

# *Mohsen Ghasemi, Ph.D.*

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Citizenship: Iran  
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## **Postdocs:**

- **Cancer Epigenetics**- Iran's National Elites Foundation (INEF)  
Breast Cancer Research Institute and Royan Institute, Tehran-Iran

- **Gene Expression; Epigenetics and Development in Cancer**  
NICHD, Bethesda, MD, USA

## **EDUCATION:**

### **Ph.D. Biomedical, 2009- 2015**

University of Delhi, Department of Biomedical Science (Dr. B. R. Ambedkar Center for Biomedical)

**Courses:** Medical Genetics, Epigenetics, Cancer Genetics, Oncology, Molecular Cell Biology, Molecular Genetics of Eukaryotes, Protein Biosynthesis, Genetics of Population, Development of Gene Concept, Gene expression & Regulation and Bioinformatics.

### **Master of Science, Biotechnology, 2005-2007**

University of Kermanshah, Department of Sciences, Kermanshah, Iran.

**Courses:** Complementary Genetics Advanced Statistical Methods, Research Methods, Application of Biotechnology, Quantitative Genetics, Multivariate Statistical Analysis Methods.

## **PUBLICATIONS:**

- **Mohsen Ghasemi**, Vasanthi Dasari, Rakesh K Mishra, Vani Barahmachari. Interaction of Chromatin Remodeling Protein, Ino80 with the Cellular Memory Modules. *Genes and Development*, 2017. Under review.
- Jayant Maini, **Mohsen Ghasemi**, Deepti Yandhuri, Suman Thakur, Vani Barahmachari. Human PRE-PIK3C2B, an intronic cis-element with dual function of activation and repression. *BBA - Gene Regulatory Mechanisms*. 2016. PII: S1874-9399(16)30277-2. doi:10.1016.
- J Maini, **M Ghasemi**, S Mendiratta, D Yandhuri, S Thakur, V Brahmachari. PRE-PIK3C2B: a Human PRE with a difference? *FEBS Journal* 2015. 282; 57-57.
- **Mohsen Ghasemi**, Hema Pawar, Rakesh K Mishra, Vani Barahmachari. The functional diversity of *Drosophila* Ino80 in development. *Mech Dev*. 2015. PII: S0925-4773(15)30015-0. doi: 10.1016.
- Bengani H, Mendiratta S, Maini J, Vasanthi D, Sultana H, **Ghasemi M**, Ahluwalia J, Ramachandran S, Mishra RK, Brahmachari V. Identification and Validation of a Putative Polycomb Responsive Element in the Human Genome. *PLoS One*. 2013 Jun 21;8(6):e67217.

## **Latest POSTERS:**

- **Mohsen Ghasemi**, Vasanthi Dasari, Rakesh Mishra and Vani Brahmachari. **Ino80 interacts with Polycomb/Trithorax Elements (PRE/TRE) in *Drosophila melanogaster* to regulate Hox gene expression.** 10<sup>th</sup> Symposium on Frontiers in Biomedical Research (FBR). University of Delhi, India. October 29- 31 2015.
- Jayant Maini, **Mohsen Ghasemi**, Deepti Yandhuri, Suman Thakur, Vani Brahmachari. **Dual regulation by Human PRE-PIK3C2B: Interaction with repressive and activating complexes.** 10<sup>th</sup> Symposium on Frontiers in Biomedical Research (FBR). University of Delhi, India. October 29- 31 2015.

- **Mohsen Ghasemi**, Vasanthi Dasari, Hema Pawar, Shanti Chandrashekar, Rakesh K. Mishra and Vani Brahmachari. **Deciphering the function of dINO80 as an Enhancer of Trithorax and Polycomb.** Chromatin Asia, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India. January 15-18 2015.
- Jayant Maini, **Mohsen Ghasemi**, Shweta Mendiratta, Y. L. Deepthi, Sunam Thakur, Vani Brahmachari. **PRE-PIK3C2B: a Human PRE with a difference?** Chromatin Asia, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India. January 15-18 2015.
- **Mohsen Ghasemi**, Vani Brahmachari. **Cellular Memory in Cancer.** Iran's 20-year vision plan, National Interes. Iran Cultural House- Embassy of Iran- New Delhi, India. December 27-29 2014
- **Mohsen Ghasemi**, Vasanthi Dasari, Rakesh Mishra and Vani Brahmachari. **Understanding the function of INO80, a chromatin remodeling protein, in Drosophila development.** EMBO meeting, Upstream and downstream of Hox genes. CCMB, Hyderabad, India. December 14–17 2014.
- **Mohsen Ghasemi**, Vani Brahmachari. **Functions of INO80, a chromatin remodeling protein in disease development.** 11<sup>th</sup> EMBL Conference: Transcription and Chromatin. EMBL Advanced Training Center, Heidelberg, Germany. August 23-26 2014.
- **Mohsen Ghasemi**, Vani Brahmachari. **Deciphering of Genetic interaction of INO80 in Drosophila.** 9<sup>th</sup> Symposium on Frontiers in Biomedical Research-FBR. University of Delhi, India. April 14-16 2014.
- Shruti Jain, **Mohsen Ghasemi** and Vani Brahmachari. **Does dINO80 a chromatin remodeling protein, regulate developmental genes in Drosophila?** Transcriptional regulation in development Cell Symposia-Transcriptional regulation in Development. Chicago, IL, USA. July 13-16 2014.
- **Mohsen Ghasemi**, Vasanthi Dasari, Shruti Jain, Narendra Pratap Singh, Rakesh Mishra and Vani Brahmachari. **Deciphering the functions of INO80, a chromatin remodeling protein, in Drosophila development.** The 55<sup>th</sup> Annual Drosophila Research Conference (ADRC), Town and Country Resort in San Diego, CA, USA. March 26 - 30 2014.
- **Mohsen Ghasemi**, Vani Brahmachari. **Cellular Memory Modules; approach in Cancer.** 32th Annual Convention of Indian Association for Cancer Research and International Symposium: Infection and Cancer. Dr. B. R. Ambedkar Center for Biomedical Research (ACBR), University of Delhi. February, 13-16 2013.
- **Mohsen Ghasemi**, Vani Brahmachari. **Deciphering the new role of INO80 chromatin remodelling proteins in diseases.** Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India. December, 4-6 2010.

#### Latest SEMINARS:

- **The Role of CRISPR/Cas9 in Optogenetics-** Second Symposium; Genetics and Stem cell. Science and Technology of Stem Cells, Vice President for Science and Technology. Shahid Beheshti University, Tehran-Iran. December 08, 2016.
- **Epigenetics and Cancer-** Breast Cancer Research Institute, Tehran-Iran. October 19, 2016.
- **Optogenetics can shed light on opportunities for restoring vision?** - 22 Farabi Conference; Ophthalmology updates, Hotel Olympic, Tehran-Iran. April 27-29, 2016.
- **Role of Enhancer of Trithorax and Polycomb Group (ETPG) in HOX gene regulation in Drosophila melanogaster.** Dr. B. R. Ambedkar Center for Biomedical Research (ACBR) University of Delhi- Delhi-India. July 23, 2014.

- **Functional characterization of INO80.** Dr. B. R. Ambedkar Center for Biomedical Research (ACBR) University of Delhi- Delhi-India. Sep 05, 2013.
- **MicroRNA Networks and Developmental Plasticity.** Department of Molecular Biology and Biotechnology, I.A.R.I, New Delhi. July 23, 2011.
- **Transposons and the Evolution of Eukaryotic Genomes.** Department of Genetics, I.A.R.I, New Delhi. March 20, 2010.
- **From DNA to Mitotic Chromosome.** Department of Genetics, I.A.R.I, New Delhi. July 17, 2010.

#### **Awards and Honours:**

- **Postdoctoral Fellowship Award.** Iran's National Elites Foundation (INEF). November 01, 2015.
- **2nd Prize Poster Presentation.** 10<sup>th</sup> Symposium on frontiers in Biomedical Research (FBR). University of Delhi, India. October 29- 31 2015.
- **Gold Medal in Medicine.** National Student in India. December 27<sup>th</sup>-29<sup>th</sup>, 2014, Iran Cultural House, New Delhi, India.
- **Fellowship Award** - Department of Biotechnology (DBT), Ministry of Science and Technology-India. March 20, 2012.
- **Travel Fellowship Award.** The 55<sup>th</sup> ADRC, Town and Country Resort in San Diego, CA, USA. March 26<sup>th</sup>-30<sup>th</sup>, 2014. Department of Biotechnology (DBT), Ministry of Science and Technology-India. (DBT/CTEP/02/201301787).
- **2nd Prize Poster Presentation.** 9<sup>th</sup> Symposium on frontiers in Biomedical Research (FBR). University of Delhi, India. April 14-16, 2014.
- **EMBL Advanced Training Centre Corporate Partnership Programme Fellowship.** Heidelberg, Germany. August 23<sup>th</sup>-26<sup>th</sup>, 2014.

#### **Volunteering Experience & Causes :**

- Peer reviewing the scientific articles in the journal of Multidisciplinary Cancer Investigation (MCI) - mcijournal.ir
- Referee in the National Institute for Medical Research Development (NIMAD) - rms.nimad.ac.ir

#### **EXPERIENCE:**

- Teacher Assistants – Molecular Biology and Genetics, at Dr. B. R. Ambedkar Center for **Biomedical Research (ACBR)**, University of Delhi, Delhi-India (Aug 2011- 2015).
- Teacher Assistants- Genetics, at faculty of science, Karaj Azad University, Tehran-Iran (Jan 2008- Apr 2009).

#### **EXPERTISE and SKILLS:**

##### **Expertise:**

- Immune Assay [Chromatin Immunoprecipitation (ChIP), Tissue Immunostaining]
- Cell Culture (Cell line)
- Protein Chemistry
- Confocal Imaging
- Spectroscopy
- Real Time-PCR techniques
- ELISA technique
- Macromolecule (DNA, RNA, and Protein) extraction
- Two-dimensional Gel Electrophoresis

**Language Skills:** Persian (Master), English (Advance), German (Basic) and Arabic (reading and writing).

#### **RESEARCH INTERESTS:**

- Medical Genetics

- Developmental Biology
- Genetics and Diseases
- Oncology
- Neurobiology
- Gene Silencing
- Gene Expression
- Proteomics
- Molecular Cell Biology
- Bioinformatics

**MEMBERSHIP IN SCIENTIFIC SOCIETIES:**

- Member of Clinical Science Work-Group of Staff Development of Science and Technology of Stem Cells, Vice President for Science and Technology - [irsc.isti.ir](http://irsc.isti.ir)
- Member of National Elites of Iran (INEF) - [en.bmn.ir](http://en.bmn.ir)
- Member of Cancer Epigenetics Society (CES) - [ces.b2sg.org](http://ces.b2sg.org)
- Member of Genetic Society of America (GSA) - [www.genetics-gsa.org](http://www.genetics-gsa.org)
- Member of the Iranian Proteomics Society (IPS) - [www.iranianproteomicsociety.ir](http://www.iranianproteomicsociety.ir)
- Member of the Iranian Biotechnology Society (IBS) - [www.biotechsociety.ir](http://www.biotechsociety.ir)
- Member of Young Researchers Club - [www.bpj.ir](http://www.bpj.ir)
- Member of the Iranian Biosafety Society - [www.biosafetysociety.ir](http://www.biosafetysociety.ir)
- Member of the Iranian Genetics Society (IGS) - [www.genetics.ir](http://www.genetics.ir)