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# Yale University

## Molecular Biophysics & Biochemistry



## Newsletter

Winter/Spring 2021

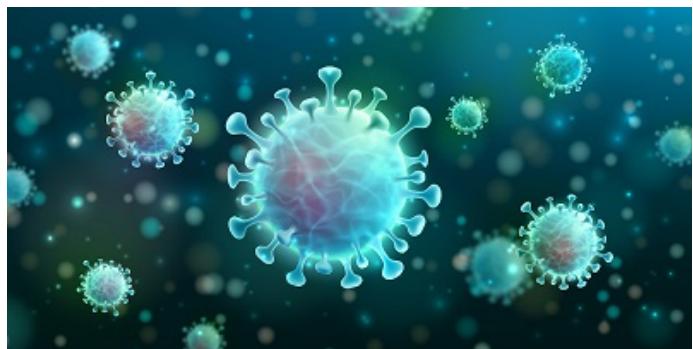
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### A view from the Editor & Chair

This, our *second edition* of the **MB&B E-Newsletter** and a brief sketch of how our colleagues in MB&B managed during the last year when everything was shut down in the middle of March 2020 due to the pandemic. We improved our zoom skills, conducting classes and having meetings. It worked to some extent but what was missing was the face to face contact that is always so valuable. Running a lab, writing papers and grant applications during the pandemic was challenging indeed. Nevertheless, grant applications were approved, and papers were published by members of MB&B.



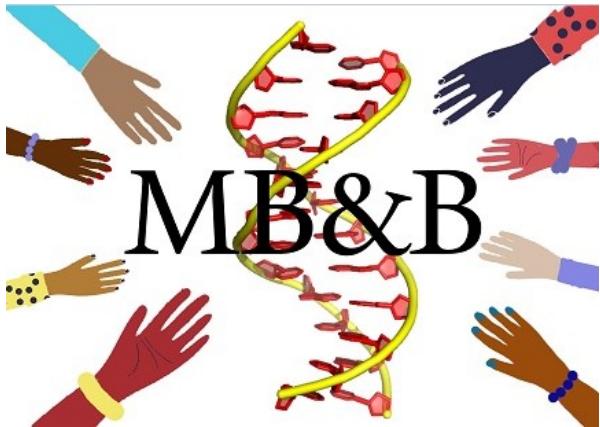
There were emotional and psychological tolls during this

during this period. Our students and postdocs were allowed back in the labs provided certain requirements were met: social distancing, masking, cleansing and time structure at the bench. There has been much diligence, respect and cooperation by everyone obeying the precautions that were issued at the start of the pandemic.

period. With the advent of vaccines, restrictions are gradually being lifted and the hope is that things will approach normality for the coming fall semester.

Sincerely,

**William Konigsberg & Enrique M. De La Cruz**



We are thrilled to have initiated and completed an **anonymized search for a tenure-track Assistant Professor**, resulting in two pending offers from 188 applications.

For the first time, applications were submitted without names, places, funding agencies, or journals disclosed...

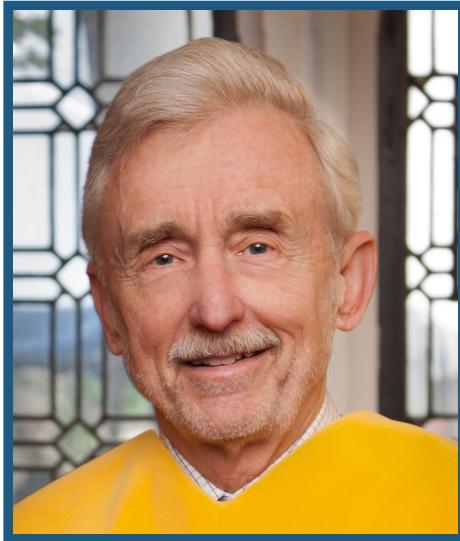
Read more on our [website](#) by clicking here and a full feature article published in [Yale News](#)

## Faculty Milestones



[Matt Simon](#)

Associate Professor with Tenure  
as of July 1st 2021



[Tom Pollard](#)

Emeritus Professor  
as of July 1, 2021



[Alan Garen](#)

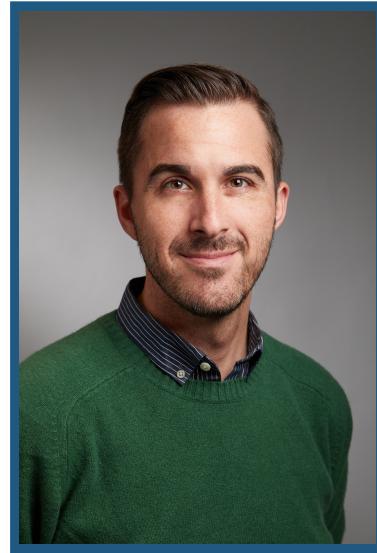
Emeritus Professor  
as of July 1st 2021

## Welcome Secondary Faculty



### Luisa Escobar-Hoyos, MSc, PhD

Luisa Escobar-Hoyos recently joined MB&B as a secondary faculty member on January 1st, 2021, and is currently an assistant professor in Therapeutic Radiology at the Yale School of Medicine. Her lab seeks to understand the role of aberrant RNA splicing and transcription programs that promote aggressive behavior and therapeutic resistance in tumor cells. Based on these mechanistic studies, the Escobar-Hoyos lab performs pre-clinical trials to identify, design and test novel biomarker- and mechanistic-based targeted therapies for pancreatic cancer and other highly aggressive tumors. During her time at Yale, she has been collaborating with different faculty from the MB&B faculty including, Joan Steitz, Karla Neugebauer, Lilian Kabeche and Wendy Gilbert. She looks forward to contributing to the mission of the department and her lab is in the Hunter building on the 2nd floor.



### Zachary Levine, PhD

Zachary (Zach) Levine recently joined MB&B as a secondary faculty member on January 1st, 2021, and is currently an assistant professor of Pathology at the Yale School of Medicine. His lab combines molecular dynamics simulations and single-molecule biophysics in order to structurally and functionally characterize amyloid oligomers that drive human aging and disease. In particular, the Levine laboratory focuses on therapeutic interventions to soluble neurological oligomers (amyloid-beta) in Alzheimer's disease, soluble pancreatic oligomers (IAPP) in Type II Diabetes, and insoluble tumor suppressor aggregates (p53) in cancer, with the goal of prolonging both life- and healthspan. Trained as a biophysicist, he is happy to join MB&B and can currently be found on the third floor of Bass Center.

## In Memorium



### Charles Radding

Professor Emeritus of Genetics

Years of service at Yale University: 1967 - 2018

Passed away on October 20, 2020. He was 90. Dr. Radding was a member of the National Academy of Sciences.

# Congratulations...

## MB&B Graduating PhD Students 2021



**Rajshekhar "Raj" Basak**

Howard Lab

**PhD Thesis Title:** *Biophysical Characterization of Somatosensory Responses in Drosophila Class IV Dendritic Arborization Neurons*



**Martha Braun**

Karatekin Lab

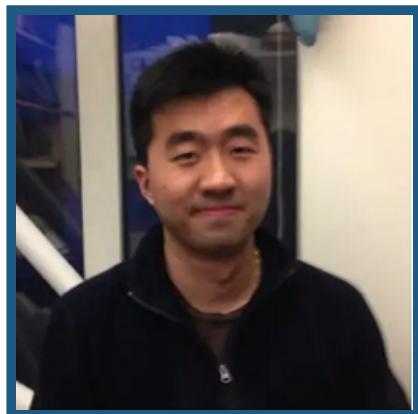
**PhD Thesis Title:** *FisB mediated membrane fission during sporulation in *Bacillus subtilis**



**Ken Brewer**

Breaker Lab

**PhD Thesis Title:** *Computational discovery of structured non-coding RNA motifs in bacteria*



**Chin Leng Cheng**

Hochstrasser Lab

**PhD Thesis Title:** *Insights into the Regulation and Mechanism of 26S Proteasome Base Assembly in *Saccharomyces cerevisiae**



**Jennifer M. Garbarino**

Bindra Lab & Jensen Lab

**PhD Thesis Title:** *Loss of ATRX confers DNA repair defects and PARP inhibitor sensitivity in glioma*



**Lea Kiefer**

Simon Lab

**PhD Thesis Title:** *Investigating RNA Population Dynamics Through Nucleotide Recoding: Extending the TimeLapse-seq Toolkit to 6-Thioguanosine*



**Lisa O. McLean**

Baserga Lab

**PhD Thesis Title:** *Discovering Novel Regulators of Nucleolar Form and Function*



**J. Patrick O'Brien**

Malvankar Lab

**PhD Thesis Title:** *A Tale of Two Nanowires: The Biochemical and Spectroscopic Characterization of the Conductive Cytochrome OmcS and OmcZ Filaments from Geobacter sulfurreducens*



## Curran Oi

### Regan Lab

**PhD Thesis Title:** *Reversible peptide-protein interactions inside cells: enabling a new approach for achieving super-resolution imaging in live cells*



**Nicolle A. Rosa Mercado**

### Steitz Lab

**PhD Thesis Title:** *Insights into the biogenesis of stress-induced readthrough transcripts*

## Kirsten A. Reimer

### Neugebauer Lab

**PhD Thesis Title:** *Co-transcriptional Splicing in Murine Erythroblasts*



**Meaghan Sullivan**

### Simon Lab

**PhD Thesis Title:** *A Comparative Approach to Studying RNA Biochemistry using TimeLapse Chemistry and Labeling in Cell Culture (TILAC)*



**Kuanlin Wu**

### Koleske Lab

**PhD Thesis Title:** *Platelet-derived growth factor receptor beta activates Abl2 through direct binding and phosphorylation*

## Congratulations to all of you

You have completed another milestone in your life.

All the hard work has brought you to this point and as you transition into the next phase of your career the MB&B community wish you continued success.

# Welcome Postdocs

**Ashish Kumar** - Bleichert lab

**Yin-wei Kuo** - Howard lab  
**Min Jae Lee** - Hochstrasser lab  
**Emily McFadden** - Baserga lab  
**Robert Nescier** - Koleske lab  
**Daniela Simcikova** - Neugebauer Lab  
**Guste Urbonaite** - Neugebauer Lab  
**Wei Zheng** - Xiong lab  
**Dagmar Zigackova** - Neugebauer Lab

## Welcome MB&B Staff

### **Meghan Killoran** **MB&B Graduate Registrar**

Meghan joined MB&B on May 3rd and came from the Washington D.C. area where she worked for the last eight years providing Registrar-related academic support in the areas of admissions, recruitment, and academic information management.



## Welcome BQBS Students Class of 2027

**Kyrillos Abdallah** from University of Michigan  
**Jared Akers** from University of Wisconsin Madison  
**Kebron Kebede Gurara** from Yale-NUS College  
**Iyad Sayed Issa** from University of Rochester  
**Morgan Shine** from Westminster College Pa  
**Gabriela T. Rosado-González** from University of Puerto Rico

## Staff Kudos

**Thank you**  
**Carol MacLeman**

*Lead Administrator*

**for 25 years  
of dedicated service & support!**



\*\*\*\*\*



## Congratulations **Liz Vellali**

*Undergrad Registrar & Faculty Support Admin*

**2nd prize**  
for Yale's Winter Recipe Roundup Contest  
for [Giant Skillet Cinnamon Roll with Orange Cream Cheese Glaze](#)

## Student Kudos

**Martha Braun & Nicolle Rosa-Mercado** winners of [The 2021 Mary Ellen Jones Dissertation Prize](#)

**Mason McCool** awarded the [2020 NIH NRSA Fellowship](#)

**James Diao** graduate of Yale college wins [2021 Paul and Daisy Soros Fellowship for New Americans](#)

**Daisy Duan**, 2nd year MB&B student receives the [National Science Foundation \(NSF\) Graduate Research Fellowships Program \(GRFP\) fellowship](#)

**Robert Fernandez** honored [2020 Yale Jefferson Award](#)

**Ronald Hood** Yale college Junior member of the Malvankar lab awarded the prestigious national [Goldwater Scholarship](#)

**Katelyn Noronha** 3rd year MB&B PhD student awarded [2021 NIH NRSA Fellowship](#)

**Catharine Shipps**, a fourth-year MB&B student in the Malvankar Lab, has been awarded the [2021 Annie Le Fellowship](#)

# Faculty Kudos

**Ronald Breaker & Frederick Sigworth**, were elected to the [American Academy of Arts & Sciences \(AAAS\)](#).

**Enrique De La Cruz** for being inducted into the inaugural class of [American Society for Biochemistry and Molecular Biology \(ASBMB\) Fellows](#)

**Enrique De La Cruz & Robert Fernandez** honored as the [100 inspiring Hispanic/Latinx Scientists in America list in Cell Mentor](#)

**Enrique M. De La Cruz and Mark Hochstrasser** elected to [The Connecticut Academy of Science and Engineering](#)

**Daniel DiMaio** received the [NCI Outstanding Investigator Award](#)

**Wendy Gilbert** receives the [Poorvu Family Academic Innovation Award](#)

**Luisa Escobar-Hoyos** receives [Damon Runyon-Rachleff Innovation Award](#)

**Lilian Kabeche** awarded [Pershing Square Sohn Prize for Young Investigators in Cancer Research](#)

**Nikhil Malvankar** was selected as one of sixteen recipients of the [2021 Camille Dreyfus Teacher-Scholar Awards](#)

**Joan Steitz** receives [2021 Warren Alpert Foundation Prize](#)

**Joan Steitz** receives the [2021 Wolf Prize in Medicine](#)

**Joan Steitz** receives [Prize Medal from the Microbiology Society](#)

# New Books

**Author:** Carl Zimmer

**Title:** [Life's Edge: The Search For What It Means To Be Alive](#)

Dutton, March 2021

# New Publications

**Authors:** Kumar S, Warrell J, Li S, McGillivray PD, Meyerson W, Salichos L, Harmanci A, Martinez-Fundichely A, Chan CWY, Nielsen MM, Lochovsky L, Zhang Y, Li X, Lou S, Pedersen JS, Herrmann C, Getz G, Khurana E, Gerstein MB

**Title:** [Passenger Mutations in More Than 2,500 Cancer Genomes: Overall Molecular Functional Impact and Consequences](#)

March 5, 2020 – **Cell:** 180:915-927.e16

**Authors:** Sherlock ME, Breaker RR

**Title:** [Former orphan riboswitches reveal unexplored areas of bacterial metabolism, signaling, and gene control processes](#)

June 2020 – **RNA**: 26(6):675-693

**Authors:** Widner DL, Harris KA, Corey L, Breaker RR.

**Title:** [\*Bacillus halodurans OapB forms a high-affinity complex with the P13 region of the noncoding RNA OLE\*](#)

July 10, 2020 – **J Biol Chem.**: 295(28):9326-9334

**Authors:** Yu D, Breaker RR

**Title:** [\*A bacterial riboswitch class senses xanthine and uric acid to regulate genes associated with purine oxidation\*](#)

August 2020 – **RNA**: 26(8):960-968

**Authors:** Dundon SRE, Pollard TD

**Title:** [\*Microtubule Nucleation Promoters Mto1 and Mto2 Regulate Cytokinesis in Fission Yeast\*](#)

August 1, 2020 - **Mol Biol Cell**: 31(17):1846-1856

**Authors:** Sheetz JB, Mathea S, Karvonen H, Malhotra K, Chatterjee D, Niininen W, Perttilä R, Preuss F, Suresh K, Stayrook SE, Tsutsui Y, Radhakrishnan R, Ungureanu D, Knapp S, Lemmon MA

**Title:** [\*Structural Insights into Pseudokinase Domains of Receptor Tyrosine Kinases\*](#)

August 6, 2020 - **Mol Cell**: 79(3):390-405

**Authors:** Cao X, Khitun A, Na Z, Dumitrescu DG, Kubica M, Olatunji E, Slavoff SA

**Title:** [\*Comparative Proteomic Profiling of Unannotated Microproteins and Alternative Proteins in Human Cell Lines\*](#)

August 7, 2020 - **J Proteome Res**: 19(8):3418-3426

**Authors:** Kiyatkin A, van Alderwerelt van Rosenburgh IK, Klein DE, Lemmon MA

**Title:** [\*Kinetics of receptor tyrosine kinase activation define ERK signaling dynamics\*](#)

August 18, 2020 - **Sci. Signal**: 13(645):eaaz5267

**Authors:** Farley-Barnes, KI, Deniz, E, Overton, MM, Khokha, MK, Baserga, SJ

**Title:** [\*Paired Box 9 \(PAX9\), the RNA polymerase II transcription factor, regulates human ribosome biogenesis and craniofacial development\*](#)

August 19, 2020 - **PLoS Genet**: 16(8):e1008967

**Authors:** Breaker RR

**Title:** [\*Imaginary Ribozymes\*](#)

August 21, 2020 - **ACS Chem Biol.**: 15(8):2020-2030

**Authors:** Fernandez RW, Wei K, Wang EY, Mikalauskaite D, Olson A, Pepper J, Christie N, Kim S, Weissenborn S, Sarov M, Koelle MR.

**Title:** [\*Cellular Expression and Functional Roles of All 26 Neurotransmitter GPCRs in the \*C. elegans\* Egg-Laying Circuit\*](#)

September 23, 2020 - **J Neurosci**: 40(39):7475-7488

**Authors:** DiMaio D, Enquist LW, Dermody TS

**Title:** [\*A New Coronavirus Emerges, This Time Causing a Pandemic\*](#)

September 29, 2020 - **Annu Rev Virol**: 7(1):iii-v. doi: 10.1146/annurev-vi-07-042020-100001

**Authors:** Yalcin SE, O'Brien JP, Gu Y, Reiss K, Yi SM, Jain R, Srikanth V, Dahl P, Huynh W, Vu D, Acharya A, Chaudhuri S, Varga T, Batista VS & Malvankar NS

**Title:** [\*Electric field stimulates production of highly conductive microbial OmcZ nanowires\*](#)

October 2020 – **Nat Chem Biol**: 16, 1136-1142

**Authors:** Franzen AD, Lam TT, Williams KR, Nairn AC, Duman RS, Sathyanesan M, Kumar V, Carpenter LL, Newton SS

**Title:** [\*Cerebrospinal fluid proteome evaluation in major depressive disorder by mass spectrometry\*](#)

October 1, 2020 - **BMC Psychiatry**: 20(1):481

**Authors:** Motamedi N, Sewald X, Luo Y, Mothes W, DiMaio D  
**Title:** [\*SV40 Polyomavirus Activates the Ras-MAPK Signaling Pathway for Vacuolization, Cell Death, and Virus Release\*](#)  
October 5, 2020 – **Viruses:** 12(10):1128

**Authors:** Mansuri MS, Peng G, Wilson RS, Lam TT, Zhao H, Williams KR, Nairn AC  
**Title:** [\*Differential Protein Expression in Striatal D1- and D2-Dopamine Receptor-Expressing Medium Spiny Neurons\*](#)  
October 13, 2020 – **Proteomes:** 8(4):27

**Authors:** Clark P, Gee GV, Albright BS, Assetta B, Han Y, Atwood WJ, DiMaio D  
**Title:** [\*Phosphoinositide 3'-Kinase γ Facilitates Polyomavirus Infection\*](#)  
October 20, 2020 - **Viruses:** 12(10):1190

**Authors:** Harwood MB, Dupzyk AJ, Inoue T, DiMaio D, Tsai B  
**Title:** [\*p120 catenin recruits HPV to γ-secretase to promote virus infection\*](#)  
October 21, 2020 - **PLoS Pathog:** 16(10): e1008946

**Authors:** Alpert T, Straube K, Carrillo Oesterreich F, Herzl L, Neugebauer KM  
**Title:** [\*Widespread Transcriptional Readthrough Caused by Nab2 Depletion Leads to Chimeric Transcripts with Retained Introns\*](#)  
October 27, 2020 – **Cell Rep:** 33(4):108324

**Authors:** Na Z, Luo Y, Schofield JA, Smelyansky S, Khitun A, Muthukumar S, Valkov E, Simon MD, Slavoff SA  
**Title:** [\*The NBDY Microprotein Regulates Cellular RNA Decapping\*](#)  
October 27, 2020 – **Biochemistry:** 59(42):4131-4142

**Authors:** Luo X, Song R, Moreno DF, Ryu HY, Hochstrasser M, Acar M  
**Title:** [\*Epigenetic Mechanisms Contribute to Evolutionary Adaptation of Gene Network Activity under Environmental Selection\*](#)  
October 27, 2020 - **Cell Rep:** 33(4):108306

**Authors:** Artim SC, Kiyatkin A, Lemmon MA  
**Title:** [\*Comparison of tyrosine kinase domain properties for the neurotrophin receptors TrkB and TrkB\*](#)  
October 30, 2020 – **Biochem J:** 477(20):4053-4070

**Authors:** Zhang Y, Corbett E, Wu S, Schatz DG  
**Title:** [\*Structural basis for the activation and suppression of transposition during evolution of the RAG recombinase\*](#)  
November 2, 2020 - **EMBO J:** 39(21):e105857

**Authors:** Luo Y, Schofield JA, Simon MD, Slavoff SA  
**Title:** [\*Global Profiling of Cellular Substrates of Human Dcp2\*](#)  
November 3, 2020 – **Biochemistry:** 59(43):4176-4188

**Authors:** Gürsoy G, Emani P, Brannon CM, Jolanki OA, Harmancı A, Strattan JS, Cherry JM, Miranker AD, Gerstein M  
**Title:** [\*Data Sanitization to Reduce Private Information Leakage from Functional Genomics\*](#)  
November 12, 2020 – **Cell:** 183(4):905-917.e16

**Authors:** Dermody TS, DiMaio D, Enquist LW  
**Title:** [\*Vaccine Safety, Efficacy, and Trust Take Time\*](#)  
November 13, 2020 - **Annu Rev Virol:** 10.1146/annurev-vi-08-102220-100001

**Authors:** Chou SZ, Pollard TD

**Title:** [Cryo-electron microscopy structures of pyrene-labeled ADP-P\*i\*- and ADP-actin filaments](#)  
November 19, 2020 - **Nat Commun:** 11(1):5897

**Authors:** Malkowski SN, Atilho RM, Greenlee EB, Weinberg CE, Breaker RR

**Title:** [A rare bacterial RNA motif is implicated in the regulation of the \*purF\* gene whose encoded enzyme synthesizes phosphoribosylamine](#)

December 2020 - **RNA:** 26(12):1838-1846

**Authors:** Yalcin S and Malvankar NS

**Title:** [The blind men and the filament: Understanding structures and functions of microbial nanowires](#)

December 2020 - **Current Opinion in Chemical Biology:** 59, 193-201

**Authors:** Reimer KA, Neugebauer KM

**Title:** [Preparation of Mammalian Nascent RNA for Long Read Sequencing](#)

December 2020 - **Curr Protoc Mol Biol:** 133(1):e128

**Authors:** Zsolnay V, Katkar HH, Chou SZ, Pollard TD, and Voth GA

**Title:** [Structural basis for polarized elongation of actin filaments](#)

December 1, 2020 - **Proc. Nat. Acad. Sci. USA:** 117:30458-30464

**Authors:** Salvail H, Balaji A, Yu D, Roth A, Breaker RR

**Title:** [Biochemical Validation of a Fourth Guanidine Riboswitch Class in Bacteria](#)

December 15, 2020 - **Biochemistry:** 59(49):4654-4662

**Authors:** Stabach PR, Zimmerman K, Adame A, Kavanagh D, Saeui CT, Agatemor C, Gray S, Cao W, De La Cruz EM, Yarema KJ, Braddock DT

**Title:** [Improving the Pharmacodynamics and In Vivo Activity of ENPP1-Fc Through Protein and Glycosylation Engineering](#)

January 2021 - **Clin Transl Sci:** 14(1):362-372

**Authors:** Kuo YW, Howard J

**Title:** [Cutting, Amplifying, and Aligning Microtubules with Severing Enzymes](#)

January 2021 - **Trends in Cell Biology:** Vol 31; Iss.1- 50-61

**Authors:** Hocky GM, Sindelar CV, Cao W, Voth GA, De La Cruz EM

**Title:** [Structural basis of fast- and slow-severing actin-cofilactin boundaries](#)

January 1, 2021 - **J Biol Chem:** Volume 296, 2021, 100337

**Authors:** Sun M, Hu K, Bewersdorf J, Pollard TD

**Title:** [Sample Preparation and Imaging Conditions Affect mEos3.2 Photophysics in Fission Yeast Cells](#)

January 5, 2021 - **Biophys J:** 120(1):21-34

**Authors:** Shipps C, Kelly HR, Dahl PJ, Yi SM, Vu D, Boyer D, Glynn C, Sawaya M, Eisenberg D, Batista VS, Malvankar N

**Title:** [Intrinsic electronic conductivity in atomically-resolved amyloid protein fibrils reveals micrometer-long hole hopping via stacked tyrosines](#)

January 12, 2021 - **PNAS:** 118 (2) e2014139118

**Authors:** Yalcin SE, Malvankar NS et al.

**Title:** [Seeing is believing: Novel imaging methods help identify structure and function of Geobacter nanowires in electricity-producing biofilms in Roadmap on emerging concepts in the physical biology of bacterial biofilms: from surface sensing to community formation](#)

January 14, 2021 - **Phys Biol:** 10.1088/1478-3975/abdc0e

**Authors:** Cao X, Khitun A, Luo Y, Na Z, Phoodokmai T, Sappakhaw K, Olatunji E, Uttamapinant C, Slavoff SA

**Title:** [Alt-RPL36 downregulates the PI3K-AKT-mTOR signaling pathway by interacting with TMEM24](#)

January 21, 2021 - **Nat Commun:** 12(1):508

**Authors:** Panchapakesan SSS, Corey L, Malkowski SN, Higgs G, Breaker RR

**Title:** [A second riboswitch class for the enzyme cofactor NAD](#)

January 27, 2021 - **RNA:** (1):99-105

**Authors:** Rosa-Mercado NA, Zimmer JT, Apostolidi M, Rinehart J, Simon MD, Steitz JA

**Title:** [Hyperosmotic stress alters the RNA polymerase II interactome and induces readthrough transcription despite widespread transcriptional repression](#)

February 4, 2021 - **Mol Cell:** 81(3):502-513.e4

**Authors:** Torabi SF, Vaidya AT, Tycowski KT, DeGregorio SJ, Wang J, Shu MD, Steitz TA, Steitz JA

**Title:** [RNA stabilization by a poly\(A\) tail 3'-end binding pocket and other modes of poly\(A\)-RNA interaction](#)

February 5, 2021 - **Science:** 371(6529):eabe6523

**Authors:** Sappakhaw K, Jantarug K, Slavoff SA, Israsena N, Uttamapinant C

**Title:** [A Genetic Code Expansion-Derived Molecular Beacon for the Detection of Intracellular Amyloid- \$\beta\$  Peptide Generation](#)

February 19, 2021 - **Angew Chem Int Ed Engl:** 60(8):3934-3939

**Authors:** Reimer KA, Mimoso CA, Adelman K, Neugebauer KM

**Title:** [Co-transcriptional splicing regulates 3' end cleavage during mammalian erythropoiesis](#)

March 4, 2021 - **Mol Cell:** 81(5):998-1012.e7

**Authors:** Panchapakesan SSS, Breaker, RR

**Title:** [The case of the missing allosteric ribozymes](#)

April, 2021 - **Nat Chem Biol:** 17(4):375-382

**Authors:** Gordon JM, Phizicky DV, Neugebauer KM

**Title:** [Nuclear mechanisms of gene expression control: pre-mRNA splicing as a life or death decision](#)

April 2021 - **Curr Opin Genet Dev:** 67:67-76

**Authors:** Wolpaw AJ, Bayliss R, Büchel G, Dang CV, Eilers M, Gustafson WC, Hansen GM, Jura N, Knapp S, Lemmon MA, Levens D, Maris JM, Marmorstein R, Metallo SJ, Park JR, Penn LZ, Rape M, Roussel MF, Shokat KM, Tansey WP, Verba KA, Vos SM, Weiss WA, Wolf E, Mossé YP

**Title:** [Drugging the 'undruggable' MYCN oncogenic transcription factor: Overcoming previous obstacles to impact childhood cancers](#)

April 1, 2021 - **Cancer Res:** 81(7):1627-1632

**Authors:** Bibeau JP, Gray S, De La Cruz EM

**Title:** [Clusters of a Few Bound Cofilins Sever Actin Filaments](#)

April 2, 2021 - **J Mol Biol:** 433(7):166833

**Authors:** Torabi SF, Chen YL, Zhang K, Wang J, DeGregorio SJ, Vaidya AT, Su Z, Pabit SA, Chiu W, Pollack L, Steitz JA

**Title:** [Structural analyses of an RNA stability element interacting with poly\(A\)](#)

April 6, 2021 - **Proc Natl Acad Sci U S A:** 118(14):e2026656118

**Authors:** Luo Y, Schofield JA, Na Z, Hann T, Simon MD, Slavoff SA

**Title:** [Discovery of cellular substrates of human RNA-decapping enzyme DCP2 using a stapled bicyclic peptide inhibitor](#)

April 15, 2021 - **Cell Chem Biol:** 28(4):463-474.e7

**Authors:** Ganga AK, Kennedy MC, Oguchi ME, Gray S, Oliver KE, Knight TA, De La Cruz EM, Homma Y, Fukuda M, Breslow DK

**Title:** [\*Rab34 GTPase mediates ciliary membrane formation in the intracellular ciliogenesis pathway\*](#)

May 8, 2021 - **Curr Biol:** S0960-9822(21)00622-9

**Authors:** Bryant CJ, Lorea CF, de Almeida Jr HL, Weinert L, Vedolin L, e Vairo FP, and Baserga SJ

**Title:** [\*Biallelic splicing variants in the nucleolar 60S assembly factor RBM28 cause the ribosomopathy ANE syndrome\*](#)

May 11, 2021 - **PNAS:** 118 (19) e2017777118

## New Research Grants

### Faculty

#### **PI - Gerstein**

**Project Title:** *A Big Data Approach to Identify Epigenetic, Transcriptomic, and Network Dynamics as Immune Dysfunction Drivers Associated with HIV Infection and Substance Use Disorder (hivbigdat)*

**Source of Support:** National Institute on Drug Abuse/NIH/DHHS

#### **PI - Gerstein**

**Project Title:** *Enhancing open data sharing for functional genomics experiments: Measures to quantify genomic information leakage and file formats for privacy preservation (prr01)*

**Source of Support:** National Institutes of Health

#### **PI - Gerstein**

**Project Title:** *Yale/NIDA Neuroproteomics Center (nida3)*

**Source of Support:** National Institute on Drug Abuse/NIH

#### **PI - Gerstein**

**Project Title:** *The Y-SCORCH Data Generation Center at Yale for Single-Cell Opioid Responses in the Context of HIV (schorchum1)*

**Source of Support:** National Institute on Drug Abuse/NIH

#### **PI - Howard**

**Project Title:** *Dendrite structure: Data-Driven Models to Bridge from Molecules to Morphology*

**Source of Support:** National Institute of Neurological Disorders and Stroke/NIH

#### **PI - Howard**

**Project Title:** *BII-Design: Evolutionary Morphogenesis and Biodiversity Institute (EMBody)*

**Source of Support:** National Science Foundation

#### **PI - Howard**

**Project Title:** *Microtubule Severing and Regrowth by Spastin*

**Source of Support:** National Institutes of Health

#### **PI - Kabeche**

**Project Title:** *Defining the DNA damage pathway in faithful mitotic progression (after the fact)*

**Source of Support:** National Cancer Institute/NIH/DHHS

#### **PI - Malvankar**

**Project Title:** *EAGER: Probing quantum-coherent transport in bacterial protein nanowires*

**Source of Support:** National Science Foundation

**PI - Neugebauer**

**Project Title:** Analysis of transcription and splicing coordination during erythropoiesis using single molecule RNA-seq

**Source of Support:** National Heart, Lung, and Blood Institute/NIH/DHHS

**PI - Neugebauer**

**Project Title:** Biogenesis and function of a novel class of stress-induced long non-coding RNAs

**Source of Support:** National Institute of Health/DHHS

**PI - Simon**

**Project Title:** RNA Degradation Enzymes: Novel Targets in Non-Small Cell Lung Cancer

**Source of Support:** Department of the Army

**PI - Simon**

**Project Title:** Revealing the dynamics of RNA metabolism with nucleotide recoding chemistry

**Source of Support:** National Institutes of Health/DHHS

**PI - Steitz**

**Project Title:** Supplement: Molecular Basis of Cancer Virus Replication, Transformation, and Innate Defense

**Source of Support:** National Institutes of Health/DHHS

**PI - Steitz**

**Project Title:** Biogenesis and function of a novel class of stress-induced long non-coding RNAs

**Source of Support:** National Institutes of Health/DHHS

## **Postdocs, Research Scientists and Associates**

**Arthur, Ashley**

**Project Title:** Examining cell polarity in nerve nets

**Source of Support:** National Institutes of Health/DHHS

**Gürsoy, Gamze**

**Project Title:** Realistic quantification of potential privacy loss from genomic summary results

**Source of Support:** National Human Genome Research Institute/NIH/DHHS

**Sindelar, Charles**

**Project Title:** Elucidating a novel flagellar architecture from the pathogenic spirochete *Leptospira* and its role in motility

**Source of Support:** National Institutes of Health/DHHS

We would appreciate any [support](#) from the alumni that would help to advance the mission of MB&B.

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