

MMI 291 Seminar Series

Current Theme: Interdisciplinary Research
Fall Quarter 2024 – CRN 39234

**Friday Seminar at 12:10-1 p.m.
GBSF Auditorium, Room 1005**

“Recombination and Genome Instability: Multi-invasion-mediated rearrangements during non-allelic homologous recombination”

Research Bio

Wolf-Dietrich Heyer is a German-American biologist with a life-long interest in the mechanism and regulation of DNA repair starting with his Ph.D. (University of Bern, 1985), where he trained with Jürg Kohli and the late Urs Leupold to study genome stability. As a Swiss National Science Foundation and Helen Hay Whitney Foundation postdoctoral fellow with Richard Kolodner, at the Dana-Farber Cancer Institute and Harvard Medical School (1986-1990) he received training in protein biochemistry. After starting his laboratory at the University of Bern in 1990, he was recruited to the University of California, Davis in 1997, where he is currently Distinguished Professor and Chair of the Department of Microbiology and Molecular Genetics. His laboratory continues to use a combination of classical and molecular genetics, biochemistry, and structural biology to elucidate the fundamental mechanisms of DNA repair, specifically homologous recombination and its regulation, using yeast as a lead model and human cells.

Publications

Piazza A, Wright WD, **Heyer WD**. “Multi-invasions Are Recombination Byproducts that Induce Chromosomal Rearrangements”. *Cell*. 2017 Aug 10;170(4):760-773.e15. doi: 10.1016/j.cell.2017.06.052. Epub 2017 Aug 3. PMID: 28781165; PMCID: PMC5554464.

Reitz D, Djeghmoum Y, Watson RA, Rajput P, Argueso JL, **Heyer WD**, Piazza A. “Delineation of two multi-invasion-induced rearrangement pathways that differently affect genome stability”. *bioRxiv* [Preprint]. 2023 Mar 16:2023.03.15.532751. doi: 10.1101/2023.03.15.532751. Update in: *Genes Dev*. 2023 Jul 1;37(13-14):621-639. doi: 10.1101/gad.350618.123. PMID: 36993162; PMCID: PMC10055120.

Dec.
6



Wolf-Dietrich Heyer, Ph.D.
Distinguished Professor and Chair
Microbiology and Molecular Genetics
University of California, Davis

**Dec. 6, 2024
12:10 – 1 p.m.
GBSF Auditorium
Room 1005**
In-person presentation

Medical Microbiology
and Immunology
School of Medicine

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We hope to see you there!