

Chair Newsletter | Ali Shilatifard
Northwestern University Feinberg School of Medicine
Department of Biochemistry and Molecular Genetics

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Quote **“Chance favors the prepared mind!” Louis Pasteur**

As September is upon us, it is often that we associate it with new beginnings as summer is ending and the school and fall season are beginning. This September, I am beginning my new monthly letter to the Department of Biochemistry and Molecular Genetics. With a growing and thriving department busy in the academic sways of research, meetings, and with new members joining, I hope this monthly letter will serve as an opportunity to share with our colleagues our laboratory and department professional happenings.

This summer the BMG department welcomed six new graduate students and two new postdoctoral fellows. We also have several other new BMG department members, all listed below. We welcome them with great enthusiasm and look forward to the new members participating in our very vibrant and engaging BMG journal clubs and seminars and attending the BEaM Forum and SQE Seminar Series. Please look for our new members and introduce yourself at next week’s annual BMG Departmental Retreat.

I am very proud and honored to have you as my colleagues and proud of your hard work, participation, and energy and excitement you bring to the department daily. Many of you have received awards and funding recognizing your hard work, and have been able to publish some of your studies. You will find a list of those received this summer below as well. I am sure we will all continue to move our science forward as we engage in opportunities within the department and the university to seek one another’s thoughts and collaborations. Since coming to Chicago and becoming a part of Northwestern University, I tell many of my colleagues at many different universities and throughout the world, how much I love the collegial and collaborative environment at Northwestern Medicine in Chicago, and I am thankful that you are a part of it.

I wish each of you a very special Labor Day Weekend and look forward to seeing you next week at our BMG retreat.

Ali Shilatifard
Professor and Chairman

New Department Members

Ben-Sahra Lab

- Elodie Villa, Ph.D., Postdoctoral Fellow

Foltz Lab

- Sakshi Khurana, DGP Graduate Student

Ntziachristos Lab

- Khyati Meghani, DGP Graduate Student
- Radhika Rawat, MSTP Student

Peek Lab

- Pei Zhu Ph.D., Research Associate

Prindle Lab

- Garth Fisher, DGP Graduate Student
- Corey Kennelly, DGP Graduate Student

Shilatifard Lab

- Bercin Cenik, Ph.D., Postdoctoral Fellow
- Anusha Chaparala, M.D., Ph.D., Research Fellow
- Jordan Harrison, Research Technician
- Sun-Young Kim, M.D., Research Fellow
- Rubye Peyser, Research Technician
- Chaneceia Smith, Lab Technician
- Didi Zha, Research Technician
- Bin Zheng, DGP Graduate Student

Recently received Grants and Awards (Summer 2018)

Noah Birch, M.D., Ph.D. (Shilatifard Lab) has been awarded a NIH Loan Repayment Program (LRP) Award through the NCI. The award is granted through a competitive review process for MD or PhD applicants whom are committed to at least 50% effort conducting biomedical research.

Dr. Zhiqiang Du, in Dr. Li's lab, just received a NIH R01 award for \$317,250.00/year supporting his studies of prion-mediated protein aggregation.

Garth Fisher, a graduate student in Dr. Arthur Prindle's lab, has been awarded a CMBD training grant (The Cellular and Molecular Basis of Disease Training Program at Northwestern University is funded by the National Institutes of Health, Institute of General Medical Sciences).

Dr. Daniel Foltz, along with Co-PI **Dr. Dileep Varma** (CMB), was awarded an H-Foundation Synergy Grant of \$50,000 for one year; and **Dr. Foltz** also received an IDP Research Innovation Challenge Award of \$50,000 for one year with Co-PIs **Dr. Lihua Zou** (BMG) and **Dr. Dileep Varma** (CMB).

Dr. Panos Ntziachristos has received The Elsa Pardee Foundation Award; the National Science Foundation Award (Emerging Frontiers in research and innovation grant, co-Investigator); and the Innovation Challenge Award (The Lurie Cancer Center, Northwestern University, co-Investigator).

Dr. Clara Peek and **Dr. Arthur Prindle** have been awarded a joint H Foundation Intra-Programmatic Basic Science Synergy Award from the Lurie Cancer Center.

Dr. Leon Platanius and colleagues of the Lurie Cancer Center recently were awarded the five-year renewal of the P30 Cancer Center Support Grant (P30CA060553). The award is worth \$31,417,849 supporting the efforts of the Lurie Cancer Center.

Dr. Shilatifard and **Dr. Morgan** in collaboration with Dr. Cigall Kadoch at Harvard received an NCI U54 (Interdisciplinary Research Consortium) as part of the Cancer *Moonshot* program to support their joint studies on synovial sarcoma.

Dr. Shilatifard and **Dr. Andrea Piunti** received a \$258,700 contract from Acer Therapeutics to study the epigenetic bases of childhood brain cancer.

Dr. Shilatifard and **Dr. Edwin Smith** received a \$380,472 supplemental from the National Cancer Institute to develop reagents for chromatin and transcription biology.

Dr. Shilatifard and **Dr. Lu Wang** received a second year of funding (\$100,000) from the MaryKay foundation to study the role of Set1B/COMPASS in breast cancer pathogenesis.

Christie Ching-Lin Sze, graduate student in Shilatifard's laboratory, received an F99/K00 Predoctoral to Postdoctoral Fellow Transition Award from the National Cancer Institute, which will support her epigenetic studies as a student and her future postdoctoral studies.

Dr. Zibo Zao, Postdoctoral Fellow in Shilatifard's laboratory, received a \$150,000 Young Investigator Grant from Alex's Lemonade Foundation to support her epigenetic studies of cancer. She was also awarded a T32 from the Lurie Cancer Center.

Dr. Jindan Yu has been awarded an R01 from the National Cancer Institute for \$361,425/year studying the role of NF90 in prostate cancer that started this August and will provide funding for five years.

[Publications \(Summer 2018\)](#)

[Foltz Lab](#)

Srivastava S, Zasadzińska E, Foltz DR. Posttranslational mechanisms controlling centromere function and assembly. *Curr Opin Cell Biol*. 2018 Jun;52:126-135. doi: 10.1016/j.ceb.2018.03.003. Review. PMID:29621654

[Shilatifard Lab](#)

Structure and Conformational Dynamics of a COMPASS Histone H3K4 Methyltransferase Complex. Qu Q¹, Takahashi YH¹, Yang Y, Hu H, Zhang Y, Brunzelle JS, Couture JF, Shilatifard A*, Skiniotis G*. *Cell*. 2018 Aug 23;174(5):1117-1126.e12. doi: 10.1016/j.cell.2018.07.020. PMID:30100186
¹Equal Contributing authors; *Co-corresponding authors.

Impactful science as the guiding principle. Shilatifard A. *Sci Adv*. 2018 Jul 4;4(7):eaau1696. doi: 10.1126/sciadv.aau1696. eCollection 2018 Jul. No abstract available. PMID:29978047

Epigenetic ConfUSION: SS18-SSX Fusion Rewires BAF Complex to Activate Bivalent Genes in Synovial Sarcoma. Morgan MA, Shilatifard A. *Cancer Cell*. 2018 Jun 11;33(6):951-953. doi:10.1016/j.ccell.2018.05.011. PMID:29894696

Resetting the epigenetic balance of Polycomb and COMPASS function at enhancers for cancer therapy. Wang L, Zhao Z, Ozark PA, Fantini D, Marshall SA, Rendleman EJ, Cozzolino KA, Louis N, He X, Morgan MA, Takahashi YH, Collings CK, Smith ER, Ntziachristos P, Savas JN, Zou L, Hashizume R, Meeks JJ, Shilatifard A. *Nat Med*. 2018 Jun;24(6):758-769. doi: 10.1038/s41591-018-0034-6. PMID:29785026

Enhancer Logic and Mechanics in Development and Disease. Rickels, R., and Shilatifard. *Trends Cell Biol* 2018 Aug;28(8):608-630. doi: 10.1016/j.tcb.2018.04.003. PMID:29759817

Born to run: Control of transcription elongation by RNA polymerase II. Chen FX, Smith E., and Shilatifard A. *Nat Rev Mol Cell Bio*. 2018 Jul;19(7):464-478. doi: 10.1038/s41580-018-0010-5. PMID:29740129

Singer Lab

McGrath-Morrow SA, Ndeh R, Helmin KA, Chen S-Y, Anekalla KR, Abdala-Valencia H, D'Alessio FR, Collaco JM, **Singer BD**. DNA methylation regulates the neonatal CD4⁺ T-cell response to pneumonia in mice. *J Biol Chem*. 2018, Jul 27; 293:11772-11783. PMCID: PMC6066312.

Other Departmental News:

Ewelina Zasadzinska of the Foltz Lab defended her Ph.D. at the University of Virginia. Congratulations!

Upcoming Event:

3rd Annual Biochemistry and Molecular Genetics Retreat
Friday, September 7th
8:30 am – 7:30 pm
McCormick Tribune Center, Evanston Campus