Chitvan Mittal

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EDUCATION

- **PhD**: Department of Biochemistry Biophysics and Molecular Biology, Iowa State University (2009-2015)
- **MS**: Biochemistry Department, University of Delhi, South Campus, India (2007 – 2009)
- **BS**: Biochemistry Department, Sri Venkateswara College, Delhi University, India (2004 – 2007)

RESEARCH EXPERIENCE

- Doctoral Research

    1. Developed a novel method to effectively quantitate post-translational modifications on individual nucleosomes, in an array of nucleosomal substrates, to study more physiologically relevant scenarios. This tool overcomes limitations of previously used approaches, and is highly versatile

    2. Identified key determinants of chromatin structure in modulating SAGA-mediated nucleosome acetylation. Also probed the mechanism of additional factors, which regulate eukaryotic gene expression

- Masters Research

    1. Characterized the properties of the LOV domain of a novel photoreceptor from *Ostreococcus tauri*, using a variety of biochemical and biophysical approaches.

RESEARCH PUBLICATIONS

- **Mittal, C.**, Olson, S. J., and Shogren-Knaak, M. A. (2016) Activator proteins and linker DNA stimulate SAGA-mediated nucleosome acetylation through multiple mechanisms. Manuscript in preparation
- Young, I. A., **Mittal, C.**, and Shogren-Knaak, M. A. (2016) Expression and purification of histone H3 proteins containing multiple sites of lysine acetylation using nonsense suppression. Protein Expression and Purification, **118**: 92-97
- **Mittal, C**., Blacketer, M. J., and Shogren-Knaak, M. A. (2014) Nucleosome acetylation sequencing to study the establishment of chromatin acetylation. Analytical Biochemistry **457:** 51-58
- Veetil, S. K, **Mittal, C.**, Ranjan, P., and Kateriya, S. (2011) A conserved isoleucine in the LOV1 domain of a novel phototropin from the marine alga *Ostreococcus tauri* modulates the dark state recovery of the domain. Biochimica et Biophysica Acta **7**: 675-682

HONORS AND AWARDS

- Associate Scholar of Professional Future Faculty Program (2013 – present)
- Teaching excellence award, Department of Biochemistry, Iowa State University (2014)
- Best Poster Presentation at The 6th STUPKA Symposium, Iowa State University (2011)

POSTER PRESENTATIONS

- Modulation of SAGA mediated nucleosome acetylation by linker DNA and activator. American Association of Cancer Research, Georgia, 2015
- Nucleosome acetylation sequencing to study the establishment of chromatin acetylation. Midwest Chromatin Epigenetics Meeting, University of Wisconsin, 2014
- Activator and DNA mediated regulation of eukaryotic SAGA complex under inducible gene transcription. 7th STUPKA Symposium, Iowa State University, 2012
- Acetylation dependent multimerization of the yeast SAGA co-activator complex in inducible gene transcription. BBMB 50th Anniversary, Iowa State University, 2010; 6th STUPKA Symposium, Iowa State University, 2011

CONFERENCES AND SYMPOSIA

- American Association of Cancer Research, Atlanta, Georgia (Sept – 2015)
- 2nd Graduate and Professional Research Conference, Iowa State University, Ames (April – 2015)
- Midwest Chromatin and Epigenetics Meeting, University of Wisconsin, Madison (May – 2014)
- International Interdisciplinary Science Conference on Protein Folding and Diseases, New Delhi, India (Dec – 2012)
- 19th Annual Growth Factor and Signal Transduction Conference: RNA in Motion, Iowa State University (Sept – 2010)

TEACHING EXPERIENCES

- Teaching Assistant, Molecular Biophysics and Laboratory in Molecular Biophysics – a course designed to teach a variety of biophysical techniques to probe the structure of biomolecules
- Mentored graduate rotation students in the research lab towards successful training and project completion
- Guest recitation lectures for Laboratory in Molecular Biophysics and Advanced Student Seminar
- HHMI Facilitator for The Principles of Genetics Biology, Undergraduate lab section – leading group discussions and fostering critical thinking and hypothesis testing among undergraduates

LEADERSHIP & ORGANIZATION POSITIONS

- Member of American Association of Cancer Research (2015 – present)
- Preparing Future Faculty Program (2012 – present)
- Academic Chair of the Graduate Student Organization, Iowa State University (2010 – 2011)

REFERENCES

- **Dr. Michael Shogren-Knaak – Principal Investigator, BBMB**
  E-mail - knaak@iastate.edu

- **Dr. Amy Andreotti – Professor, BBMB**
  E-mail – amyand@iastate.edu

- **Dr. Scott Nelson – Associate Professor, BBMB**
  E-mail – swn@iastate.edu