



MoTEC 2025

July 20-25, The Queen Mary Hotel, Long Beach, CA

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Local Organizing Committee

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Kylie Allen, Department of Biochemistry, Virginia Tech University

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Cedric Owens, Schmid College of Science and Technology, Chapman University

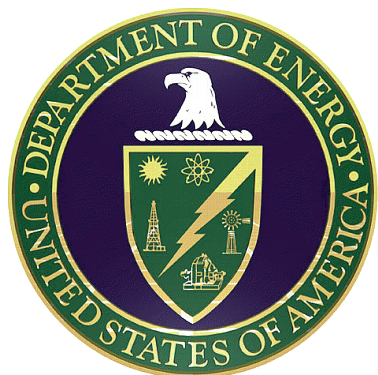
Chad Saltikov, Dept Microbiology and Environmental Toxicology, University of California, Santa Cruz

Jarett Wilcoxon, Department of Chemistry and Biochemistry, University of Wisconsin-Milwaukee

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MoTEC Sponsors



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MoTEC 2025 Code of Conduct

The MoTEC 2025 meeting falls under the aegis of the University of California system generally and its Riverside campus specifically.

The University of California, Riverside's (UCR) Standards of Conduct govern the behavior of all students, faculty, and staff at the university:

- **Respect:** Treat others with respect and consideration
- **Collaboration:** Be collaborative and encourage participation
- **Diversity:** Value a diversity of views and opinions
- **Communication:** Communicate openly and respectfully
- **Professionalism:** Behave in a professional manner
- **Safety:** Be mindful of your surroundings and the safety of others
- **Reporting:** Report any dangerous situations or people in distress to UCR staff

The UCR Standards of Conduct apply to both academic and non-academic conduct. They also apply to conduct that occurs off campus if it:

- Affects the health, safety, or security of the university community
- Involves university academic work, records, or documents
- Compromises university neighbor relations

The UCR Standards of Conduct are adapted from the University of California Policies Applying to Campus Activities, Organizations, and Students (PACAOS), which can be found at <https://www.ucop.edu/student-equity-affairs/policies/pacaos.html>.

MoTEC History

In the 1970's and early 1980's The Climax Molybdenum Company (later AMAX) sponsored several meetings on the chemistry and uses of molybdenum. The principal focus of these meetings was chemistry and chemical engineering, but they invariably included one or more sessions on enzymes that possessed molybdenum (which at the time was limited to nitrogenase, xanthine oxidase, sulfite oxidase and the assimilatory nitrate reductase from plants).

The first meeting focusing principally on the biology and biochemistry of molybdenum was organized by Robert C. Bray and Russ Hille, April 12-14, 1997, at the University of Sussex as a satellite meeting of the annual meeting of Biochemical Society of the United Kingdom that year. The Sussex meeting brought together a large and international contingent of biochemists and molecular biologists, and was enthusiastically received by the participants. It became clear that the community was large enough to sustain a regular meeting of its own, and subsequent discussion among workers in the field led to the suggestion of a Molybdenum and Tungsten Enzymes Gordon Conference, and a successful application for the creation of such a meeting was prepared by Ed Stiefel and Russ Hille. This Gordon Conference, which included a strong contingent of synthetic and physical inorganic chemists (notably absent from the Sussex meeting owing to a scheduling conflict with an annual meeting of the American Chemical Society) was held every other year from 1999 to 2009 with the organizers indicated below, with sites alternating between the US and Europe.

1999 Plymouth State College, Plymouth USA (Edward I. Stiefel and Russ Hille)
2001 The Queen's College, Oxford, UK (C. David Garner and Ralf. R.R. Mendel)
2003 Kimball Union Academy, USA (John H. Enemark and Rudolf K. Thauer)
2005 The Queen's College, Oxford, UK (Michael K. Johnson and Tracy Palmer)
2007 Colby-Sawyer College, USA (Alastair G. McEwan and Caroline Fl. Kisker)
2009 Renaissance, Il Ciocco, IT (Martin L. Kirk and Maria João Romão)

The Gordon Conference series was discontinued after 2009, but its place, an independently organized Molybdenum and Tungsten Enzymes Conference was established, the first such meeting being organized by Joel Weiner at the University of Edmonton August 3-6, 2011, immediately prior to the ICBIC 15 meeting in Vancouver that year. Again, it was evident that the community was sufficiently large and active to sustain such a regular meeting. The second of these independently organized meetings was held July 16-19 2013 Sintra, Portugal immediately prior to ICBIC 16 in Grenoble, France, and was hosted by José Moura, Isabel Moura, Luisa Maia and Maria João Romão. This meeting for the first time included a significant contingent of workers on nitrogenase, which had previously held a separate Gordon Conference focusing exclusively on that enzyme. The inclusion of the nitrogenase theme was viewed by all as a very positive development, and has been a component of all subsequent meetings. The next meeting was held at Lake Balatonfüred, Hungary, September 6-10, 2015, hosted by Günter Schwarz and Katrin Fischer-Schrader of the University of Cologne, and it was here that the name Molybdenum and Tungsten Enzymes Meeting (MoTEC) was first adopted. Subsequent meetings were held in Santa Fe, NM (2017, hosted by Sharon Burgmayer and Martin Kirk), Potsdam, Germany (2019, hosted by Silke Leimkühler) and Indianapolis, IN (2022, hosted by Partha Basu). A virtual MoTEC meeting was held in 2021. Organized by Axel Magalon due to COVID-related travel restrictions.

Although focused on molybdenum- and tungsten-containing enzymes, The MoTEC series has had great breadth, dealing not only with the structural and functional characterization of molybdenum- and tungsten-containing enzymes, but also chemical and computational modeling of them (from both a structural and functional standpoint), bioinformatics analysis of their biological distribution, cell biology, cofactor biosynthesis, intracellular trafficking and insertion.

The present meeting constitutes the fifteenth in the series, stretching back to the University of Sussex meeting in 1997. The field has expanded greatly in that time, in terms of the number of principal investigators working in the field, the breadth of approaches employed and the number of enzymes studied (now exceeding 100 on the basis of the most recent genomics analyses).

25+ Years of Molybdenum and Tungsten Enzymes Meetings

Year	Venue	Chair(s)
1997	Sussex University, Brighton, UK	Bob Bray and Russ Hille
1999	Plymouth State College, Plymouth, USA	Ed Stiefel and Russ Hille
2001	Queen's College, Oxford, UK	David Garner, Ralf Mendel
2003	Kemble Union Academy, Meriden, USA	John Enemark and Rudolf Thauer
2005	Queen's College, Oxford, UK	Michael Johnson and Tracy Palmer
2007	Colby-Sawyer College, Newport, USA	Alastair McEwan and Caroline Kisker
2009	Renaissance Hotel, Il Ciocco, Italy	Martin Kirk and Maria João Romão
2011	University of Alberta, Edmonton, Canada	Joel Weiner
2013	Hotel Tivoli, Sintra, Portugal	José & Isabel Moura, Luisa Maia, Maria Romão
2015	Hotel Flamingo, Balatonfüred, Hungary	Günter Schwarz and Katrin Fischer-Schrader
2017	Buffalo Thunder Hotel, Santa Fe, USA	Sharon Burgmayer
2019	University of Potsdam, Potsdam, Germany	Silke Leimkühler
2021	Univ. Marseilles, Marseilles, France (virtual)	Axel Magalon
2022	IUPUI, Indianapolis, USA	Partha Basu
2025	The Queen Mary Hotel, Long Beach, USA	Russ Hille

SHIP INFORMATION

WELCOME TO THE QUEEN MARY!

Her history is full of action, adventure, romance and paranormal activity offering a full service hotel, award-winning dining and unique attractions.

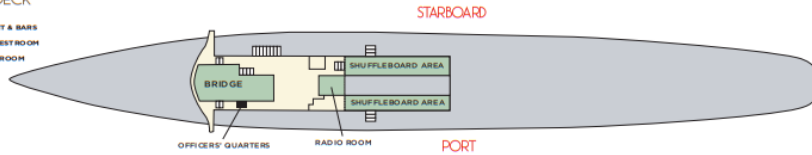
FOR TOUR CHECK-IN AND TO PURCHASE ADDITIONAL TOURS AND EXHIBITS
Go to Level 4 (Promenade Deck) and proceed to the Tour Center. Please arrive at least 10 minutes early for all tours.

FOR ASSISTANCE

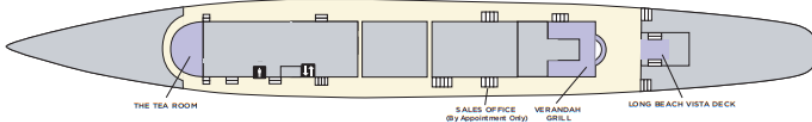
Due to the historic nature of the ship, not all areas are accessible. For special accommodations for guided tours and historic exhibits, please go to the Tour Center located on level 4 (Promenade Deck); for the Stern go to the Wharf entrance on level 1 (ground level). For special accommodations with hotel rooms, please go to the Hotel Lobby on Level 3 (A-Deck).

SPORTS DECK

- RESTAURANT & BARS
- WOMEN'S RESTROOM
- MEN'S RESTROOM
- ELEVATOR
- SHOP



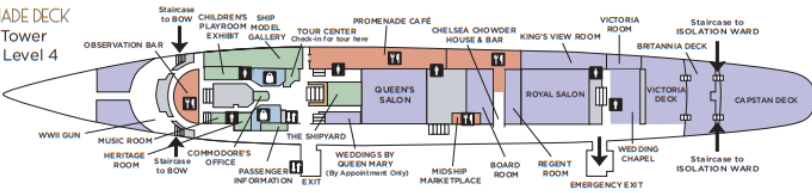
SUNDECK



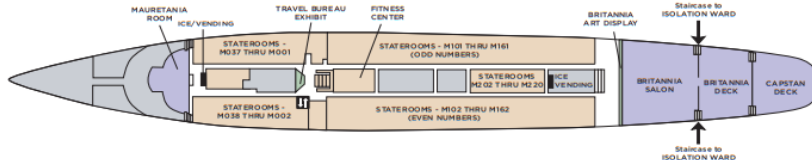
PROMENADE DECK

Exterior Tower
Elevator Level 4

BOW

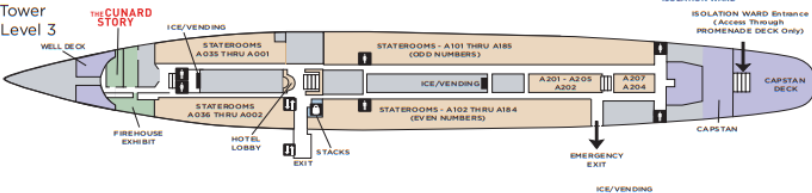


M-DECK

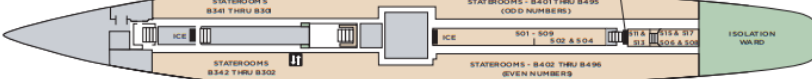


A-DECK

Exterior Tower
Elevator Level 3

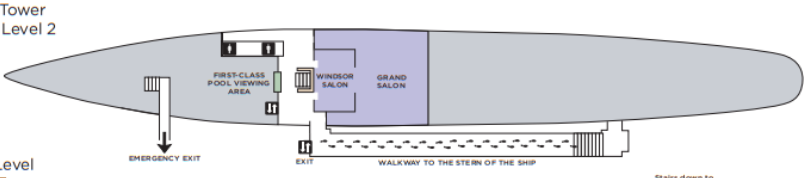


B-DECK



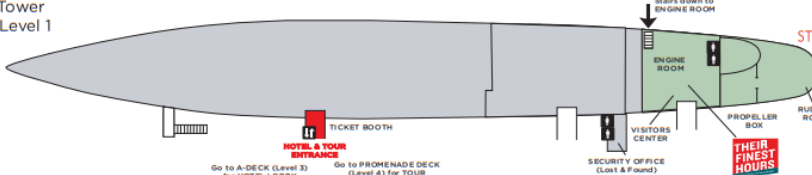
R-DECK

Exterior Tower
Elevator Level 2



D-DECK

Ground Level
Exterior Tower
Elevator Level 1



ATTRACTIONS & HISTORICAL EXHIBITS	SHOPPING	DINING	MEETINGS & RECEPTIONS
<ul style="list-style-type: none"> - BRIDGE & OFFICERS' QUARTERS Sports Deck, Forward - COM-MODORE'S OFFICE Promenade Deck, Midships - ENGINE ROOM D-Deck, Aft - FRENCH HOUSE EXHIBIT A-Deck, Forward - ISOLATION WARD A-Deck, Aft, Stern - PRINT SHOP DISPLAY D-Deck, Aft - QUEEN MARY HERITAGE ROOM Promenade Deck, Forward, Port - QUEEN MARY HISTORIC EXHIBIT D-Deck, Aft - RADIO ROOM (WRO) Sports Deck, Midships - SHIP MODEL GALLERY Promenade Deck, Starboard - SISTERS OF THE SEARCHLIGHT D-Deck, Aft - THEIR FINEST HOUR EXHIBIT D-Deck, Aft - TRAVEL BUREAU M-Deck, Midships - THE CLIMBING STORY A-Deck, Forward - TOUR CENTER Promenade Deck, Midships - THE SHIPYARD Promenade Deck, Midships - WWII GUN D-Deck, Aft 	<ul style="list-style-type: none"> - MARKETPLACE & STARBOARD SHOPPE Promenade Deck, Midships - PICCINILLY DELIGHTS Promenade Deck, Midships - STACKS A-Deck, Midships - HOTEL LOBBY A-Deck, Midships - FITNESS CENTER Between M-Deck and A-Deck, Midships 	<ul style="list-style-type: none"> - CHELSER CHOWDER HOUSE & BRR Promenade Deck, Midships - MIDSHIP MARKETPLACE Promenade Deck, Port - OBSERVATION BAR Promenade Deck, Forward - PROMENADE CAFE Promenade Deck, Midships - ROYAL SUNDRY BRUNCH R-Deck Grand Salon 	<ul style="list-style-type: none"> - BOARD ROOM Promenade Deck, Midships - BRITANNIA SALON M-Deck, Aft - CAPSTAN ROOM A-Deck, Aft - GRAND SALON R-Deck, Midships - KING'S VIEW ROOM Promenade Deck, Starboard, Aft - MAURETANIA ROOM M-Deck, Forward - QUEEN'S SALON Promenade Deck, Midships - REGENT ROOM Promenade Deck, Midships - ROYAL SALON Promenade Deck, Midships - THE TEA ROOM Sun Deck, Forward - VERNER'S GRILL Sun Deck, Aft - VICTORIA ROOM Promenade Deck, Aft - WEDDINGS BY QUEEN MARY Promenade Deck, Midships - WEDDING CHAPEL Promenade Deck, Aft - WELL DECK A-Deck, Bow Area - WINDSOR SALON R-Deck, Midships

*Restaurants, shops, tours & exhibit hours may be seasonal and are subject to change pending any special events or private bookings.

Program Sunday July 20, 2024

12:00-18:00 Check-in and Registration *Hotel Lobby, A Deck (Level 3)*

18:00-20:00 Dinner

20:00-21:00 Session I R. Hille, Chair

20:00-20:15 Introductory Remarks – Russ Hille

20:15-21:00 Keynote Speaker (TBA)

21:00 Opening Reception

Program Monday, July 21, 2024

7:30-8:30 Breakfast

8:30 -10:30 Session II (Chair TBA)

8:30-9:25 Speaker 2

9:25-9:30 Q&A

9:00-9:25 Speaker 3

9:25-9:30 Q&A

9:30-9:55 Speaker 4

9:55-10:00 Q&A

10:00-10:25 Speaker 5

10:25-10:30 Q&A

10:30-11:00 Coffee Break

11:00 -12:30 Session III (Chair TBA)

11:00-11:25 Speaker 6

11:25-11:30 Q&A

11:30-11:55 Speaker 7

11:55-12:00 Q&A

12:00-12:25 Speaker 8

12:25-13:30 Q&A

12:30-14:00 Lunch

14:00 – 15:00 Session IV (Chair TBA)

14:00-14:25 Speaker 9

14:25-14:30 Q&A

14:30-14:55 Speaker 10

14:55-15:00 Q&A

13:00-18:30 Free Time

18:30-20:00 Dinner

20:00 -21:30 Session V (Chair TBA)

20:00-20:25 Speaker 11

20:25-20:30 Q&A

20:30-20:55 Speaker 12

20:55-21:00 Q&A

21:00-21:25 Speaker 13

21:25-21:30 Q&A

21:30-23:00 Poster Session (odd numbered posters presenting)

Program Tuesday, July 22, 2024

7:30-8:30 Breakfast

8:30 -10:30 Session VI (Chair TBA)

8:30-9:25 Speaker 14

9:25-9:30 Q&A

9:00-9:25 Speaker 15

9:25-9:30 Q&A

9:30-9:55 Speaker 16

9:55-10:00 Q&A

10:00-10:25 Speaker 17

10:25-10:30 Q&A

10:30-11:00 Coffee Break

11:00 -12:30 Session VII (Chair TBA)

11:00-11:25 Speaker 18

11:25-11:30 Q&A

11:30-11:55 Speaker 19

11:55-12:00 Q&A

12:00-12:25 Speaker 20

12:25-13:30 Q&A

12:30-14:00 Lunch

14:00 – 15:00 Session VIII (Chair TBA)

14:00-14:25 Speaker 21

14:25-14:30 Q&A

14:30-14:55 Speaker 22

14:55-15:00 Q&A

15:00-8:30 Free Time

18:30-20:00 Dinner

20:00 -22:30 Session IX (Chair TBA)

20:00-20:25 Speaker 23

20:25-20:30 Q&A

20:30-20:55 Speaker 24

20:55-21:00 Q&A

21:00-21:25 Speaker 25

21:25-21:30 Q&A

21:30-23:00 Poster Session (even numbered posters presenting)

Program Wednesday, July 23, 2024

7:30-8:30 Breakfast

8:30 -10:30 Session X (Chair TBA)

8:30-9:25 Speaker 26

9:25-9:30 Q&A

9:00-9:25 Speaker 27

9:25-9:30 Q&A

9:30-9:55 Speaker 28

9:55-10:00 Q&A

10:00-10:25 Speaker 29

10:25-10:30 Q&A

10:30-11:00 Coffee Break

11:00 -12:30 Session XI (Chair TBA)

11:00-11:25 Speaker 30

11:25-11:30 Q&A

11:30-11:55 Speaker 31

11:55-12:00 Q&A

12:00-12:25 Speaker 32

12:25-13:30 Q&A

12:30-14:00 Lunch

14:00-20:00 Free Time (whale-watching excursion, dinner on one's own)

20:00 -22:30 Session XII (Chair TBA)

20:00-20:25 Speaker 33

20:25-20:30 Q&A

20:30-20:55 Speaker 34

20:55-21:00 Q&A

21:00-21:25 Speaker 35

21:25-21:30 Q&A

21:30-23:00 Poster Session

Program Thursday, July 24, 2024

7:30-8:30 Breakfast

8:30 -10:30 Session XIII (Chair TBA)

8:30-9:25 Speaker 36

9:25-9:30 Q&A

9:00-9:25 Speaker 37

9:25-9:30 Q&A

9:30-9:55 Speaker 38

9:55-10:00 Q&A

10:00-10:25 Speaker 39

10:25-10:30 Q&A

10:30-11:00 Coffee Break

11:00 -12:30 Session XIV (Chair TBA)

11:00-11:25 Speaker 40

11:25-11:30 Q&A

11:30-11:55 Speaker 41

11:55-12:00 Q&A

12:00-12:25 Speaker 42

12:25-13:30 Q&A

12:30-14:00 Lunch

14:00 – 15:00 Session XV (Chair TBA)

14:00-14:25 Speaker 43

14:25-14:30 Q&A

14:30-14:55 Speaker 44

14:55-15:00 Q&A

15:00-15:25 Speaker 45

15:25-15:30 Q&A

15:00-19:00 Free Time

19:00-22:00 Banquet

Program Friday, July 25, 2024

7:30-10:00 *Breakfast on one's own*

11:00 *Checkout*

Speaker Abstracts

Poster Titles

Poster Abstracts

Attendee Contact List