ILLINOIS
Cell & Developmental Biology
SCHOOL OF MOLECULAR & CELLULAR BIOLOGY
WINTER 2020

LETTER FROM THE NEW DEPARTMENT HEAD, DR. SUPRIYA PRASANTH

Dr. Supriya Prasanth

Welcome to the 2020 edition of the CDB Newsletter! The year 2020 will go down in history as one of the challenging years the world has faced. The COVID pandemic has impacted us in unprecedented ways. It is because of the valiant efforts of the entire community at our great institution that we have been able to navigate this tough year.

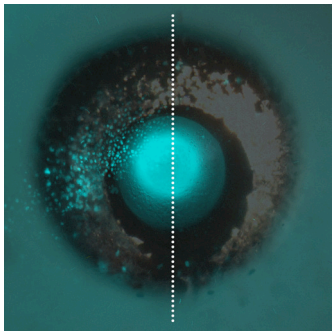
I extend my sincere thanks to the faculty, staff, researchers, and students of the Department of Cell and Developmental Biology who have adapted during these challenging times and continued to excel under these unforgettable circumstances. I became department head in January 2020 and would like to express my appreciation to previous department head, Jie Chen, and associate head David Rivier for their guidance and wisdom during the transition. Please welcome Rachel Smith-Bolton as the new associate head of our department and chair of the diversity, equity, and inclusion committee in the School of Molecular & Cellular Biology.

This newsletter is a celebration of the achievements of our faculty and students in 2019 and 2020. Two of our faculty, Drs. Stephanie Ceman and Kannanganattu Prasanth were promoted to full professor. We are happy to welcome Dr. Anna Sokac who joined the department as an Associate Professor. I am also excited to share that 2020 was a great year for CDB faculty to secure federal research funding. Drs. Sokac and Freeman received MIRA awards from the National Institute of General Medical Sciences/NIH. Dr. K. Prasanth received a new R01 grant and Dr. Belmont was successful in securing multiple multi-PI NIH grants.

In this newsletter we highlight Prof. Belmont's research and extraordinary contribution to the field of nuclear structure and organization. We also highlight Dr. Brieher's research accomplishments and his fruitful collaboration with Dr. Freeman. In addition to research excellence, our faculty have continued to excel in teaching and instruction. I am proud to share that Dr. David Rivier was awarded the Campus Excellence in Teaching Award. During the COVID pandemic, even though we had switch to remote teaching, our faculty adapted quickly and continued the world-class instruction that is the standard at Illinois.

(continued on the next page)

In This Issue



Research image of cornea wound healing courtesy of the Henry Lab

LETTER FROM THE HEAD (CONT.)

Our students have been strong and resilient during this tough year. Prof. Chen, previous Head of CDB, initiated a tradition that graduate students organize the annual CDB retreat. Chaired by CDB student Nilmani Singh, the 2019 retreat featured alumnus Dr. Cyril Ramathal, principal scientist at AbbVie, who delivered the keynote lecture. Our students had planned the 2020 Annual Retreat and had confirmed Mr. Tom Cycyota, President and CEO, Allosource as the keynote speaker. This has been moved to 2021. In this newsletter, we share the achievements in research, teaching and service by our phenomenal graduate students. We highlight our graduate student Ms. Surabhi Sonam, who has tirelessly worked to organize CDB professional development seminars. She was also the recipient of the Tom and Cynthia Cycyota Research Fellowship. Our students play an indispensable role in the success of our research enterprise.

It is the deep commitment of our faculty and students that has enabled us to steer 2020 away from the hiccups and difficulties and towards success and prosperity. We remain committed to working hard to provide quality education to our undergraduate and graduate students. Our department hopes that our alumni continue to support our mission to excel in research, teaching, and service.

We look forward to a promising and healthy 2021!

Supriya Prasanth

BRIAN FREEMAN NAMED A FELLOW OF CELL STRESS SOCIETY INTERNATIONAL

Freeman, an Alexander von Humboldt Awardee and Hans Fischer Senior Fellow, explores the roles of the eukaryotic molecular chaperone network with a focus on the impact of the Hsp90 chaperone system on nuclear pathways including gene regulation, chromatin architecture, and genome organization.

To be chosen as a fellow, candidates must distinguish themselves in a variety of ways, including path-breaking contributions to the cell stress response and molecular chaperone fields. Fellows must also make laudable contributions to the field through service and stewardship. He was recognized at the society's virtual meeting on November 5 and 6.

Professor Freeman joined the University of Illinois faculty in 2002. He has been recognized with many awards for his research and teaching from organizations such as the Alexander von Humboldt Foundation, Technische Universität München, Bavarian State Ministry of Education, and the University of Illinois Alumni Association. He received his PhD in biochemistry and biophysics from Northwestern University.

Dr. Brian Freeman

"There is nothing more humbling and flattering than to be recognized by my peers, especially when it is from a group of scientists that I have held with such high regard for so many years. I am truly grateful and honored."

- Professor Brian Freeman

NEW FACULTY FEATURE: DR. ANNA SOKAC

Tell us about your lab and your research focus.

My lab studies actin biology in developing embryos. Since the actin cytoskeleton is the architectural driver of cell shape change and morphogenesis, it is absolutely essential to the life and health of eukaryotes. Nonetheless, it remains understudied and poorly understood. I think actin often gets overlooked because on first glance, it seems simple – maybe even boring. It is a monomeric protein that polymerizes into filaments that act like the bones of cells.

On closer inspection, though, one realizes that the regulation and dynamics of actin and the filaments it builds are awesome, making use of an as yet unrealized repertoire of molecular, physical and chemical tricks to give rise to cells and tissues with just the right mechanics and shape, at just the right time, to ensure organismal physiology and health. There are so many lessons to learn about this amazing cytoskeletal system, and the implications are vast. So, studying actin is always rewarding. Plus, my approach to understanding actin has always afforded me a front row seat to watch cells and tissues change their shapes in real time, inside live embryos. That was the hook that caught me as a graduate student, and remains a joy to me today.

What is especially exciting about this particular area of research, at this time?

It is becoming increasingly clear that actin has more functions than simply shaping cells. My lab and others are learning that actin also influences cellular stress response and nuclear processes including gene expression and DNA damage repair. These new actin functions present a whole new actin frontier with major implications for health and disease.

Tell us about someone who made a difference in your life.

An anonymous advocate recently nominated me to be a Scialog Fellow in the Research Corporation for Science Advancement. I wish that I knew who that advocate was because I would really like to thank them. Participating in the annual conferences for Scialog fellows has been so intellectually stimulating and has greatly boosted my confidence in interacting with scientists across disciplines. The opportunity brought a number of new projects and collaborations to my lab. I am tremendously grateful for the nomination and to the Corporation for bringing valuable new perspectives and voices to my science. This small act of advocacy was game-changing for me.

What are your teaching interests?

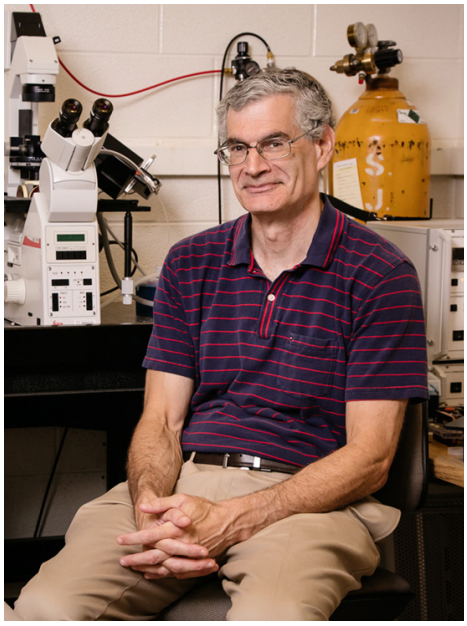
Graduate student education is very important to me. Of course, I love teaching the expert-level science. But I am also incredibly excited about those topics relevant to the "science of science." What is our scientific language? How do we develop critical thinking skills? How do we write and communicate effectively? Why is it so important to have a professional network from day one? How do we make the most of our mentoring relationships? I have had the pleasure of contributing to a published curriculum that incorporates these topics, called Entering Research. Generating these curricular materials and then implementing them with students has been like my career candy!

What do you like to do in your free time?

Spend time with all in my lovely family, walk, garden, cook and adore my cat.

Photos courtesy of Baylor College of Medicine

NEW NIH GRANTS WILL FUND RESEARCH ON CELL NUCLEI STRUCTURE AND DYNAMICS



Dr. Andrew Belmont

Cell & Developmental Biology professor Andrew Belmont has received two new grants from the National Institutes of Health that will advance his work in understanding nuclear structure and dynamics and gene expression.

Both grants are funded by the 4D Nucleome Program within the NIH's Common Fund. The program aims to develop technologies that enable the study of how DNA is arranged within cells in space and time (the fourth dimension) and how this affects cellular function in health and disease. Recent scientific advances, coupled with technological breakthroughs in tools and methods, provide the opportunity to catalyze this emerging field of research, according to the NIH.

Belmont is a co-principal investigator on a multi-institution research center grant that will develop a better understanding of the structure of cell nuclei and how changes in that structure affect cell functions. The five-year, $10 million project is called, "Multiscale Analyses of 4D Nucleome Structure and Function by Comprehensive Multimodal Data Integration" and is headed by lead principal investigator Jian Ma of Carnegie Mellon University.

A growing body of research has shown that the cell nucleus is highly compartmentalized, and that this spatial phenomenon relates to cell function, Carnegie Mellon said in its announcement about the grant. But scientists don't yet understand how a type of structure in the nucleus called nuclear bodies tug and tether with the chromosomes that carry the genetic code, as well as other biomolecules such as RNA and proteins, they said.

Using both microscopy and a genomic method developed by two former graduate students, Belmont and members of his lab have been mapping interphase chromosome positioning relative to particular nuclear compartments. These compartments include nuclear speckles, which are large nuclear bodies that contain RNA-processing proteins, transcription factors, and RNAs.

"Nuclear speckles are very interesting because our recent genomic mapping shows there is a large subset of genes that locate reproducibly very close to speckles in nearly all cells. These chromosome regions mapping very close to speckles likely have special properties, including high gene expression levels. That's led us to a lot of questions," Belmont said.

Over the past five years, Belmont has collaborated closely with four other investigators, leading a center funded by the previous phase of the 4D Nucleome Program. It focused especially on developing new methods for genomic mapping of chromosomes within nucleus, as well as new microscopy methods for visualizing chromosomes within the nucleus. Jian Ma led the computational modeling portion of that center. Other investigators included Huimin Zhao from the University of Illinois, David Gilbert from Florida State University, and Bas van Steensel from the Netherlands Cancer Institute.

The new center, in addition to Professors Ma, Belmont, and Gilbert, will now include six other investigators across the country and one in Scotland, allowing the growing research team to extend their methods to a larger number of cell types and use the data to better predict the structure of chromosomes within nuclei.

NIH GRANTS (CONT.)

"Our plan is to generate multimodal data, such as imaging as well as genomic data, and develop advanced machine learning algorithms and integrative structure models to make sense of it," said Ma, an associate professor in CMU's computational biology department, in a release.

In addition to this new 4D Nucleome Center, Belmont is also working in collaboration with Kyu Young Han at the University of Central Florida and Yaron Shav-Tal at Bar-Ilan University in Israel to shed new light on nuclear dynamics and their impact on the biology of gene regulation. Their new, $4 million, 4D Nucleome-funded five-year award is entitled, "Identification of the active nuclear niche(s) using novel proteomic, genomic, transgenic, and live-cell microscopy technologies."

In recent research, Belmont and members of his lab have determined that there may be at least two places in the nucleus that are special for gene expression. One is the nuclear speckle periphery.

"However, there might be other places that other genes might move to and touch, but we don't know where they are in the nucleus," Belmont said.

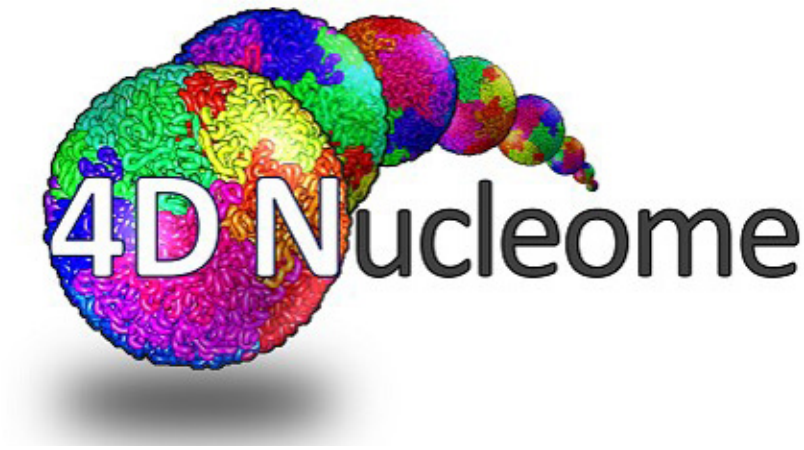
Together, Belmont, Han, and Shav-Tal will try to identify and better understand these other structures that other sets of genes may touch. At his laboratory, Han is building new, relatively low-cost microscopes with fast time acquisition and high resolution—comparable to much more expensive microscopes—that will allow individual researchers to better visualize and study these gene motions.

At Illinois, "we're going to use our genomic method and the proteomics method to identify these unknown compartments in the nucleus," Belmont said. "This will be followed by live-cell imaging of gene motion relative to these new compartments. We and Yaron Shav-Tal's group are the biologists. We'll test the hypothesis that one group of genes goes to nuclear speckles and another group of genes goes to these other structures," he said.

Shav-Tal will explore how these same nuclear components may be involved in RNA movement from the site of transcription to export into the cytoplasm through the nuclear pores. Shav-Tal together with Belmont and Han will also investigate the dynamics of these nuclear compartments relative to each other and the dynamics and flow of proteins regulating gene expression between these compartments.

This work is supported by the NIH under award numbers 1UM1HG011593 and U01DK127422.

"We're going to use our genomic method and the proteomics method to identify these unknown compartments in the nucleus. This will be followed by live-cell imaging of gene motion relative to these new compartments."
- Professor Andrew Belmont



2019 ANNUAL CDB RETREAT

The second annual retreat of the Department of Cell & Developmental Biology was organized on November 23rd, 2019 at I-Hotel and Conference Center in Champaign. The day was marked by lots of fun, food, and scientific camaraderie.

The department members got an amazing opportunity to have conversations about their research work and life outside of laboratories. There were selected talks by graduate students followed by short discussion sessions. All graduate students presented a poster of their research work, which provided an in-depth outlook of the diversity of ongoing research in the department. The first-year rotation students got to know their future colleagues in a relaxed and informal setting.

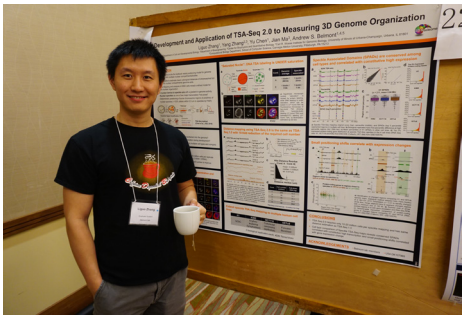
Throughout the day, fun games such as Precision-metry (which involved weighing precisely while blindfolded) kept everyone in high spirits. There was a quiz that involved identifying the departmental faculty members using the images from their early career publications.

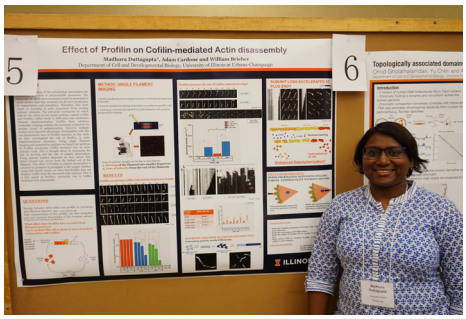
Dr. Cyril Ramathal, a CDB alumnus working at Genomics research center AbbVie, Chicago as principal research scientist delivered the keynote talk titled "The Use of Genetics and Genomics in Drug Discovery and Development". He shared his insights about the skills required to succeed in industry and the process of drug commercialization.

At the end of the day, prizes for talks, posters and games were distributed. The day ended with a fun photo session and the hopes to have another amazing retreat in the future.

The 2019 CDB Retreat Committee consisted of the following graduate students: Chair Nilmani Singh (Chen Lab), Lindsey Behrens (Freeman Lab), Yo-Chuen Lin (S. Prasanth Lab), Surabhi Sonam (Henry Lab), and Yunshu Song (Stubbs Lab).

Right: Dr. Cyril Ramathal, CDB alumnus and keynote speaker of the 2019 retreat
Row 1 (L to R): Liguo Zhang, students playing a pipette game, Madhura Duttagupta
Row 2: Group photo from the retreat





FREEMAN LAB DISCOVERS A PATHWAY FOR RECOGNIZING SELECT CHROMOSOME SITES

Professor Brian Freeman and collaborators, including William Brieher from CDB, have delineated a molecular chaperone-dependent mechanism for selectively mobilizing gene loci through the nuclear actin matrix. Their findings were detailed in the article, "Mechanism of Long-Range Chromosome Motion Triggered by Gene Activation," published in Developmental Cell.

A curious feature within all cells is the precise spatial organization of the genome, according to Freeman.

While early light microscopy work led to the concept of "chromosome territories," electron microscopy, as well as fluorescence in situ hybridization experiments, validated the existence of structured chromatin fibers with non-random, higher-order packaging.

Recent high-throughput molecular techniques have shown that eukaryotic genomes are partitioned into distinct compartments that are further divided into topologically associated domains, as well as smaller self-associating regions. Intriguingly, the exact packaging arrangement is dependent upon the health, age, and type of cell. Hence, genome organization promises to be key determinant for cell fate.

Despite the commonality of precise genome packaging, a mechanism for reorganizing chromatin in response to cellular demands had not been reported. The Freeman laboratory approached this problem by exploiting a simplified system in which a single gene locus is experimentally triggered to move from the inner nucleus to the nuclear periphery in response to physiological cues.

Work led by Dr. Anqi Wang and Janhavi Kolhe delineated a molecular chaperone-dependent pathway for relocating activated gene loci.

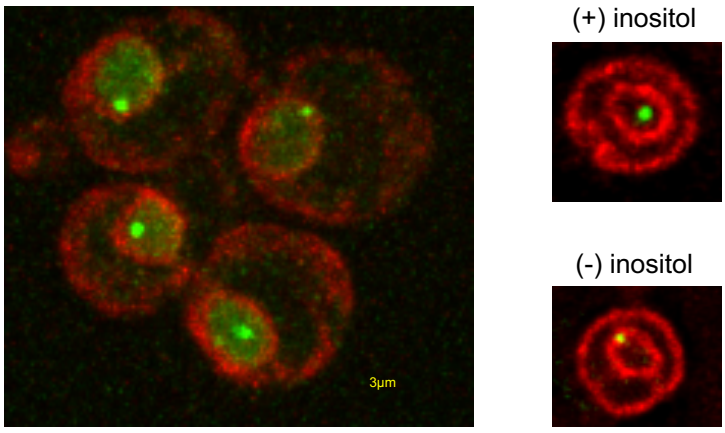
Their data support a model in which a two-authentication system mobilizes a gene promoter through a dynamic network of polymeric nuclear actin.

Transcription factor-dependent nucleation of a myosin motor propels the gene locus through the actin matrix and fidelity of the actin association was ensured by ARP-containing chromatin remodelers.

Motor activity of nuclear myosin was dependent on the Hsp90 chaperone. Hsp90 further contributed by biasing the remodeler-actin interaction towards nucleosomes with the non-canonical histone H2A.Z thereby focusing the pathway on select sites such as transcriptionally active genes.

Together, the system provides a rapid and effective means to broadly yet selectively mobilize chromatin sites.

References:
https://doi.org/10.1016/j.devcel.2019.12.007



The Freeman lab delineates a molecular chaperone-dependent mechanism for selectively mobilizing gene loci through the nuclear actin matrix. Their findings were published in Developmental Cell.

BRIEHER LAB ADVANCES NEW UNDERSTANDINGS IN CYTOSKELETON AND CELL ADHESION

Dr. William Brieher

Students of cell biology well appreciate architect Louis Sullivan's maxim that "form follows function." Three research papers from professor William Brieher's lab in 2020 help show how cells organize actin to determine cell form and function.

Actin is a protein that polymerizes into long filaments and is organized into networks to support cell structure. However, actin networks in cells are being remodeled constantly. Consequently, actin maintenance of cell structure might be just as analogous water pressure maintaining the shape of a fountain as it is to girders maintaining the shape of a building. How cells control actin dynamics to generate cell and tissue architecture is the long-term goal of the Brieher lab.

One favorite topic in the lab is the mechanism of actin filament depolymerization, which is not yet known. Fast actin disassembly rates allow cells to quickly remodel actin networks in response to various signals. In principle, actin filaments could disassemble by losing subunits from the ends of the filaments or by severing in the middle.

However, research assistant professor Vivian Tang, recent PhD graduate Ambika Nadkarni, and Brieher showed that actin filaments disassemble abruptly as if the filaments explode into pieces in a single step referred to as bursting. Bursting might be an efficient way for cells to quickly dismantle unneeded actin filaments and to recycle the actin monomers for reuse to build new structures.

Their results were outlined in the article, "Catastrophic actin filament bursting by cofilin, Aip1, and coronin," in the Journal of Biological Chemistry. The research was also was also included in a special virtual issue focusing on the eukaryotic cytoskeleton. Assembled by Enrique M. De La Cruz, the collection of articles explores the polymers and motor proteins that determine the function of the eukaryotic cytoskeleton in cell migration, cardiac health, and neurodegeneration.

In another study, "CD2AP links actin to PI3 kinase activity to extend epithelial cell height and constrain cell area," published in the Journal of Cell Biology, PhD student Yuou Wang studied the function of a protein known as CD2AP. Wang and Brieher knew that CD2AP was necessary for organizing the actin cytoskeleton in epithelial cells, but they did not understand how or to what purpose. The mysterious roles of CD2AP in inherited kidney disease and as a risk associated gene in Alzheimer's disease helped motivate further study.

Wang and Brieher found that CD2AP maintains cell height and constrains cell area by linking actin assembly to the activation of PI3-Kinase. Looking ahead, Brieher said they would like to know if this signaling pathway can be modulated to dial in the height of the lateral membrane to generate squamous versus cuboidal versus columnar epithelial tissue.

Finally, Brieher, PhD student John Xiao He Li and research assistant professor Vivian Tang shed light on adhesion repair. Epithelial cells use an adhesion molecule known as E-cadherin to help build extensive cell-cell adhesive contacts leading to cohesive sheets of cells that separate two different environments.

But what happens if the adhesive bonds holding the cells together fail? Whenever a cluster of E-cadherin cell-cell adhesion molecules dissolve, the cells respond by extending a thin protrusion (microspike) that pushes into the neighboring cell giving cadherin adhesion molecules another chance to

BRIEHER (CONT.)

reengage. Once the adhesive cluster is repaired, the microspike withdraws.

Inhibiting the proteins necessary for microspike extension leads to large scale rupture of cell-cell contacts and the increased risk of tissue tearing. The results showed that maintaining cohesive epithelial sheets is a highly dynamic process requiring continuous maintenance and repair.

The article, "Actin protrusions push at apical junctions to maintain E-cadherin adhesion," was published in PNAS. Brieher said he and members of his lab would like to understand how these protruding microspikes contribute to tissue formation during development and whether their activity is disrupted in disease states such as metastatic cancer.

References:
PMID: 31871203. DOI: 10.1073/pnas.1908654117
PMID: 32723865. DOI: 10.1074/jbc.RA120.015018
PMID: 31723006 DOI: 10.1083/jcb.201812087

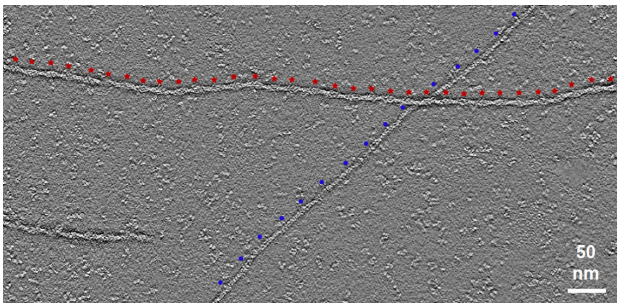


Image courtesy of the Brieher Lab. A larger image of one slice from the electron tomogram where the actin was polymerized in the presence of cofilin and coronin. Individual actin subunits are resolved in the filament lattice. Scale bar is 50 nm.

FACULTY AWARDS

Associate professor **William Brieher** received the **2019 College of LAS Dean's Award for Excellence in Undergraduate Education**. Colleagues commended Brieher for his innovative approach to encouraging critical thinking in students and showing them how to think like a scientist. He brings research to the forefront of his teaching, often presenting two papers on the same subject—each of which come to different conclusions—and challenges students to explain opposing results. Brieher is also known for making tremendous efforts to help students feel comfortable in his classes.

Associate professor **David Rivier** received the **2019 School of MCB Teaching Excellence Award** and the **2020 University of Illinois Urbana-Champaign Campus Award for Excellence in Undergraduate Teaching**. Rivier makes complex molecular biology ideas and concepts comprehensible, and emphasizes the discovery process. He pioneered a method of creating video lectures that utilizes inexpensive devices and software that allow the instructor to produce high-quality videos in any classroom. Rivier was also named as one of 38 Illinois faculty and staff who were identified by 10 or more students as having a positive impact on their experience at Illinois (through the Chancellor's Senior Survey).

Associate professor **Rachel Smith-Bolton** received the **2020 Arnold O. Beckman Research Award**. She studies drosophila genetics to study tissue repair and regeneration. She also serves as the department's associate head and chairs the school's diversity, equity, and inclusion committee.

Associate professor **Anna Sokac** was named a **Scialog Fellow** from the Research Corporation for Science Advancement. Scialog supports research, intensive dialog, and community building to address scientific challenges of global significance. Fellows collaborate in high-risk discovery research on untested ideas and communicate their progress in annual closed conferences.

GRADUATE STUDENT FEATURE: SURABHI SONAM (JONATHAN HENRY LAB)

Surabhi Sonam's interest in biology stems from her family, primarily from her childhood conversations with her father, a veterinary surgeon. "My dad was the biggest inspiration for me. He used to teach me biology, physics, and chemistry and we often discussed concepts and theories of biology for long hours," Sonam said.

After securing her bachelor's degree in Life Sciences from University of Delhi in India, she completed her MS in Biotechnology. An internship opportunity at the Centre for Cellular and Molecular Biology in India helped her make the final decision. "I knew I wanted to conduct more research, so I got a job as a research intern at the Institute of Microbial Technology," she said. "I came to UIUC in 2015 for my PhD and joined the lab of Dr. Jonathan Henry in CDB and there has been no looking back since then."

Conversations on biology have been a great bonding factor with her husband, a research scientist in Comparative Biosciences in the College of Veterinary Medicine.

What else keeps her busy? On the weekends, they love to explore. "I'd like to go to all of the state parks in Illinois. We've also been to Michigan, the Indiana Dunes, Muskegon, the Rocky Mountains... I try to travel as much as I can." The other passion they share is cooking—watching food shows and cooking together on the weekends. "It's a great stressbuster!"

Surabhi received the Chester and Nadine Houston Graduate Fellowship, which enabled her to go to the Marine Biological Laboratory in Massachusetts for a week. She attended a workshop called "Frontiers in Stem Cells and Regeneration," which focused on a variety of biological research organisms, including zebrafish, worms, and mice. Throughout this workshop, they conducted research in state-of-the-art facilities alongside experts in the field.

She also received the Tom and Cynthia Cycyota Research Fellowship. "Mr. Cycyota has been very supportive. I first met him in 2016 when he was giving a talk at the Institute for Genomic Biology." They've stayed in touch and have discussed her interest in regenerative medicine.

While at Illinois, she also started the alumni career development series, which aims to educate graduate students about careers in four fields working at a research university, industry, scientific writing, and teaching faculty (like at a liberal arts college).

With the help of Prof. Jie Chen and Office Administrator Laura Martin, their student-led team identified several alumni in all different fields. "Their talks helped open our perspective and explore all of our options."

Surabhi also led the team to organize the 2018 CDB Retreat, which was a great success!

Her advice to other graduate students is to interact and participate as much as they can.

"Don't refrain from getting involved in initiatives beyond academics! Step out of your comfort zone." - Surabhi Sonam, PhD Student in the Jonathan Henry Laboratory

Photo courtesy of Surabhi Sonam

2019 DEPARTMENTAL AWARDS

UNDERGRADUATE AWARDS AND HONORS

Undergraduate Research Achievement Award
Rachel Benedeck, Mary Schuler Lab
Matthew Contreras, Rachel Smith-Bolton Lab
Daniel Kim, Bill Brieher Lab
Allison Krunnfusz, Mary Schuler Lab
Sydney Luu, Lisa Stubbs Lab

Roderick MacLeod Award for Academic Excellence
Rachel Benedeck, Mary Schuler Lab

Cycyota Undergraduate Summer Research Fellowship
Disha Kuchangi, Andrew Belmont Lab

GRADUATE STUDENT AWARDS AND HONORS

Tom and Cynthia Cycyota Research Fellowship
Yo-Chuen Lin, Supriya Prasanth Lab

Tunji Toogun Research Excellence Award
Mahdieh Jadaliha, K.V. Prasanth Lab

Outstanding Teaching Assistant Award
Nayab Abidi

Graduate Student Platform Presentation Award
Chih-Ying Chen, Lisa Stubbs Lab
Nilmani Singh, Jie Chen Lab
Liquo Zhang, Andrew Belmont Lab

Chester and Nadine Houston Graduate Fellowship
Omid Gholamalamdari, Andrew Belmont Lab
Monica Lannom, Stephanie Ceman Lab

RECENT GRADUATES

Spring 2018 - James Chu, Rajashekar Iyer

Summer 2018 - Mahdieh Jadaliah, Keaton Schuster

Fall 2018 - Ankita Saha

Spring 2019 - Soumya Negi, Kook Son

Summer 2019 - Binhui Zhao

December 2019 - Nayab Abidi, Phil Kenny

May 2020- Chris Seward, Qinyu Sun, Liguo Zhang

August 2020 - Chih-Ying Chen, Rosaline Hsu, Yuou Wang

Our alumni are important to us! We want to hear from you. Send us your latest news, and we'll include it in the next newsletter. We also welcome articles and suggestions for future newsletters. You can share your news with us at:

mcbcommunications@illinois.edu

2020 DEPARTMENTAL AWARDS

UNDERGRADUATE AWARDS AND HONORS

Outstanding Research Achievement Award
Mariam Arif, Supriya Prasanth Lab
Kevin Stehlik, Mary Schuler Lab
Margaret Vacchiano, Mary Schuler Lab

Undergraduate Research Achievement Award
Nicholas Griffith, Rachel Smith-Bolton Lab
Samrudhi Joshi, Supriya Prasanth Lab
Disha Kuchangi, Andrew Belmont Lab
Rahul Maini, Jing Yang Lab
Hanna Pawlowski, Lisa Stubbs Lab

Roderick MacLeod Award for Academic Excellence
Mariam Arif, Supriya Prasanth Lab
Nicholas Griffith, Rachel Smith-Bolton Lab

Cycyota Undergraduate Summer Research Fellowship
Wiktoria Kowalczyk, Andrew Belmont Lab

GRADUATE STUDENT AWARDS AND HONORS

Tom and Cynthia Cycyota Research Fellowship
Surabhi Sonam, Jonathan Henry Lab

Tunji Toogun Research Excellence Award
Phil Kenny, Stephanie Ceman Lab

Outstanding Teaching Assistant Award
Madhura Duttagupta, Bill Brieher Lab

Graduate Student Platform Presentation Award
Chong Dai, Jie Chen Lab
Janhavi Kohle, Brian Freeman Lab
Yo-Chuen Lin, Supriya Prasanth Lab
Nilmani Singh, Jie Chen Lab
Yuou Wang, William Brieher Lab
Liguo Zhang, Andrew Belmont Lab

Chester and Nadine Houston Graduate Fellowship
Surabhi Sonam, Jonathan Henry Lab

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CDB appreciates the support of our alumni and friends. If you wish to make a donation this year, use this form or visit:
mcb.illinois.edu/giving/

I would like to make the following contribution to CDB:

$_____ Cell and Developmental Biology Annual Fund (11331199)

$_____ Tunji Toogun Memorial Graduate Fellowship Fund in Cell and Developmental Biology (11341354)

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