

# CURRICULUM VITAE

HUMAIRA GOWHER

ASSOCIATE PROFESSOR OF BIOCHEMISTRY

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## ADDRESS:

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## EDUCATION:

1991 -1994	B.S. Honors Biochemistry	Aligarh Muslim University, India
1994 -1997	M.S. Biochemistry ( <i>Distinction</i> )	Aligarh Muslim University, India
1999 - 2002	Ph.D. Biochemistry ( <i>Summa cum lauda</i> )	Justus Leibeg Universitaet Geissen, Germany Advisor: Prof. Albert Jeltsch Thesis: Biochemical Investigation of DNA methyltransferases

## POSITIONS AND HONORS

### Positions and Employment

1997 - 2002	Graduate Research Assistant, Indian Institute of Science, Bangalore, India and Justus Leibeg University, Giessen, Germany
2002 - 2005	Research Associate, Jacobs University, Bremen, Germany
2005 - 2009	Postdoctoral Visiting Fellow, NIDDK, NIH, Bethesda, MD
2009 - 2013	Research Scientist, NIDDK, NIH, Bethesda, MD
2013 - 2019	Assistant Professor, Department of Biochemistry, Purdue University, West Lafayette, IN
2019-	Associate Professor, Department of Biochemistry, Purdue University, West Lafayette, IN

### Other Experience and Professional Memberships

2015-Present	Member, American Heart Association, American Chemical Society
2013 - Present	Member, Purdue University Center for Cancer Research
2005 - Present	Member, American Society for Biochemistry and Molecular Biology
1999 - Present	Member, Epigenetics Society (earlier DNA methylation Society)
1999 - 2003	Graduiertenkolleg "Biochemie von Nukleoproteinkomplexen"
2000 - 2005	Associate Member, FEBS and IUBMB

## Honors and Awards

1994	Merit Scholarship for Undergraduate studies from Dept. of Biochemistry, Aligarh Muslim University
1996	Research Fellowship Award for Graduate studies from Indian Institute of Science, Bangalore, India
2001	Young Scientist Award by Federation of European Biological Society
2002	Award of excellence, " <i>Summa cum lauda</i> " for doctoral dissertation
2003	Postdoctoral Fellowship awarded by the DAAD, Germany
2015	Showalter Trust Award, Purdue University
2017	Scientist Development Award, American Heart Association.
2019	<i>Seed for Success</i> Award for Research Excellence by Purdue University
2019	<i>Millionaire Club</i> Award by College of Agriculture, Purdue University

## PUBLISHED WORK

\*Undergraduate Student, \*\* Graduate student, Bold/underlined: corresponding author

1. Hammad A, Abutaleb NS, Elsebaei MM, Norvil AB\*\*, Alswah M, Ali AO, Abdel-Aleem JA, Alattar A, Bayoumi SA, **Gowher H**, Seleem MN, Mayhoub AS. From Phenylthiazoles to Phenylpyrazoles: Broadening the Antibacterial Spectrum toward Carbapenem-Resistant Bacteria. *J Med Chem.* **2019** Aug 19. Impact Factor: 6.25
2. Jeltsch A, Gowher H. Editorial-Role of DNA Methyltransferases in the Epigenome. *Genes (Basel).* **2019** Jul 30;10(8). Impact Factor: 3.3. *Invited Review*
3. Norvil AB\*\*, Saha D\*\*\*, Saleem Dar M\*\*\*, Gowher H. Effect of Disease-Associated Germline Mutations on Structure Function Relationship of DNA Methyltransferases. *Genes (Basel).* **2019** May 14;10(5). Impact Factor: 3.3 Times cited : 3
4. Elsebaei MM, Mohammad H, Samir A, Abutaleb NS, Norvil AB\*\*, Michie AR\*, Moustafa MM, Samy H, **Gowher H**, Seleem MN, Mayhoub AS. Lipophilic efficient phenylthiazoles with potent undecaprenyl pyrophosphatase inhibitory activity. *Eur J Med Chem.* **2019** Aug 1;175:49-62. Impact Factor: 4.8 Times cited : 2
5. Veland N, Lu , Hardikar S, Gaddis S, Zeng Y, Liu B, Estecio MR, Takata Y, Lin K, Tomida MW, Shen J, Saha D\*\*\*, **Gowher H**, Zhao H, Chen T. DNMT3L facilitates DNA methylation partly by maintaining DNMT3A stability in mouse embryonic stem cells. *Nucleic Acids Res.* **2019** Jan 10;47(1):152-167, Impact Factor: 11.5. Times cited: 5
6. **Gowher H** and Jeltsch A. Mammalian DNA methyltransferases: new discoveries and open questions. *Biochemical Society Transactions* **2019** Jun 28;47(3):959. Impact Factor: 3.4. Times cited : 19 *Invited Review*
7. He M, Yang Q\*\*\*, Norvil, AB\*\*, Sherris D and Gowher H. Characterization of small molecules inhibiting pro-angiogenic activity of the zinc finger transcription factor Vezfl. *Molecules.* **2018** Jul 3;23 (7)in section Medicinal Chemistry. Impact Factor: 3.5.

8. Alabdi, LA \*\*, He M, Yang Q\*\*\*, Norvil, AB\*\* and **Gowher H**. The transcription factor Vezf1 represses the expression of the antiangiogenic factor Cited2 in endothelial cells. *J Biol Chem*. **2018 Jul 13;293 (28):11109-11118**. Impact Factor: 4.1 Times cited: 5
  
9. Petell CJ\*\*, Loiseau G\*, Gandy R\*, Pradhan S and **Gowher H**. A refined DNA methylation detection method using MspJI coupled quantitative PCR *Anal Biochem*. **2017 Sep 15;533:1-9** Impact Factor: 2.2 Times cited: 2
  
10. Norvil AB\*, Petell CJ\*\*, Alabdi LA\*\*, Wu L\*, Rossie S, **Gowher H**. Dnmt3b methylates DNA by a non-cooperative mechanism and its activity is unaffected by manipulations at the predicted dimer interface. *Biochemistry* **2016 Nov 4th**. [Epub ahead of print] Impact Factor: 3.0 Times cited: 6
  
11. Savell KE, Gallus NV, Simon RC, Brown JA, Revanna JS, Osborn MK, Song EY, O'Malley JJ, Stackhouse CT, Norvil A\*, **Gowher H**, Sweatt JD, **Day JJ**. Extra-coding RNAs regulate neuronal DNA methylation dynamics. *Nat Commun*. **2016 Jul 7;7:12091**.  
Contribution: *Our lab contributed the in vitro biochemical assays to determine interaction between Dnmt3a and Fos ecRNA's.*  
 Impact Factor: 12.1 Times cited: 28  
  
*Commentary and News Report on Nature Communications publication, July 2016.*  
[http://www.eurekalert.org/pub\\_releases/2016-07/uoa-err070716.php](http://www.eurekalert.org/pub_releases/2016-07/uoa-err070716.php)
  
12. Petell CJ\*\*, Alabdi L\*\*, He M, San Miguel P, Rose R\*, **Gowher H**. An epigenetic switch regulates de novo DNA methylation at a subset of pluripotency gene enhancers during embryonic stem cell differentiation. *Nucleic Acids Res*. **2016 Sep 19;44 (16):7605-17**.  
 Impact Factor: 11.5 Times cited: 33  
  
*In October 2016, Commentary and News Report on Nucleic Acids Research publication from Purdue Newsroom was published by 3 independent new outlets increasing the altmetric score of this publication to 37.*  
<http://www.purdue.edu/newsroom/releases/2016/Q4/key-epigenetic-switch-mechanism-in-gene-regulation-discovered.html>  
  
<https://phys.org/news/2016-10-key-epigenetic-mechanism-gene.html>  
  
<https://www.healthcanal.com/cancers/75128-key-epigenetic-switch-mechanism-in-gene-regulation-discovered.html>  
  
[http://www.seedquest.com/news.php?type=news&id\\_article=81827&id\\_region=&id\\_category=&id\\_crop=](http://www.seedquest.com/news.php?type=news&id_article=81827&id_region=&id_category=&id_crop=)
  
13. **Gowher H**, Brick K, Camerini-Otero RD, Felsenfeld G. Vezf1 protein binding sites genome-wide are associated with pausing of elongating RNA polymerase II *Proc Natl Acad Sci U S A*. **2012 Feb 14;109(7):2370-5**.  
 Impact Factor: 9.7 Times cited: 21
  
14. **Dickson J, Gowher H**, Strogantsev R, Gaszner M, Hair A, Felsenfeld G, West AG. VEZF1 elements mediate protection from DNA methylation *PLoS Genet*. **2010 Jan 6 (1):e1000804**  
 Impact Factor: 9.4 Times cited: 107

15. **Gowher H**, Stuhlmann H, Felsenfeld G. Vezfl Regulates Genomic DNA Methylation Through its Effects on Expression of DNA Methyltransferase Dnmt3b. *Genes Dev.* **2008 Aug 1**;22(15):2075-84.  
Impact Factor: 14.1 Times cited: 41
16. Goyal R, Rathert P, Laser H, **Gowher H**, Jeltsch A. Phosphorylation of serine-515 activates the Mammalian maintenance methyltransferase Dnmt1. *Epigenetics.* **2007 Sep**; 2 (3), 155-160.  
Impact Factor: 4.5 Times cited: 42
17. Xie ZH, Huang YN, Chen ZX, Riggs AD, Ding JP, **Gowher H**, Jeltsch A, Sasaki H, Hata K, Xu GL. Mutations in DNA methyltransferase DNMT3B in ICF syndrome affect its regulation by DNMT3L. *Hum Mol Genet* **2006 May 1**; 15, 1375-1385.  
Impact Factor: 7.6 Times cited: 52
18. **Gowher H**, Loutchanwoot P, Vorobjeva O, Handa V, Jurkowska RZ, Jurkowski TP, Jeltsch A. Mutational analysis of the catalytic domain of the murine Dnmt3a DNA-(cytosine C5)-methyltransferase. *J Mol Biol* **2006 Mar 31**; 357, 928-941.  
Impact Factor: 4.3 Times cited: 83
19. **Gowher H**, Stockdale CJ, Goyal R, Ferreira H, Owen-Hughes T, Jeltsch A. De novo methylation of nucleosomal DNA by the mammalian Dnmt1 and Dnmt3A DNA methyltransferases. *Biochemistry* **2005 Jul 26**; 44, 9899-9904.  
Impact Factor: 3.37 Times cited: 71
20. **Gowher H**, Zhang X, Cheng X, Jeltsch A. Avidin plate assay system for enzymatic characterization of a histone lysine methyltransferase. *Anal Biochem* **2005 Jul 15**; 342, 287-291.  
Impact Factor: 2.6 Times cited: 28
21. **Gowher H**, Liebert K, Hermann A, Xu G, Jeltsch A. Mechanism of stimulation of catalytic activity of Dnmt3A and Dnmt3B DNA-(cytosine-C5)-methyltransferases by Dnmt3L. *J Biol Chem* **2005 Apr 8**; 280, 13341-13348.  
Impact Factor: 5.5 Times cited: 290
22. Ge YZ, Pu MT, **Gowher H**, Wu HP, Ding JP, Jeltsch A, Xu GL. Chromatin targeting of de novo DNA methyltransferases by the PWWP domain. *J Biol Chem* **2004 Jun 11**; 279, 25447-25454.  
Impact Factor: 5.5 Times cited: 201
23. Reither S, Li F, **Gowher H**, Jeltsch A. Catalytic mechanism of DNA-(cytosine-C5)-methyltransferases revisited: covalent intermediate formation is not essential for methyl group transfer by the murine Dnmt3a enzyme. *J Mol Biol* **2003 Jun 13**; 329, 675-684.  
Impact Factor: 4.3 Times cited: 73
24. Fatemi M, Hermann A, **Gowher H**, Jeltsch A. Dnmt3a and Dnmt1 functionally cooperate during de novo methylation of DNA. *Eur J Biochem* **269**, **2002 Oct**; 4981-4984.  
Impact Factor: 3.58 Times cited: 232
25. Urig S, **Gowher H**, Hermann A, Beck C, Fatemi M, Humeny A, Jeltsch A. The Escherichia coli dam DNA methyltransferase modifies DNA in a highly processive reaction. *J Mol Biol* **2002 Jun 21**; 319, 1085-1096.

Impact Factor: 3.9 Times cited: 98

26. **Gowher H**, Jeltsch A. Molecular enzymology of the catalytic domains of the Dnmt3a and Dnmt3b DNA methyltransferases. *J Biol Chem* **2002 Jun 7**; 277, 20409-20414.  
Impact Factor: 5.5 Times cited: 204
27. **Gowher H**, Ehrlich KC, Jeltsch A. DNA from *Aspergillus flavus* contains 5-methylcytosine. *FEMS Microbiol Lett* **2001 Nov 27**; 205, 151-155.  
Impact Factor: 2.04 Times cited: 36
28. **Gowher H**, Jeltsch A. Enzymatic properties of recombinant Dnmt3a DNA methyltransferase from mouse: the enzyme modifies DNA in a non-processive manner and also methylates non-CpG [correction of non-CpA] sites. *J Mol Biol* **2001 Jun 22**; 309, 1201-1208.  
Impact Factor: 3.9 Times cited: 228
29. **Gowher H**, Leismann O, Jeltsch A. DNA of *Drosophila melanogaster* contains 5-methylcytosine. *Embo J* **2000 Dec 15**; 19, 6918-6923.  
Impact Factor: 9.369 Times cited: 226
30. **Gowher H**. and Jeltsch A. Molecular enzymology of the EcoRV DNA-(Adenine-N (6))-methyltransferase: kinetics of DNA binding and bending, kinetic mechanism and linear diffusion of the enzyme on DNA. *J Mol Biol* **2000 Oct 13**; 303, 93-110.  
Impact Factor: 3.9 Times cited: 75
31. Friedrich T, Fatemi M, **Gowhar H**, Leismann O, and Jeltsch A. (2000). Specificity of DNA binding and methylation by the M. FokI DNA methyltransferase. *Biochem Biophys Acta* **2000 Jul 14**; 1480, 145-159.  
Impact Factor: 4.2 Times cited: 23
32. Ghirlando R, Giles K, **Gowher H**, Xiao T, Xu Z, Yao H, Felsenfeld G. Chromatin domains, insulators, and the regulation of gene expression. *Biochem Biophys Acta* **2012 Jul**; 1819(7):644-51.  
Impact Factor: 4.2 Times cited: 90 **Invited Review**
33. Giles KE, **Gowher H**, Ghirlando R, Jin C, Felsenfeld G. Chromatin Boundaries, Insulators, and Long-Range Interactions in the Nucleus. *Cold Spring Harb Symp Quant Biol* **2010 Nov 3**; 75:79-85. Times cited: 49 **Invited Review**
34. **Gowher H**, and Jeltsch A. Mechanism of inhibition of DNA methyltransferases by cytidine analogs in cancer therapy. *Cancer Biol Ther* **2004 Nov**; 3, 1062-8.  
Impact Factor: 3.2 Times cited: 91 **Invited Review**
35. Hermann, A., **Gowher, H.**, and Jeltsch, A. Biochemistry and biology of mammalian DNA methyltransferases. *Cell Mol Life Sci* **2004 Oct**; 61, 2571-87.  
Impact Factor: 5.6 Times cited: 613 **Invited Review**

### **Complete List of Published Work in My Bibliography:**

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1BwdVFE2cIkc/bibliography/47969504/public/?sort=date&direction=ascending>

Google Scholar: <https://scholar.google.com/citations?user=s3bfjW4AAAAJ&hl=en>

The published data has approx. citations = **3079**

## INVITED LECTURES AND TALKS

### **Invited Talks at National and International Conferences**

*“Loss of Dnmt3a regulation in cancer”* at FASEB meeting on Biological Methylation, at Florence, Italy **June 2018**

*“Biological outcomes of catalytic specialization of Dnmt3 DNA methyltransferases”* at Keystone meeting on DNA and RNA methylation, Vancouver Canada **January 2018**

*“Biological outcomes of catalytic specialization of Dnmt3 DNA methyltransferases”*, Spotlight talk in ASBMB, Chicago, IL **April 2017**, at GRC Epigenetics, Holderness, Plymouth, NH **August 2017**, at the Keystone Meeting, DNA and RNA methylation, Vancouver, Canada **January 2018**

*“An epigenetic switch regulates de novo DNA methylation at pluripotency gene enhancers”* at the EpiCypher 2016: Biological and Clinical Frontiers in Epigenetics in San Juan, Puerto Rico, **April, 2016**, at the 2016 Midwest Chromatin and Epigenetics meeting in Van Andel Research Institute, Grand Rapids, Michigan, **June, 2016**

*“Histone demethylation sanctions enhancer DNA methylation during embryonic stem cell differentiation”*, at the 7th NEB meeting, “Restriction and Modification Systems”, Gdansk, Poland, **August 2015**, at the 4th Cancer Epigenetics Conference in San Francisco, CA, **November, 2015**

*“Functional interaction of Lsd1 activity and DNA methylation at pluripotent enhancers”*, Abcam sponsored meeting, “Epigenetics: Bridging Development & Disease”, Harvard Medical School, Boston, **May 2015**

*“Modulators of DNA methylation and its role in disease”*, International Conference on “Cellular and Molecular Mechanisms of Disease Processes”, The University of Kashmir, India, **April 2014**, at FASEB meeting on “Biological Methylation”, Nassau, Bahamas **July 2014**

*“Bgp1/Vezfl couples RNA Pol II activity and maintenance of genomic methylation”*, Annual ASBMB meeting “Theme: Transcription and Chromatin”, Washington DC, **July 2011**, at the Gordon Research Conferences Epigenetics, Mechanisms, Development and Disease” Stonehill College Easton, MA, **August 2011**

***Six others prior to joining the faculty position at Purdue.***

### **Invited Lectures National and International Educational Institutions**

*“Epigenetic regulation at distal control elements of genes”* at Laboratory of Cellular and Developmental Biology, NIDDK, NIH, Bethesda **April 2019**

*“Epigenetic regulation at distal control elements of genes”* at the Department of Biochemistry, University of Stuttgart, Germany **April 2019**

*“Epigenetic regulation at distal control elements of genes”* at Fels Cancer Center, Temple University, Philadelphia **October 2018**

“Loss of Dnmt3a regulation in cancer” at Jamia Hamdard University, New Delhi **and** Indian Institute of Technology, Kanpur **September 2018**

“Loss of Dnmt3a regulation in cancer” at University of Texas MD Anderson Cancer Center-Science Park in Smithville, Texas **May 2018**

“Loss of Dnmt3a regulation in cancer” at the Epigenetics and Stem Cell Biology Laboratory (ESCBL) National Institute of Environmental Health Sciences (NIEHS), Research Triangle Park, NC **April 2018**

“Biological outcomes of catalytic specialization of Dnmt3 DNA methyltransferases”, Indiana University School of Medicine, Bloomington, **April 2017**, Biochemistry and Molecular Biology, Indiana University School of Medicine-South Bend, **May 2017**, University of British Columbia, Vancouver, Canada, **September 2017**.

“Use of novel methylation sensitive restriction enzyme in detection of the temporal gain of DNA methylation”, at the New England Biolabs, **June, 2016**

“Modulators of DNA methylation”, at the Department of Biochemistry, Indian Institute of Science, Bangalore India, **April 2014**

“Modulators of DNA methylation”, at the Department of Clinical Biochemistry, University of Kashmir, **April 2014**

“Modulators of DNA methylation”, at the Wisconsin Institute of Discovery, University of Wisconsin, Madison, **Dec 2011**

### **Talk at Purdue**

“Biological outcome of catalytic specialization of DNA methyltransferases”, at the Purdue University Cancer Center, Purdue University, **December 2016**, Department of Biochemistry, **December 2017**

“Histone demethylation sanctions enhancer DNA methylation during embryonic stem cell differentiation”, at the Department of Biological Sciences, Purdue University, **September 2015**

“Targeting of DNA methylation during mES cell differentiation,” at the Department of Chemistry, Purdue University, **September 2014** and at the Department of Biochemistry, Purdue University, **September 2014**.

“Modulators of DNA methylation”, at Purdue University Cancer Center Seminar series, **May 2014**.

## **RESEARCH SUPPORT**

### **Current Grants**

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1. Agency/Title of Grant: **National Science Foundation, / Role of divergent lncRNAs in transcriptional priming and enhancer-mediated activation of nearby genes.**
  2. Duration of Funding: **08/015/2017 to 08/15/2020**
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3. Total amount of award: \$ 223,000/year Total amount for 3 years: \$669,000  
4. Your role: PI

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1. Agency/Title of Grant: **National Institute of Health, R01/ Regulation of Dnmt3 activity at enhancers of cell identity genes during differentiation**  
2. Duration of Funding: 08/01/2017 to 08/31/2022  
3. Total amount of award: \$1,603,208.00 for 5 years  
4. Your role: PI

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1. Agency/Title of Grant: **American Heart Association, Scientist Development Grant Control of antiangiogenic gene expression by Vezfl-mediated Pol II pausing**  
2. Duration of Funding: 07/01/2017-07/30/2020  
3. Total amount of award: \$225,000 for 3 years  
4. Your role: PI

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## SYNERGISTIC ACTIVITIES

### 1. Mentoring of Undergraduate Researchers including from under-represented groups (2013 – present).

I have mentored many undergraduate researchers in my laboratory, of whom six were under-represented minority students. This includes students who participate in research for credit in my laboratory during semester time, and summer research students sponsored through the Purdue REU, College of Agriculture (MASI) and the Purdue Center for Cancer Research (SROP) programs. Notably, six undergraduate researchers, AB Norvil, L Wu, GJ Loiseau, R Gandy, AR Michie and R Rose, have been authors on publications from my laboratory. After completing her undergraduate degree, AB Norvil joined my lab for graduate studies to continue her research. Several NSF-REU supported minority students, after a summer research experience in my lab, were excited to pursue a career in research and teaching. As an example, in 2016, GJ. Loiseau, applied for graduate program at several highly reputed institutions and joined the Biochemistry Program at the University of Wisconsin, Madison in August 2017. These students also use their summer research projects to present in several conferences, which exposes them to various recruiters increasing their chance to find a suitable graduate program.

### 2. Mentoring high school students through the Science Bound Program:

I have participated in Purdue's Science bound program, which is an ongoing partnership between Purdue, the business community, and Indianapolis public schools. It helps the underrepresented minority students and those from low-income households to get access to science, math and technology (STEM) career pathways, and mentors and prepares students for future careers in the



STEM fields. I have hosted one student each during the summers of 2014 and 2015, Gabriela Ovalle, and Jacqueline Christon respectively, from Arsenal Technical High School and Luis F. Ojeda from Tecumseh Junior High School.

### **3. Leadership role in enhancing campus diversity:**

Core Graduate Faculty Diversity Ambassador for Department of Biochemistry for the Diversity Transformation Award of \$149,260. This program entitled, “ Building Partnerships with Historically Black Colleges and Universities: *Graduate Faculty Diversity Ambassador Program*” is aimed to create a dynamic two-way exchange network between faculty in the College of Agriculture and select Historically Black Colleges and Universities (HBCUs). This program is expected to expand the research capacity at the institutions involved, and by cross training and transferring students, break perceived barriers at these institutions. This will facilitate the recruitment of the best and brightest graduate students.

### **4. Mentored teaching experience:**

I have participated in the Effective College Teaching workshop (sponsored by Purdue Colleges of Agriculture and Engineering in year 2014 and 2016), and several other Brown Bag seminar series on the teaching success. This enabled me to learn new ways of effective teaching and develop as a communicator and facilitator in the laboratory and the classroom to teach a crucial Biochemistry Major course to juniors, BCHM462 “Metabolism”.

### **5. Public Outreach:**

I participated as an invited speaker in a networking event organized by the Department of Clinical Biochemistry, University of Kashmir, India in April, 2014 for high school and college graduates about impact of academic career involving teaching and research and maintaining work life balance. This visit also led to a news article in the local newspaper, (<http://www.kashmirilife.net/into-genes-vol06-issue10-59390/>). I have been interviewed by blog writers and short stories about my experience during the advancement of my career were published. <https://www.gyawun.com/meet-kashmiri-scientist/>

### **6. Peer Review services:**

#### **Reviewer for Professional Journals**

PNAS, Nucleic Acids Research, FASEB J, Journal of Molecular Biology, Pharmacological Reports, PLoS, OnePLOS, Genetics, Epigenomics.

#### **Reviewer for Grants**

Early Career Reviewer (ECR) for NIH Special Emphasis Panel/Scientific Review Group Development 2 (DEV2) in 07/2015

Reviewer for Indiana CTSI Core Pilot program 11/2015

Reviewer for American Heart Association, Scientific Review Group Basic Cell Genetics/Epigenetics 1 (Basic Cell GE1) 03/2017

Adhoc Reviewer for NIH Special Emphasis Panel/Scientific Review Group:

Development 2 (DEV2) 09/2017  
Molecular Genetics B (MGB) 02/2018,  
Development 2 (DEV2) 01/2019

## **7. Conference organizing:**

2016 Advisory Board Member of GTCBio for organizing the 5<sup>th</sup> Cancer Epigenetics Conference in San Francisco.

Co-organizer of the Chromatin & Epigenetics Symposium on Oct 11<sup>th</sup>, 2016 at the Purdue University.

Chair and Organizer of the Department of Biochemistry Research Retreat for 4 years from 2016-2019