MADHUSUDAN CHOUDHARY

CURRICULUM VITAE

Department of Biological Sciences,
Sam Houston State University,
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EDUCATION

Ph.D. Genetics McMaster University, Hamilton, Canada, May 1988
Advisor: Prof. Rama Singh
DISSERTATION: "*Genetic Structure and Species Divergence in Natural Populations of Drosophila"*

M. Sc. Botany (specialized in Cytogenetics) Patna University, Patna, India, July 1977
(Held 2nd rank in the Class)

B. Sc (Honours) in Botany, Zoology and Chemistry Patna University, Patna, India, May 1974
(Held 1st rank in the class)

EMPLOYMENT

Assistant Professor- Department of Biological Sciences, Sam Houston State University, Huntsville, Texas. September, 2008-present

Research Assistant Professor- Department of Microbiology & Molecular Genetics, U.T. Medical School at Houston, Texas. January, 1993-August, 2008
(Collaborator and Advisor: Prof. Samuel Kaplan)

Huxley Research Instructor- Department of Evolutionary Biology, Rice University, Houston, Texas. September, 1990- December, 1992
(Collaborator and Advisor: Joan Strassmann and Prof. David Queller)

Research Associate- Department of Zoology, Duke University, Durham, North Carolina. September, 1987- August, 1987
(Advisor: Prof. Cathy Laurie)

Graduate Teaching Assistant- Dept. of Biology, McMaster University, Hamilton, Canada. 1982-1987

Lecturer- Patna Science College, Patna University, India. 1979-1982

CSIR Research Fellow (Govt. Of India)) - Cytogenetics Laboratory, Patna University, India. 1977-1979

AWARDS & SCHOLARSHIPS

Nominated by UT Medical School for Advance Research Program (ARP) proposal, State of Texas, 2006

Teacher Appreciation Award by Texas Academy of Mathematics & Science (TAMS), University of North Texas, Denton, Texas 2002

Yates Scholarship awarded by McMaster University, Canada. 1987
Graduate Student Travel- Award Genetics Society of America, 1986
Junior Research Fellowship- Awarded by CSIR, Government of India, 1977-1979
National Merit Scholarship- Awarded by Government of India, 1975-1977

TEACHING EXPERIENCE

Sam Houston State University
Graduate course:
Advance Genetics (BIO591) - fall 2009 (10 students /class)

Undergraduate course:
Undergraduate Seminar (BIO411) - spring 2010 (50 students/class)
Introductory Applied Microbiology (BIO247W) - spring 2010 (30 students/class)
Introductory Genetics (BIO345W) - fall and spring semesters of 2008-2010 (75 students/class)
Genetic Analysis of Human Disease (BIO436W) - Spring 2009 (15 students/class)
Undergraduate Seminar (BIO410) - fall 2008 (10 student/class)
Introductory Biology (BIO114) - fall and spring 2008-2009 (30 students/class)

UT Medical school, Houston
Clinical Microbiology Lab (30 students/class)
Short course in Recombinant DNA Technology (20 students, including postdoctoral fellows)

Houston Community College system (HCCS)
Introductory Biology I (30 students/class)
Introductory Biology II (30 students/class)
Microbiology (20 students/class)

Patna Science College, Patna
Cytogenetics
Mendelian and Molecular Genetics
Microbial Genetics

RESEARCH INTERESTS

Bacterial Genome Analyses: Genome structure, organization, and complexity
Cell Cycle Regulation of *Rhodobacter sphaeroides*
Molecular Analysis of Gene-Expression: Microarray expression
Phylogenetic Analysis of Bacterial Species
Gene Duplication Analysis: Functional constraints and evolution of metabolic networks

RESEARCH GRANTS AND CONTRACTS

Total Research Funding: $16,800

Awarded:

PI: Madhusudan Choudhary 06/01/09-05/31/10
Project Title: *Genome analysis of Rhodobacter sphaeroides genome*
Sam Houston State University Competitive Intramural Enhancement Grant for Research (EGR)
Role: PI

Pending:

PI: Madhusudan Choudhary 06/01/10-05/31/11
Project Title: *Role of CtrA during cell cycle of Rhodobacter sphaeroides*
Sam Houston State University Competitive Intramural Enhancement Research Grant (ERG)
Role: PI

PI: Cihan Varol
Project Title: *Synchronizing Activities of Breast Cancer and Environment Research Centers*
National Institute of Health
Role: Co-PI

Prior submission and under revision:

PI: Madhusudan Choudhary
National Science Foundation (RUI)
Project Title: *Genome analysis of Rhodobacter sphaeroides genome*
Role: PI

PI: Madhusudan Choudhary
National Institute of Health (R15)
Project Title: *Genome analysis of Rhodobacter sphaeroides genome*
Role: PI

PI: Samuel Kaplan
Global genome mutagenesis and essential gene analysis of Rhododbacter sphaeroides
Texas Higher Education Coordinating Board (Advanced Research Program)
Role: Co-PI

GRADUATE STUDENTS
Advisor
Lin Lin (2008-2010)
Anne Peters (2009-2011)

Committee Member
Alison Garner (2008-2010)
Terah McClendon (2008-2010)
Chas Stephens (2009-2011)

UNDERGRADUATE RESEARCH STUDENTS

Anish Bavishi (2007-present) Rice University
Ankur Abhishek (2008-present), UT-Austin
Anne Peters (2008-2009), SHSU
Kristen Schroeder (2008), SHSU
Randi Nicole Harbor (2008-present), SHSU
Tim Johnson (2009), SHSU
Kristina Hernandez (2008), SHSU
Ryan Bentke (2009), SHSU
Ashay Bavishi (2009), SHSU
Sara (2009) High School

RESEARCH PUBLICATION:
(Total Citations 614; ISI reports as of September 2009)

Research publications (Peer reviewed):

1. Singh, R. S., Choudhary, M., and David, J. R. (1987) Contrasting pattern of geographic variation in cosmopolitan sibling species *Drosophila melanogaster* and *D. simulans*. **Biochem**. **Genet**., 25: 27-40. **(Citation: 37); Impact factor 0.908**

2. Choudhary, M. and Singh, R. S. (1987) Historical effective size and the level of genetic variation in *Drosophila melanogaster* and *Drosophila pseudoobscura*. **Biochem**. **Genet.**, 25:41-51**. (Citation: 13); Impact factor 0.908**

3. Choudhary, M. and Singh, R. S. (1987) A comprehensive study of genic variation in natural populations of *Drosophila melanogaster.* III. Variation in genetic structure and their causes between *Drosophila melanogaster* and its sibling species, *Drosophila simulans*. **Genetics**, 117: 697-720. **(Citation: 46), Impact factor 4.389**

4. Singh, R. S. and Choudhary, M. (1989) Evolutionary relationships between gene-structure and gene-regulation variation in *Drosophila melanogaster*. **J. Genetics**, 68: 61-74.5. **(Citation: 1), Impact factor 0.844**

5. Choudhary, M. and Laurie, C. (1991) Use of in vitro mutagenesis to analyze thmolecular basis of the difference in Adh expression associated with the allozyme polymorphism in *Drosophila melanogaster*. **Genetics**, 129: 481-488. **(Citation: 35), Inpact factor 4.389**

6. Laurie, C., Bridgham, J., and Choudhary, M. (1991) Association between DNA sequence variation and variation in expression of the Adh gene in natural populations of *Drosophila melanogaster*. **Genetics**, 129: 489-499. **(Citation: 69), Impact factor 4.389**

7. Choudhary, M., Coulthart, M. B., and Singh, R. S. (1992) A comprehensive study of genic variation in natural populations of *Drosophila melanogaster* VI. patterns and processes of genic divergence between *D. melanogaster* and its sibling species, *D. simulans*. **Genetics,** 130: 843-853. **(Citation 17), Impact factor 4.389**

8. Choudhary, M., Strassmann, J., Solis, C., and Queller, D. (1993) Microsatellite variation in a social insect. **Biochem. Genet.,** 31: 87-96. **(Citation: 39); Impact factor 0.908**

9. Choudhary, M., Strassmann, J., Queller, D., Turillazzi, S., and Cervo, R. (1994) Social parasites in polistine wasps are monophyletic: Implications for sympatric speciation. **Proc. R. Soc. Lond. B,** 257: 31-35. **(Citation: 33), Impact factor 7.46**

10. Choudhary, M., Mackenzie, C., Nereng, K. S., Sodergren, E., Weinstock, G., and Kaplan, S. (1994) Multiple chromosomes in bacteria: Structure and function of chromosome II of *Rhodobacter sphaeroides* $2.4.1^T$. **J. Bacteriology,** 176: 7694-7702. **(Citation: 32), Impact factor 4.013**

11. Choudhary, M., Mackenzie, C., Nereng, K. S., Sodergren, E., Weinstock, G., and Kaplan, S. (1997) Low resolution sequencing of *Rhodobacter sphaeroides* $2.4.1^T$: Chromosome II is a true chromosome. **Microbiology,** 143:3085-3099. **(Citation: 25); Impact factor 3.20**

12. Mouncey, N. J., Choudhary, M., and Kaplan, S. (1997) Characterization of genes encoding dimethylsulfoxide reductase of *Rhodobacter sphaeroides* $2.4.1^T$: an essential metabolic gene function encoded on chromosome II. **J. Bacteriology,** 179: 7617-7624. **(Citation: 45), Impact factor 4.013**

13. Choudhary, M., C. Mackenzie, N. J. Mouncey, and S. Kaplan (1999) RsGDB, *Rhodobacter sphaeroides* genomic database. **Nucleic Acid Res.**, 27:61-62. **(Cited 9), Impact factor 6.317**

14. Choudhary, M. and S. Kaplan (2000) DNA sequence analysis of photosynthetic region of *Rhodobacter sphaeroides* $2.4.1^T$. **Nucleic Acid Res.**, 28:862-867. **(Citation: 43), Impact factor 6.317**

15. Mouncey, N. J., Gak, E., Choudhary, M., Oh, J., and Kaplan, S. (2000) Respiratory pathways of *Rhodobacter sphaeroides* 2.4.1$^{T:}$ identification and characterization of genes encoding quinol oxidases. **FEMS Microbiology Letters**, 192:205-210. **(Citation: 11); Impact factor 2.223**

16. Mackenzie, C, Choudhary, M., Larimer, F. W., Predki, P. E., Stilwagen, S., Armitage, J., Barber, R. D., Donohue, T. J., Hosler, J. P., Newman, J. E., Sphapleigh, J. P., Sockett, R. E., Zeilestra-Ryalls, J., and Kaplan, S. (2001) The home stretch, a first analysis of the nealy completed genome of *Rhodobacter sphaeroides* 2.4.1 **Photosynthesis Research**, 70:19-41. **(Citation: 32); Impact factor 2.724**

17. Zhou, S., Kvikstad, E., Kile, A., Severin, J., Forrest, D., Runnheim, R., Churas, C., Anantharaman, T. S., Hickman, J. W., Mackenzie, C., Choudhary, M., Donohue, T., Kaplan, S., and Schwartz, D. C. (2003) Whole-genome shotgun optical mapping of *Rhodobacter sphaeroides* 2.4.1 and its use for whole-genome shotgun sequence assembly **Genome Research,** 13: 2142-2151. **(Citation: 23), Impact factor 11.224**

18. Zeng, X., Choudhary, M., and Kaplan, S. (2003) A second and unusual *pucBA* operon of *Rhodobacter sphaeroides* 2.4.1: Identification and characterization **J. Bacteriology,** 185:6171-6184. **(Citation: 21), Impact factor 4.013**

19. Choudhary, M., Fu, Y. X., Mackenzie, C., and Kaplan, S. (2004) DNA Sequence duplication in *Rhodobacter sphaeroides* genome: Evidence of an ancient partnership between chromosome I and II. **J. Bacteriology,** 186: 2019-2027. **(Citation: 6), Impact factor 4.013**

20. Morton, R. A., Choudhary, M., Cariou, M., and Singh, R. S. (2004) A reanalysis of protein polymorphism in *Drosophila melanogaster, D. simulans, D. sechellia and D. mauritiana*: effects of population size and selection. **Genetica,** 120: 101-114. **(Citation: 9); Impact factor 2.034**

21. Pappas, C., Stram, J., Pavel, I., Moskvin, O., Machanzie, C., Choudhary, M., Land, M., Larimer, Frank W., Kaplan, S., and Gomelsky, M. (2004) Construction and validation of the *Rhodobacter sphaeroides* 2.4.1 DNA microarray: transcriptome flexibility at diverse growth modes. **J. Bacteriology,** 186:4748-4758. **(Citation: 35), Impact factor 4.013**

22. Choudhary, M., Zanhua, X., Fu, Y. X., and Kaplan, S. (2007) Genome analysis of three strains of *Rhodobacter sphaeroides*: Evidence of rapid evolution of CII. **J. Bacteriology,** 189: 1914-1921. **(Citation: 11), Impact factor 4.013**

23. Bavishi, Anish, Ankur Abhishek, Lin Lin, and Madhusudan Choudhary (2009) Complex Prokaryotic Genome Structure: rapid Evolution of CII. Genome (Manuscript submitted)

24. Bavishi, Anish, Lin Lin, , Schroeder, Kristen Anne Peters, and Madhusudan Choudhary (2009) Abundance of Gene Duplication and the Evolution of Specific Metabolic

Functions in the Complex Genome of *Rhodobacter sphaeroides* 2.4.1. Microbiological Research (manuscript submitted)

25. Bavishi, Anish and M. Choudhary (2009) The effects of video games on educational, physical, and social characteristics of adolescent males. (Manuscript submitted).

Book Chapters and Reviews:

1. Mackenzie, C, Choudhary, M., Nereng, K. S., Sodergren, E., Chidambaram, M., Weinstock, G., and Kaplan, S. (1997) A physical and genetic map of *Rhodobacter sphaeroides* $2.4.1^T$. **Bacterial Genomes: Physical Structure and Analysis**, F. J. de Bruijn, J. R. Lupski, and G. W. Weinstock, eds., pp. 729-731. Chapman & Hall, New York, USA.

2. Mackenzie, C, Chidambaram, M., Choudhary, M., Nereng, K. S., Kaplan, S., and Weinstock, G. (1997) Sequence skimming of chromosome II of *Rhodobacter sphaeroides* $2.4.1^T$. **Bacterial Genomes: Physical Structure and Analysis**, F. J. de Bruijn, J. R. Lupski, and G. W. Weinstock, eds., pp. 541-551. Chapman & Hall, New York, USA.

3. Choudhary, M., Mackenzie, C., Weinstock, G., and Kaplan, S. (1999) Genome sequence skimming of *Rhodobacter sphaeroides* : Chromosome II is a "run of the mill" chromosome. **The phototrophic Prokaryotes,** Peschek, G.A., Loffelhardt, W., and Schmetterer, G., eds., pp. 435-441. Plenum Press, New York, USA.

4. Mackenzie, C., Kaplan, S., and Choudhary, M. (2004) **Multiple Chromosomes**: In Microbial Evolution: Intracellular Mechanisms for Generating Diversity (edited by Robert V. Miller and Martin J. Day), pp. 82-101.

5. Choudhary, M., Mackenzie, C., Donohue, T. J., and S. Kaplan. Purple Bacterial Genomics. (2008) **In Advances in Photosynthesis and Respiration**, C. N. Hunter, F. Daldal, T. J. Beatty, and M. Thurnauer. (eds) Springer Verlag Inc. Vol 28: 691-706.

6. **(All authors contributed equally)** Mackenzie, C., Eraso, J., Choudhary, M., Roh, J., Zeng, X., Bruscella P., Puskas, A., and Kaplan, S. (2007) Post-Genomic Adventures with *Rhodobacter sphaeroides*. **Annu. Rev. Microbiol.,** 61: 283-307. (Citation: 12**). Impact factor 14.456**

Presentations in Meeting and Conferences

1. Choudhary, M., and Oaks, A. Hydrolysis of storage protein in maize and wheat. Presented in Silver Anniversary Meeting of Canadian Society of Plant Physiologists, June 1983, University of Waterloo, Canada.

2. Choudhary, M. and Singh, R. S. Variant patterns of genetic diversity in sibling species, *Drosophila melanogaster* and *Drosophila simulans*. Presented at Joint Meeting of

Genetics Society of Canada and Canadian Congress of Biology, June 1985, University of Western Ontario, Canada.

3. Choudhary, M. and Singh, R. S. Historical effective size and the level of genetic variation in *Drosophila melanogaster* and *D. pseudoobscura*. Presented at Annual Meeting of Genetics Society of America, June 1986, University of Illinois, Urbana, USA.

4. Choudhary, M. and Singh, R. S. Variation in genetic structure and their causes in populations of *Drosophila melanogaster* and *D. simulans.* Presented at Annual Meeting of Genetics society of America, June 1987, San Francisco, California, USA.

5. Choudhary, M. and Singh, R. S. A comprehensive study of genetic differentiation between the sibling species, *Drosophila melanogaster* and *D. simulans*: Implication for genetic theories of speciation. Presented at XVIth. International Congress of Genetics, August 1988, Toronto, Canada.

6. Choudhary, M. and Laurie, C. Molecular basis of the difference in Adh expression between polymorphic slow and fast allozymes of *Drosophila melanogaster.* Presented at Annual Drosophila Conference, March 1990, Asilmar, California, USA.

7. Choudhary, M., Strassmann, J., Queller, D., Turillazzi, S., and Cervo, R. The phylogenetic relationships among social parasites and their hosts in polistine wasps. Presented at joint meeting of the American Society of Naturalists, The Society of Systematic Biologists, and The society for the Study of Evolution, June 1992, The Univ. of California at Berkeley, California, USA.

8. Strassmann, J., Hughes, C., Queller, D., Choudhary, M. , and Solis, C. Highly variable microsatellite loci in social wasps. Presented at joint meeting of the American Society of Naturalists, The Society of Systematic Biologists, and The society for the Study of Evolution, June 1992, The Univ. of California at Berkeley, California, USA.

9. Choudhary, M., Kaplan, S., Nereng, K.S., Mackenzie, C., Suwanto, A., Weinstock, G., and Zong, G. Towards the sequencing of chromosome II of Rhodobacter sphaeroides $2.4.1^T$. Presented at the First International Symposium Mapping and Sequencing of Small Genomes, March 1993, Paris, France.

10. Choudhary, M., Mackenzie, C., Nereng, K. S., Weinstock, G., and Kaplan, S. (1994) A high-resolution ordered cosmid map of the small chromosome of *Rhodobacter sphaeroides* $2.4.1^T$. Presented at Annual meeting of the American Society of Microbiologists, May 1994, Lasvegas, Neveda, USA.

11. Choudhary, M., Mackenzie, C., Nereng, K. S., Sodergren, E., Weinstock, G., and Kaplan, S. (1994) Multiple chromosomes in bacteria: Structure and function of chromosome II of *Rhodobacter sphaeroides* $2.4.1^T$. Presented at VIIIth International symposium on photosynthetic prokaryotes, Sept. 10-15, 1994, Urbino, Italy.

12. Choudhary, M., Mackenzie, C., Weinstock, G., and Kaplan, S. (1997) Partial genetic content of chromosome II of *Rhodobacter sphaeroides* 2.4.1^{T}. Presented at IXth International symposium on photosynthetic prokaryotes, Sept. 6-12, 1997, Vienna, Austria.

13. Gomelsky, M., Pappas, C., Sram, J., Macenzie, C., Choudhary, M., and Kaplan., S. (2002) Genome sequence analysis and transcription profiling of the metabolic versatile bacterium, *Rhodobacter spharoides* 2.4.1 Presented at Annual meeting of the American Society of Microbilogists, May 2002, Salt Lake City, Utah, USA.

14. Kaplan, S., Choudhary, M., Mackenzie, R. C., Roh, J. H., and Smith, W. E. (2003) Genome Construction and Analysis in *Rhodobacter sphaeroides* 2.4.1. Presented at Department of Energy Joint Genome Institute (JGI), March 2003, Santa Fe, USA.

15. Bavishi, A., Choudhary, M, Iacono, C., and Gossard, G. (2008) An Inquiry into the effects of video gaming on adolescent males. Presented in a poster session at the Annual Conference of Society of Teachers of Family Medicine (STFM), Baltimore, Maryland, April 2008.

16. Bavishi, A., Madera, J., Hebl, M., and Choudhary, M. (2008) Student perceptions of professors based on academic program, gender, and race. Paper presented in an oral session at The Annual Stanford Undergraduate Psychology conference (SUPC), Palo Alto, California, May 2008.

17. Anish Bavishi, Ankur Abhishek, and Madhusudan Choudhary (2008) Rapid evolution of the second chromosome in bacteria. Presented at the Texas/South-Central ASM meeting at UT Austin, Austin (November 9-11, 2008): (**Joan Abramowitz Award, 2nd Place in poster presentation for undergraduate students**).

18. Ankur Abhishek, Anish Bavishi, and Madhusudan Choudhary (2008) Mitochondrial origin predates *proteobacterial* evolution. Presented at the Texas/South-Central ASM meeting at UT Austin, Austin (November 9-11, 2008).

18. Lin Lin and Madhusudan Choudhary (2008) Characterization of downstream genes regulated by CtrA, a cell cycle master regulator in *Rhodobacter sphaeroides*. Presented at Graduate Research Symposium in the Biological Sciences, Sam Houston State University (December 17th, 2008).

20. Tim Johnson, Randi Harbour, Kristina Hernandez, Lin Lin, and Madhusudan Choudhary (2009) Identification of the chromosomal origins of replication (Ori_{RI} and Ori_{RII}) of the *Rhodobacter sphaeroides*. Presented at the ASM-Texas Branch meeting (March 5-7, 2009): (**Orville Wyass undergraduate student Award, 2nd Place in poster presentation**).

21. Anne Peters, Kristen Schroeder, Lin Lin, and Madhusudan Choudhary (2009) Identification and characterization of gene duplication in *Rhodobacter sphaeroides*. Presented at the ASM-Texas branch meeting (March 5-7, 2009).

22. Kristen Schroeder, Anne Peters, Lin Lin, and Madhusudan Choudhary (2009) Structural-functional constraints on duplicated genes of the *Rhodobacter sphaeroides* Presented at the ASM-Texas branch Meeting (March 5-7, 2009).

23. Cole Anderson, Anish Bavishi, M. Choudhary, and Aaron Lynne (2009) Genomic comparison of the three strains of Salmonella. Presented at the ASM Texas branch meeting (5-7 March, 2009).

24. Lin Lin, Kristen Schroeder, Anne Peters, and Madhusudan Choudhary (2009) Structure-function constraints and gene expression analysis of the duplicated genes in the *R. sphaeroides*Presented at Texas Genetics Society meeting (April 2-4, 2009).

25. Alison Garner, Cole Anderson, Anish Bavishi, Madhusudan Choudhary, and Aaron Lynne (2009) *Salmonella* genomic comparison: evolution of serovar pathogenicity and host adaptation. Presented at the ASM Texas branch Meeting (5-7 November, 2009).

26. Lin Lin and Madhusudan Choudhary (2009) Towards the cell cycle synchronization of *Rhodobacter sphaeroides.* Presented at the ASM Texas branch Meeting (5-7 November, 2009).

27. Anne Peters, Lin Lin, Randi Harbour, Hyuk Cho, and Madhusudan Choudhary (2009) Functional constraint and expression analysis of duplicate genes in *Rhodobacter sphaeroides*. Presented at the ASM-Texas branch meeting (November 5-7, 2009).

Invited Presentation

1. Department of Biology, University of Rochester, Rochester, New York.
   Title: Genetic structures of *D. melonogaster* and *D. simulans*. (April, 1987)

2. Department of Biology, University of Rochester, Rochester, New York.
   Title: Molecular basis of the differential expression between polymorphic fast and slow allozymes of *D. melanogaster* (May 25, 1990)

3. Department of Ecology & Evolutionary Biology, Rice University, Houston, Texas
   Title: The *Adh* gene expression differences in *D. melanogaster* (May 27, 1992)

4. Department of Botany & Zoology, Patna University, Patna, India.
   Title: Molecular basis of the Adh polymorphism in *D. melanogaster* (July10, 1990)

5. Department of Biology, McMaster University, Hamilton, Ontario, Canada.
   Title- Gene expression differences at polymorphic *Adh* locus in *D. melanogaster*

6. Genome variation analysis laboratory, Cornell University, Ithaca, New York

Title: Microsatellite: A useful genetic marker for the determination of genetic relatedness within species of social insects (July 30, 1992)

7. Sixth International symposium on photosynthetic prokaryotes, Vienna, Austria.
   Title: DNA sequencing of CII of *R. sphaeroides*.

8. Department of Natural Sciences, University of Houston-Downtown, Texas
   Title: Genome analysis of *Rhodobacter sphaeroides*

9. Department of Life Sciences, Central College, HCCS, Houston, Texas
   Title: Protein synthesis in prokaryotes and eukaryotes.

10. Department of Biology, Western Kentucky University, Bowling Green, Kentucky.
    Title: Genome analysis of *Rhodobacter sphaeroides* (6th April, 2007)

11. Department of Biological Sciences, Sam Houston State University, Huntsville, Texas.
    Title: Structural and functional organization *Rhodobacter sphaeroides* genome (February 19th, 2008)

12. Department of Biology, University of West Georgia, Carrollton, Georgia
    Title: A tale of two chromosomes in *Rhodobacter sphaeroides* (March, 2008)

13. Department of Basic Medical Sciences, Western University, Pomona, California
    Title: Genomics, Microarray, and proteomics of *Rhodobacter sphaeroides* (April, 2008)

14. Invited Speaker in Plenary Session (Microbial Ecology) at the Texas/South-Central ASM meeting at UT Austin, Austin (November 10, 2008)
    Title: Genome analysis of *Rhodobacter sphaeroides*

15. Invited speaker in Academic Fest organized by AMU at University of Houston (Main Campus), Texas (July 25th, 2009)
    Title: Academic excellence is the highway to success in life.

Non-refereed Publications:

1. Choudhary, M.: Electrophoresis: A powerful tool in Biochemistry. Botanical Bulletin, 1: 86-89. (Published by Patna University Botanical Society, India). 1982.

2. Choudhary, M.: The Synthesis of Myth and Science. Biharika, 37-40.
   (Published by Bihar Association of North America). 2004.

3. Choudhary, M.: Natural Selection or Intelligent Design. Biharika, p. 51
   (Published by Bihar Association of North America). 2006.

Consultant:

Central Research Business Unit, CARGIL INC., Wayzata, Minnesota, USA (2001)
I have provided services of my experiences and expertise in the area of the annotation and metabolic reconstruction of *Rhodobacter sphaeroides* based on its genomics, biochemistry, physiology, and gene regulation.

Genome Annotation:

Participated in Genome Annotation workshop of the *Rhodobacter sphaeroides* genome, held at the University of Wisconsin at Madison, August 8-13, 2003.

PROFESSIONAL SOCIETIES AFFLIATIONS

Member, Sigma Xi (2008- present)
Member, American Association of Advancement of Sciences (AAAS) 2007-present
Member, American Association of Microbiologists (ASM) 2008-present
Member, Texas Brach, ASM (2008-present)
Member, Texas Genetic Society (2009-present)
Judges, Texas Branch ASM Annual Meeting (2008 and 2009)

PUBLIC COMMUNITY SERVICES

President-Bihar Association of North America (2006-2008)
Member- Academic Advisory Council, Fort Bend ISD (2001)
Coordinator- BANA Academic Fest (2000-2009)

Manuscript Reviewed

Abstract reviewer- Annual Biomedical Research Conference for Minority Students (2006-2007)
Genome
Biochemical Genetics

Grants Reviewed

Departmental and University Committees

Departmental Committees
Co-Advisor: *SHAMOS* (Sam Houston Association of Medical Oriented Students)
Cell Biology (2008-present)
Student Research Award (2008-present)
Seminar Committee (Chair, 2009-present)