CONTENTS

3–4  Letter from the Chair

DEPARTMENT NEWS

4  Welcome New Faculty

5–6  New Department Members

7–8  Grants and Awards

9–10  Publications

UPCOMING EVENTS

11  2nd Annual SQE Symposium

ON THE COVER. A close-up view of DNA methylation. Cover designed and created by Nicole Ethen, MS.
LETTER FROM THE CHAIR

As Fall is here, we are entertained and inspired with nature’s newly adorned and colorful exterior designs. Fall also arrives with the announcement of the annual Nobel prize recognizing the scientific achievements of extraordinary individuals who have worked extremely hard to understand and explain in one way or another the mechanisms which underlie our natural world. Congratulations to Dr. Bill Kaelin, winner of this year’s Nobel Prize in Physiology or Medicine, along with Peter J. Ratcliffe and Gregg L. Semenza. I share with you the link to Dr. Kaelin’s interview upon hearing of his selection as a Nobel laureate. I hope you find inspiration for your scientific journey in his wise words.

I would like to thank Marc Mendillo and Clara Peek for organizing this year’s annual BMG retreat. It is always a great opportunity to gather as a department to share with one another our accomplishments, our current studies, and our future plans. These moments reassure us, assist us, and inspire us. I wish to thank each of you in attendance for your participation. Congratulations to Srivastava and Celeste Rosencrance for the best poster award!

Please take time to look at the grants, awards and publications listed below from each lab, and reach out to congratulate your peers on their accomplishments. I am very proud of the progress we have made as a department.

We welcome two additional laboratories into our department this year. Dr. Feng Yu, the Duane and Susan Burnham Professor of Molecular Medicine, and Director for the Center for Cancer Genetics/Epigenetics, and Dr. Lu Wang, Assistant Professor.

Ali Shilatifard
Professor and Chairman

“There are no shortcuts as far as I’m concerned.”
-William G. Kaelin
2019 Nobel Laureate
This month Northwestern University has been celebrating **150 years of women at the University**. We would like to take this opportunity to highlight the women faculty in our department. It is important to recognize our women faculty colleagues in BMG and celebrate the fantastic science they are doing at Northwestern Medicine.

**Dr. Elizabeth Bartom**  
Assistant Professor of Biochemistry and Molecular Genetics

**Dr. Beth McNally**  
Professor of Medicine (Cardiology) and Biochemistry and Molecular Genetics

**Dr. Amanda Muhs Saratis**  
Assistant Professor of Neurological Surgery and Biochemistry and Molecular Genetics

**Dr. Clara Bien Peek**  
Assistant Professor of Biochemistry and Molecular Genetics and Medicine (Endocrinology)

**Dr. Liming Li**  
Associate Professor of Biochemistry and Molecular Genetics

**Dr. Jindan Yu**  
Professor of Medicine (Hematology and Oncology) and Biochemistry and Molecular Genetics

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**WELCOME NEW FACULTY**

**Dr. Feng Yue**  
Duane and Susan Burnham Professor of Molecular Medicine, Director for the Center for Cancer Genetics/Epigenetics

**Dr. Lu Wang**  
Assistant Professor
Welcome New Hires

**TIFFANY GE**  
Egan Lab  
DGP Graduate Student

**QI YU**  
Egan Lab  
Bioinformatics Scientist

**DAVID AMICI**  
Mendillo Lab  
MSTP Student

**DAN ANSEL**  
Mendillo Lab  
Research Technician

**JASEN JACKSON**  
Mendillo Lab  
Research Technician

**CUIJUAN HAN**  
Ntziachristos Lab  
Postdoctoral Fellow

**ADAM LORCH**  
Ntziachristos Lab  
Research Associate

**SHARON TAM**  
Peek Lab  
DGP Graduate Student

**MARIAM ARDEHALI**  
Shilatifard Lab  
Research Technician

**BENISH BAQAI**  
Shilatifard Lab  
Research Technician

**NICOLE ETHEN**  
Shilatifard Lab  
Medical Illustrator/Animator

**PHUOC HUYNH**  
Shilatifard Lab  
Research Technician
WELCOME NEW HIRES

DAVID JOHNSON
Shilatifard Lab
Research Technician

ALEX KAZMER
Shilatifard Lab
Research Technician

BRIAN SANDS
Shilatifard Lab
Research Technician

OLIVER VICKMAN
Shilatifard Lab
Research Technician

MANUEL ACOSTA TORRES
Singer Lab
MD/PhD Grad Student

AILEEN SZCZEPANSKI
Wang Lab
Research Technician

LOURDES BREA
Yu Lab
Graduate Student

VIRIYA KEO
Yu Lab
Graduate Student

EZINNE MONG
Yu Lab
Postdoctoral Fellow

FANG WANG
Yu Lab
Postdoctoral Fellow
Dr. Elizabeth Bartom – Bartom Lab
has been awarded the Driskill Graduate Program 2019 Dean’s Teaching Award for her work teaching data science.

Dr. Elodie Villa – Ben-Sahra Lab
has been awarded a two-year postdoctoral fellowship from the Tuberous Sclerosis Alliance Foundation.

Tiffany Ge – Eagen Lab
was recently appointed to the CMBD Training Grant.

Blanca Gutierrez – Ntziachristos Lab
has received support from The Graduate School (TGS).

Dr. Leon Platanias – Platanias Labs
has been awarded an RO1 (R01NS113352) to support research on SLFN5: A Novel Therapeutic Target for Glioblastoma. This proposal will define mechanisms by which SLFN5, a member of the unique group of Schlafen proteins, promotes glioblastoma malignancy by suppressing the Type I IFN signaling response.

Dr. Leon Platanias – Platanias Lab
has been awarded an RO1 (R01NS113425) to support the Development of Novel MNK Inhibitors for Treating Glioblastoma. This proposal will define mechanisms by which MNK kinases promote glioblastoma growth and develop novel agents to target them.

Kaixiang Cao – Shilatifard Lab
has been awarded an NIH K99/R00 (HD094906) to study: Exploring Novel Regulatory Mechanisms Underlying Enhancer Activation and Cell Fate Transition

Dr. Andrea Piunti – Shilatifard Lab
has been awarded an NIH K99/R00 (CA234434) to study: A Molecular Informed Therapy for Diffuse Intrinsic Pontine Gliomas (DIPG).
Dr. Ryan Rickels - Shilatifard Lab
accepted a postdoctoral fellowship at Duke University.

Christie Sze - Shilatifard Lab
has been awarded the eight annual Driskill Scholar Award.

Dr. Benjamin Singer - Singer Lab
has been awarded an R01 to study: Mechanisms of regulatory T cell-mediated recovery from severe influenza A virus infection.

Dr. Luisa Morales-Nebreda - Singer Lab
has been awarded an F32 to study: Determinants of age-related regulatory T cell function during influenza A virus-induced lung injury.

BMG RETREAT BEST POSTER WINNERS

Shashank Srivastava, PhD
Foltz Lab

Celeste Rosencrance
Eagen Lab
**BARTOM LABORATORY**


β-Catenin/Tcf7l2–dependent transcriptional regulation of GLUT1 gene expression by Zic family proteins in colon cancer.

*Science Advances, 07/2019*

Rollins MG, Jha S, Bartom ET, Walsh D.

RACK1 evolved species-specific multifunctionality in translational control through sequence plasticity within a loop domain.

*Journal of Cell Science, 06/2019*


Tenascin-C expression contributes to pediatric brainstem glioma tumor phenotype and represents a novel biomarker of disease.

*Acta Neuropathologica Communications, 05/2019*

Pooter, RF D, Dias S, Chowdhury M, Bartom ET, Okoreeh MK, Sigvardsson M, Kee BL.

Cutting edge: Lymphomyeloid-primed progenitor cell fates are controlled by the transcription factor TAL1.

*Journal of Immunology, 05/2019*

**FREEMAN LABORATORY**

Smith KP, Focia PJ, Chakravarthy S, Landahl EC, Klosowiak JL, Rice SE, Freymann DM.

Structural assembly of the human Miro1/2 GTPases based on the crystal structure of the N-terminal GTPase domain.

*Preprint, 08/2019*
PTNMIACHRSTOS LABORATORY

Rawat R, Starczynowski DT, Ntziachristos P. 
Nuclear deubiquitination in the spotlight: the multifaceted nature of USP7 biology in disease.

Current Opinions in Cell Biology, 06/2019

SHILATIFARD LABORATORY

β-Catenin/Tcf7l2–dependent transcriptional regulation of GLUT1 gene expression by Zic family proteins in colon cancer.

Science Advances, 07/2019

CATACOMB: An endogenous inducible gene that antagonizes H3K27 methylation activity of Polycomb repressive complex 2 via an H3K27M-like mechanism.

Science Advances, 07/2019

SINGER LABORATORY

Single-cell transcriptomic analysis of human lung provides insights into the pathobiology of pulmonary fibrosis.

American Journal of Respiratory and Critical Care Medicine, 06/2019

Qi C, Hountras P, Pickens CO, Walter JM, Kruser JM, Singer BD, Seed P, Green SJ, Wunderink RG
Detection of respiratory pathogens in clinical samples using metagenomic shot-gun sequencing.

Journal of Medical Microbiology, 07/2019
Singer BD, Smith ER, Morgan MAJ, Ugarenko M, Khaltyan N, Helmin KA, Ryan CA, Murray DC, Rickels RA, Yilmaz BD, Rendelman EJ, Savas JN, Singer BD, Bulun SE, Shilatifard A

CATACOMB: An endogenous inducible gene that antagonizes H3K27 methylation activity of Polycomb repressive complex 2 via an H3K27M-like mechanism.

Read more

Science Advances, 07/2019

Singer BD and Chandel NS

Immunometabolism of pro-repair cells.

Read more

Journal of Clinical Investigation, 05/2019

Tighe RM, Redente EF, Yu YR, Herold S, Sperling AI, Curtis JL, Duggan R, Swaminathan S, Nakano H, Zacharias WJ, Janssen WJ, Freeman CM, Brinkman RR, Singer BD, Jakubzick CV, Misharin AV on behalf of the ATS Assembly on Allergy Immunology and Inflammation

Improving the quality and reproducibility of flow cytometry in the lung: an official American Thoracic Society workshop report.

Read more

American Journal of Respiratory Cell and Molecular Biology, 08/2019

Singer BD.

A practical guide to the measurement and analysis of DNA methylation.

Read more

American Journal of Respiratory Cell and Molecular Biology, 10/2019

YU LABORATORY

Xu B, Song B, Lu X, Kim J, Hu M, Zhao JC, Yu J

Altered chromatin recruitment by FOXA1 mutations promotes androgen independence and prostate cancer progression.

Read more

Cell Research, 09/2019
UPCOMING EVENTS

NOVEMBER 15, 2019
2nd Annual Simpson Querrey Center for Epigenetics Symposium
“Epigenetics, Metabolism, and Human Disease”

Simpson Querrey Center for Epigenetics
303 East Superior Street
Simpson Querrey, 7th Floor
Chicago, IL 60611

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