This year’s Biochemistry Retreat will utilize Zoom to bring you presentations by selected faculty and students, a keynote address by a former graduate student, Dan Kephart, and interactive presentations hosted by faculty, graduate students and postdoctoral fellows.

Organizers: David Price, Peter Rubenstein, Maria Spies, Kris DeMali, Koryn Dumond
Welcome and Introductions

**Introductions & Kick-Off**
David Price

**Former Head’s Farewell**
Charles Brenner

**New Interim Head’s Introduction**
Kris DeMali

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**New Graduate Student Introductions**

- **Adnan Ahmed**
  - MS, Zoology
  - Texas Tech University

- **Grace Ciampa**
  - MS, Biology
  - University of Massachusetts-Lowell

- **Ashley Goll**
  - BS, Biochemistry
  - University of Iowa

- **Nicholas Hammons**
  - BS, Biochemistry & Molecular Biology
  - North Dakota State University

- **Miriam McDonough**
  - BA, Biochemistry/BA, Neuroscience
  - Simpson College

- **Spydel Nardy**
  - BS, Biochemistry
  - Iowa State

- **Rebecca Splitt**
  - BS, Biochemistry
  - Bradley University

- **John Tworek**
  - BA, Biochemistry
  - Augustana College

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Morning Program (10:00 AM – 12:30 PM)

Click here at any point during the morning session to join the Retreat
Faculty and Lab Presentations

Adrian Elcock
Molecular Modeling of the Bacterial Cell
10:20-10:30

Alicia Salvi (DeMali Lab)
Links Between Cell Mechanics and Cell Metabolism
11:10-11:20

Maria Spies
Genome Integrity: From Single-Molecule Biophysics to Drug Discovery
10:30-10:40

Ernesto Fuentes
Bacterial Environmental Sensing by Two-Component Systems
11:20-11:30

Kathryn Hobbs (A. Spies Lab)
Allosteric Control in Caspase-7
10:40-10:50

Pamela Geyer
The role of nuclear lamina proteins in stem cell maintenance
11:30-11:40

Christopher Ball (Price Lab)
Three Distinct Mechanisms of HCMV IE2 Protein Regulation of Viral Gene Expression
10:50-11:00

Daniel Weeks
Exploring Proteins that Aggregate, their Function and Control
11:40-11:50

Brandon Davies
Life, Death, and the Fate of Fat
11:00-11:10

Lori Wallrath
Caging the Nucleus: LINC Complex Proteins and Lamins Facilitate Microtubular Organization in Muscle
11:50-12:00

Mini-Keynote Presentation

Dan Kephart, Vice President of Research and Development at LGC
Bright Opportunities on the Dark Side
12:10-12:30

12:30-1:00 PM - Lunch Break

This is the end of the first half of our retreat. To attend the next part of our retreat please join your desired presentations by clicking on the images below.
## Interactive Presentations (1:00 PM – 2:30 PM)

<table>
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| 1:00 - 1:30 PM | **David Price, Professor**  
Research Projects in the Price Lab  
Tingting Duan, Post Doc  
Drosophila female germline stem cells undergo mitosis without nuclear breakdown  
Ben Hinz, Undergraduate  
Linking lamin disease mutations to function  
Irini Petros, Research Intern  
Toxic Aggregates in the nucleus of xenopus laevis oocytes | **Meg Ketterer, Research Assistant**  
Nuclear envelope protein TMEM43: Modeling Enery-Dreifuss muscular dystrophy (EDMD)-related myopathy and arrhythmogenic right ventricular cardiomyopathy (ARVC) in Drosophila  
**Geoff Collins, Undergraduate**  
Structural and mutagenic analyses of the 7SK snRNP in human cells to uncover the mechanisms of release and resequestration of P-TEFb  
**Colleen Caldwell, Graduate Student**  
RPA at the Crossroads of DNA Replication, Recombination, and Repair | **Todd Washington, Professor**  
Translesion DNA Synthesis: Choosing the right tool for the job  
**Sara Mayer, Graduate Student**  
RNAi knock-down of SNRNP200 RNA helicase causes loss of cells in the Drosophila eye: A new model of retinitis pigmentosa  
**Cole Kitzman, Research Intern**  
Modeling a premature aging syndrome caused by Barrier-to-Autointegration Factor (BAF)  
**Emily Lavering, Graduate Student**  
Changes in nucleolar activity induce spatial shifts in protein aggregation |
| 1:30 - 2:00 PM | **Irini Petros, Research Intern**  
Toxic Aggregates in the nucleus of xenopus laevis oocytes  
**Meg Ketterer, Research Assistant**  
Nuclear envelope protein TMEM43: Modeling Enery-Dreifuss muscular dystrophy (EDMD)-related myopathy and arrhythmogenic right ventricular cardiomyopathy (ARVC) in Drosophila  | **Colleen Caldwell, Graduate Student**  
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**Emily Lavering, Graduate Student**  
Changes in nucleolar activity induce spatial shifts in protein aggregation |
| 2:00 - 2:30 PM | **Irini Petros, Research Intern**  
Toxic Aggregates in the nucleus of xenopus laevis oocytes  
**Meg Ketterer, Research Assistant**  
Nuclear envelope protein TMEM43: Modeling Enery-Dreifuss muscular dystrophy (EDMD)-related myopathy and arrhythmogenic right ventricular cardiomyopathy (ARVC) in Drosophila  | **Colleen Caldwell, Graduate Student**  
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If you are experiencing technical difficulties with Zoom, please visit [Zoom Support](https://support.zoom.us/).  
If you have any other issues, not related to Zoom please email [Koryn-dumond@uiowa.edu](mailto:Koryn-dumond@uiowa.edu).  
Tell us what you thought about the virtual retreat! Take this [Anonymous survey](https://www.surveymonkey.com/r/AnonymousSurvey).