgi-bin/roads.cgi>

Phone: (800) 427-7623 (Enter the number of the highway (18 or 173) then enter pound sign (#) Sigalert:

<http://www.sigalert.com/map.asp?Region=Greater+Los+AngelesMiscellaneous>

Additional Details

Lunch will be provided to those who registered for the welcome lunch reception. Otherwise, please have lunch prior to your arrival to the Annenberg Community Beach House. Boxed Lunch will be provided on Saturday.

It is the policy of the Annenberg Community Beach House that guest may not bring their own food for meals, meetings and socials. Full service is provided by onsite catering.

The Annenberg Community Beach House has adopted a smoke-free environment policy in all buildings including meeting rooms and social rooms.

We strongly encourage the use of masks throughout the retreat for the safety of all participants. Masks will be available at the registration desk.

Friday: For those who registered for the welcome lunch reception. Check-in time is at 11:00 AM.

Friday start time: 1:00 PM end time: 10:00 PM
Saturday start time: 8:00 AM end time: 3:00 PM

Meal times:

Friday Dinner at 6:00 PM
Saturday Breakfast at 8:00 AM
Saturday Lunch at 12:00 Noon

Our conference meeting will take place in Garden Terrace Room. Our poster session will take place in Sand & Sea Room + View Deck.

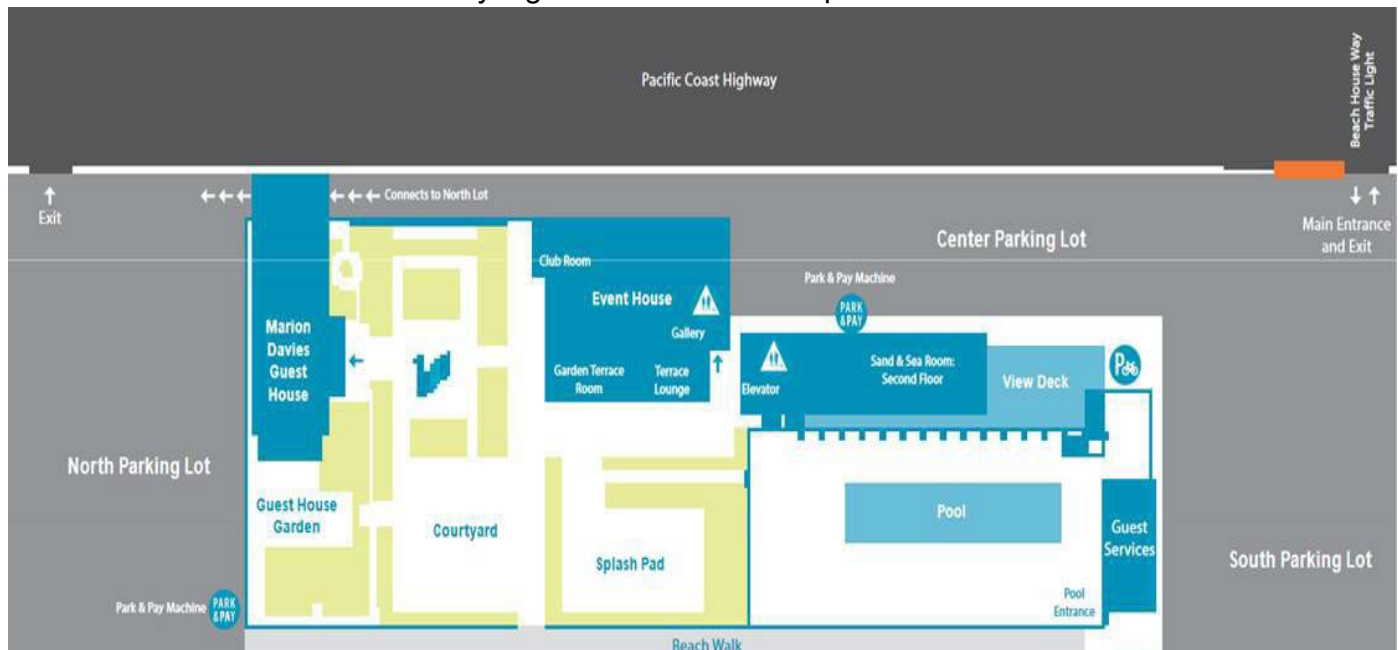
Talk Sessions in Garden Terrace Room

Before the meal or break time prior to your talk session, check that the latest version of your talk is properly loaded onto the designated presentation laptop.

Talks must be kept within the allocated time (20 minutes): 15 minutes for talk and 5 minutes for questions.

Poster Session in the Sand & Sea Room

Poster session will be held on Friday night after the research presentations.



Sponsorship Recognition

A special thank you to Zymo Research for your generous sponsorship.

MCDB RESEARCH CONFERENCE PROGRAM

Friday, December 6

For those who registered for the welcome lunch reception. Check-in time is at 11:00 AM.

Friday, December 6

- | | |
|--------------|---|
| 1:10 PM | Opening Remarks by Jeff Long, Chair of MCDB |
| 1:20-1:40 PM | Michael Weinstein
Director of Systems Biology at Zymo Research and UCLA Adjunct Faculty
Alignment vs. Assignment: The Bioinformatics of Microbial Standards |
| 1:40-2:00 PM | Rando Lab
Di Wu
Bioinstructive scaffolds enhance stem cell engraftment for functional tissue regeneration after volumetric muscle loss |
| 2:00-2:20 PM | Askary Lab
Kai Hao
Reconstructing signaling history of single cells with imaging-based molecular Recording |
| 2:20-2:40 PM | Sagasti Lab
Katie Ching
Axon caliber varies over space and time. |
| 2:40-3:00 PM | Jacobsen Lab
Shuya Wang
MBD2 couples DNA methylation to transposable element silencing during male gametogenesis |
| 3:00-3:20 PM | Break |
| 3:20-3:40 PM | Shah Lab
Sofia Foondos
Spatial Transcriptomics of <i>Caenorhabditis elegans</i> Embryos |
| 3:40-4:00 PM | Hartenstein Lab
Volker Hartenstein
Structural changes shaping the <i>Drosophila</i> ellipsoid body ER-neurons during development and aging |
| 4:00-4:20 PM | Shahan Lab
Rachel Shahan
Getting to the Root of Cell Fate Decisions |
| 4:20-4:40 PM | Sears Lab
Karen Sears
Extending the cellular health-span: Insights from diverse bats
Why We Die Suddenly: Fibrosis, The Ephapse and Sudden Death |

4:40-5:00 PM	Break
5:00-6:00 PM	Daria Siekhaus Programs enabling immune cell infiltration and beyond
6:00-7:30 PM	Dinner
7:30-10:00 PM	Poster Session

Saturday, December 9

8:00-9:00 AM	Continental Breakfast
9:00-9:20 AM	Braybrook Lab Jessica Carstens-Kass Sugar Rush! Microbial Degradation of Kelp Fucoidans
9:20-9:40 AM	Goldstein Lab Johnny Angel Diaz Modeling the initiation of human prostate cancer metabolism
9:40-10:00 AM	Banerjee Lab Utpal Banerjee A Novel Mechanism of and the Need for the Nuclear Transport of Large Mitochondrial Complexes
10:20-10:40 AM	Break
10:40-11:00 AM	Clark Lab Youngsun Hwang Human germline development and competence in different in-vitro platforms
11:00-11:20 AM	Long Lab Melissa Kosty Role of serine carboxypeptidase-like proteins in meristem development
11:20-11:40 AM	Coller Lab Aaron Ambrus Inactivating Autophagy in the Immune System Suppresses Melanoma Growth
11:40-12:00 PM	Deb Lab Arjun Deb Engineering first in class drugs for tissue repair
12:00-1:00 PM	Lunch

1:20-1:40 PM	Farmer Lab D'Juan Farmer Mechanisms of growth in the craniofacial skeleton
1:40-2:00 PM	Johnson Lab Amit Paul The Double life of an RNA splicing factor
2:00-2:20 PM	Van Norman Lab Jaimie Van Norman Choosing sides? Investigating polarization and function of plant receptor kinases
2:20-2:40 PM	Awards Presentation /Closing Remarks
2:40-3:00 PM	Retreat Adjourn

POSTERS

Braybrook Lab

Hugh Knopp, Siobhan Braybrook
It's all in the Wall: Heavy Metal Accumulation in Giant Kelp

Clark Lab

Autumn Jackson, Isaias Roberson, Azra Cruz, Amander Clark
Analysis of Germ Cell Nest Breakdown, Follicle Formation, and Follicle Activation in the Mouse Ovary

Mark Larsen and Amander Clark
A 2D culture system for the efficient induction and study of early hPGCLCs

Isaias Roberson, Azra Cruz, Autumn Jackson, Sinthia Kabir Mumu, Jon DiRusso, Amander T. Clark
Engineering Reconstituted Ovaries with Developmentally Matched In Vitro-derived Germ Cells to Improve Outcomes of In Vitro Oogenesis

Qiu Ya Wu & Amander Clark
Examining primate ovarian biology to develop human in vitro-derived ovarian follicles

Farmer Lab

Ashley Arancio, Brandon Hernandez, Hung-Jhen Chen, D'Juan Farmer
Characterizing development of meninges in zebrafish

Miranda Sun, Suzan Manoian, D'Juan Farmer
Deciphering cell fate decisions in the coronal suture

Goldstein Lab

Sachi Bopardikar, Johnny Diaz, Andrew Goldstein
Modeling Hypoxia in Tumor Evolution via Genetically Defined, Heterogenous, Human Prostate Organoids

Ernie Lee, Shirley Zhang, Andrew Goldstein
Evaluating the Role of Ancestry-associated Germline Mutations in Prostate Cancer Initiation.

Angel Ruiz, Andrew Goldstein
Evaluating the role of mitochondria-lipid droplet adhesion proteins in castration resistant prostate cancer and liver metastasis.

Johnson Lab

Kalen Bunch, Munshi Azad Hossain, Tracy Johnson
Elucidating the Mechanisms of Regulation for a Critical Component of the SWI/SNF Chromatin Remodeling Complex

Lowry Lab

Niloufar Mansooralavi, Abril Morales, Peter Soliman, Dr. William E. Lowry
Decoding MECP2-Driven Neurodevelopmental Deficits in Rat Model of Rett Syndrome

Mikkola Lab

Paul Mack, Yue Wang, Mengwei Ko, YuanYuan Wang, Stephanie Frenz-Weissner, Katherine McDaniel, Hanna Mikkola
Cellular and Molecular Underpinnings of Leukemia Predisposition in Trisomy 21 Across Development

Sagasti Lab

Olivia Justynski, Khaled Nassman, Alvaro Sagasti
Isolating and characterizing migratory cells in zebrafish skin

Sears Lab

Kobie Boslough, Karen Sears, Amander Clark

A qualitative comparison of ovarian histomorphology in pregnant Phyllostomid and Mormoopid bats.

Greta Keller, Karen Sears

The molecular basis of the convergently evolved midline cleft palate in bats

Shah Lab

Sofia Foondos, Gabriela Sanchez, Zachary Hemming, Aihui Wang, Thomas Underwood, Roy Wollman, Pavak Shah

Spatial Transcriptomics of *Caenorhabditis elegans* Embryos

Neil Peinado, Pavak Shah

Connecting the Cell Cycle and Cell Fate in the *C. elegans* gut

Pavak Kirit Shah, Clover Stubbert, Cherry Soe

An ex ovo culture protocol for *Caenorhabditis elegans* embryos

Clover Stubbert, Pavak Shah

Centrosomal Dynamics During Embryonic Neurogenesis

Siekhaus Lab

Allison Birnbaum, Satviki Chaturvedi, Jasmine Stanley-Ahmed, Daria Siekhaus

Atos regulates neuronal survival in Alzheimer's disease in *Drosophila melanogaster*

Van Norman Lab

Jaimie Van Norman, Roya Campos, and Jason Goff

PLK1, a transmembrane receptor kinase, links lateral cell polarity with radial tissue patterning during root development

Patricio Perez-Henriquez, Cecilia Rodriguez-Furlan, Jaimie Van Norman

KINASE ON THE INSIDE (KOIN) is non-cell-autonomously required to repress proliferative cell divisions across the root meristem