List of Publications

A. PUBLICATIONS FROM PH.D. THESIS WORK

a. Research Articles:

1. **K. Singh**, A. Poteryakhina, A. Zheltukhin, K. Bhatelia, P. Prajapati, L. Sripada, D. Tomar, R. Singh, A.K. Singh, P.M. Chumakov, R. Singh, NLRX1 acts as tumor suppressor by regulating TNF-alpha induced apoptosis and metabolism in cancer cells, BBA: Mol Cell Research 1853 (2015) 1073-1086.

2. **K. Singh**, L. Sripada, AnastasiaLipatova, M. Roy, P. Prajapati, D. Gohil, K. Bhatelia, P.M. Chumakov, R. Singh, NLRX1 resides in mitochondrial RNA granules and regulates mitochondrial RNA processing and bioenergetic adaptation, BBA: Mol Cell Research (2018). doi: 10.1016/j.bbamcr.2018.06.008

3. **Singh K**, Roy M, Bhatelia K, Prajapati P, Sripada L, Gohil D, Chumakov P., Singh R. NLRX1 regulates TNF-α-induced mitochondria-lysosomal crosstalk to maintain the tumorigenic potential of breast cancer cells**. (***Manuscript under communication*)

b. Platform and poster presentation at conference proceedings and workshops:

1. **Singh K, Singh R*.** NODs: NLRX1: Beyond immunity emerging role in mitochondria. 7th Annual Conference of the *Society for Mitochondrial Research and Medicine on Targeting Mitochondria for Health and Disease, CDRI-Lucknow, 28-30 November 2018.* ***** *Invited speaker*

2. **Singh K**, Sripada L, Roy M, Prajapati P, D Gohel, Bhatelia K, Chumakov PM, Singh R. NLRX1, a novel mitochondrial RNA granule protein regulates RNA processing and OxPhos assembly. *International Congress of Cell Biology-2018, CCMB, Hyderabad, India, January 27th-31st 2018.*

3. **Singh K**, Sripada L, Roy M, Prajapati P, D Gohel, Bhatelia K, Chumakov PM, Singh R. NLRX1 modulates TNF-α mediated lysosomal function by regulating mitochondrial metabolism and turnover. *India-EMBO Symposia on Autophagy: Cellular mechanism(s) and significance in health and disease*, Bhubaneswar, India, December 11-13,2017

4. **Singh K,** Sripada L, Roy M, Prajapati P, D Gohel, Bhatelia K, Chumakov PM, Singh R. NLRX1 regulates RNA processing in mitochondrial RNA granules. *Bangalore Microscopy Course 2017* at National Centre for Biological Sciences (NCBS), Bangalore, India, September 17-24,2017

5. **Singh K**, Prajapati P, Roy M, Sripada L, Bhatelia K, Dalwadi P, Singh R, Chumakov PM, Singh R. NLRX1 regulates TNF-α mediated mitochondrial turnover by modulating lysosomal function. *IFOM-Instem conference Inflammation and*

Tissue Homeostasis, Institute for Stem Cell Biology and Regenerative Medicine Bangalore, India, February 3-5, 2016. ***Selected for short talk.***

6. **Singh K**, Tomar D**,** Prajapati P, Sripada L, Bhatelia K, Singh AK, Singh R, Chumakov PM, Singh R. The role of a mitochondrial protein in regulation of TNF induced ROS and inflammation. *2nd Annual Conference of Society for Mitochondrial Research and Medicine-India "Mitochondria in Health and Disease".* Central University of Gujarat, Gandhinagar, India, November 2-3, 2012. ***Best poster award.***

7. **Singh K**, Bhatelia K, Prajapati P, Sripada L, Tomar D**,** Singh R, Singh AK, Chumakov P, Singh R. A mitochondrial protein regulates TNF-α induced ROS production by modulating mitochondrial Complex III and Caspase-8 activity in breast cancer cells. *3rd Annual Conference of the SMRM on "Mitochondria in Health and Disease".* National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, India, December 19-20, 2013. ***Best poster award***.

B. PUBLICATIONS FROM OTHER ASSOCIATED PROJECTS DURING PH.D. TENURE

a. Research Articles:

1. S Lakshmi, **Singh K**, Lipatova VA, Singh A, Prajapati P, Tomar D, Bhatelia K, Roy M, Singh R, Godbole M M, Chumakov P M, Singh R. Metabolic regulation and tumor suppression by a mitochondria-targeted hsa-miR-4485. Journal of Molecular Medicine, 95 (2017), 641–651.

2. K Bhatelia, **K Singh**, P Prajapati, L Sripada, M Roy, R Singh, MITA modulated autophagy flux promotes cell death in breast cancer cells, Cellular Signalling. 35 (2017) 73–83. doi: 10.1016/j.cellsig.2017.03.024.

3. Roy M, Tomar D, **Singh K**, Lakshmi S, Prajapati P, Bhatelia K, Gohel D, Singh R. TRIM8 regulated autophagy modulates the level of cleaved Caspase-3 subunit to inhibit genotoxic stress induced cell death. Cellular Signalling. 2018 Apr 17;48:1-12. doi: 10.1016/j.cellsig.2018.04.003.

4. P Prajapati, L Sripada, **K Singh**, M Roy, K Bhatelia, P Dalwadi, R Singh, Systemic Analysis of miRNAs in PD Stress Condition: miR-5701 Modulates Mitochondrial–Lysosomal Cross Talk to Regulate Neuronal Death, Molecular Neurobiology. (2017) 1–13. doi:10.1007/s12035-017-0664-6.

5. P. Prajapati, L. Sripada, **K. Singh**, K. Bhatelia, R. Singh, R. Singh, TNF-alpha regulates miRNA targeting mitochondrial complex-I and induces cell death in dopaminergic cells, BBA: Mol Basis of Diseases 1852 (2015) 451-461.

6. D. Tomar, P. Prajapati, J. Lavie, **K. Singh**, S. Lakshmi, K. Bhatelia, M. Roy, R. Singh, G. Benard, R. Singh, TRIM4; a novel mitochondrial interacting RING E3 ligase, sensitizes the cells to hydrogen peroxide (H_2O_2) induced cell death, Free radical biology & medicine, 89 (2015) 1036-1048.

7. Bhatelia K, Singh A, Tomar D, **Singh K**, Sripada L, Chagtoo M, Prajapati P, Singh R, Godbole MM, Singh R. Antiviral signaling protein MITA act as a tumor suppressor in breast cancer by regulating NF-kB induced cell death. BBA: Mol Basis of Diseases 2013;1842 (2): 144-153
.
8. Tomar D, Prajapati P, Sripada L, **Singh K**, Singh R, Singh AK., Singh R. TRIM13 regulates translocation of caspase-8 to autophagosomes, its activation, and cell death during ER stress. BBA: Mol Cell Research 2013;1833 (12): 3134-3144

9. Singh AK, Patel P, Tomar D, Singh R, Sripada L, Prajapati P, **Singh K**, Singh R. TBK1 regulates p62/sqstm1 mediated autophagic clearance of intracellular ubiquitinated Staphylococcus aureus in human epithelial cells. Transl Genet Genom 2017 May 21

10. Pandey A, **Singh K**, Patel S, Patel K, Singh R, Sawant K. Efficient delivery of lenalidomide using pH responsive alloy-drug magnetic nanoconjugates for intranasal therapy of brain tumor: A multimodal therapeutic strategy. **(***manuscript under communication***)**

b. Review Article:

1. Bhatelia K, **Singh K**, R. Singh, TLRs: Linking inflammation and breast cancer, Cellular signaling, 26 2014,2350-2357.

c. Platform and poster presentation at conference proceedings:

1. Sripada L, Prajapati P, Bhatelia K, Tomar D**, Singh K**, Singh A, Singh R, hsa-miR-4485, a tumor suppressor miRNA, associates with human mitochondria by targeting mitochondrial GPD2. *XXXVII All India Cell Biology Conference.* Indian Institute of Science, Bangalore, India, December 22-24, 2013. ***Best poster award.***

2. *Sripada L*, Prajapati P, Tomar D, **Singh K**, Bhatelia K, Singh R. "*hsa-miR-4485, mitochondria associated miRNA affects mitochondrial functions and cell death in Parkinson's Disease.*" Joint 7th Asian-Pacific Organization for Cell Biology congress and American Society for Cell Biology workshop on infectious diseases, at Biopolis, Singapore from 24 to 27 February 2014. Abstract selected to re-

ceive the **travel award**, sponsored by the **International Federation of Cell Biology**.

3. *Sripada L*, Prajapati P, Bhatelia K, Tomar D, **Singh K**, Singh AK, Singh R. "*miRNA sequences aligns with mitochondrial genome, associates with mitochondria, alters in stress and modulates mitochondrial functions in various physio-pathological conditions.*" 38th Mahabaleshwar Seminar on Mitochondria, Metabolism and Energetics organized by Tata Institute of Fundamental Research, Mumbai, Maharashtra, India, January 27- 30, 2013. ***Best poster selected for Short Talk***

4. Tomar D, Roy M*, Prajapati P, *Sripada L*, **Singh K**, Singh R. "Autophagy mediated protection from cell death during genotoxic stress; role of TRIM8, a RING family ubiquitin E3 ligase" International Symposium On *Conceptual Advances in Cellular Homeostasis Regulated by Proteases and Chaperones The Present, The Future and Impact on Human Diseases, ACTREC, Tata Memorial Centre, Kharghar, Navi Mumbai, Maharashtra, India (Platform presentation *Presenting Author).*

5. Prajapati P, Tomar D, *Sripada L*, **Singh K**, Singh R, Singh R. "*TRIM32 regulates oxidative stress induced cell death.*" The XXXVII All India Cell Biology Conference on Cell Dynamics and Cell Fate, National Centre for Biological Sciences, Bangalore, Karnataka, India, December 22- 24, 2013

6. Bhatelia K, Singh A, Tomar D, **Singh K**, *Sripada L*, Chagtoo M, Prajapati P, Singh R, Godbole MM, Singh R. "*MITA regulates cell death in breast cancer cells*" The XXXVII All India Cell Biology Conference on Cell Dynamics and Cell Fate, National Centre for Biological Sciences, Bangalore, Karnataka, India, December 22- 24, 2013

7. *Sripada L*, Prajapati P, **Singh K**, Tomar D, Singh R, Singh AK, Singh R. "Effect of mitochondria associated miRNA, hsa-miR-4485 on 6-OHDA induced cell death in SHSY-5Y" *SMRM 3rd Annual Conference on Mitochondria in Health and Disease,*National Institute of Mental Health and Neuro Sciences, Bangalore, Karnataka, India.

8. Singh AK, Patel P, Sripada L**,** Singh R, **Singh K**, Tomar D**,** Singh R. *S. aureus* infection enhances mitochondrial biogenesis in human epithelial cells. *SMRM 3rd Annual Conference on Mitochondria in Health and Disease*, National Institute of Mental Health and Neuro Sciences, Bangalore, Karnataka, India.

9. Bhatelia K, Singh A, Tomar D, **Singh K**, *Sripada L*, Chagtoo M, Prajapati P, Singh R, Godbole MM, Singh R. "MITA, ER localized Interferon Regulator, acts as a tumor suppressor in breast cancer" *SMRM 3rd Annual Conference on Mitochondria in Health and Disease,* National Institute of Mental Health and Neuro Sciences, Bangalore, Karnataka, India.

10. Tomar D, Prajapati P*, Sripada L, **Singh K**, Roy M, Singh R, Singh AK, Singh R. "TRIM13 negatively regulates TNF induced NF-κB signaling and suppresses clonogenic ability of the cells". *International Conference on Recent Advances in "Cancer Prevention and Therapeutics"*. School of Life Sciences, Central University of Gujarat, Gandhinagar, India, November 19-20, 2013**.** ***Best poster award.*** **Presenting Author*
11. Singh AK, Patel P, Singh R, Prajapati P, Tomar D**,** Sripada L, **Singh K,** Singh R. Mitochondrial ROS negatively regulates intracellular survival of *S. aureus* in human epithelial cells. *2nd Annual Conference of Society for Mitochondrial Research and Medicine-India "Mitochondria in Health and Disease".* Central University of Gujarat, Gandhinagar, India, November 2-3, 2012. ***Best poster award***
12. *Bhatelia K, **Singh K**, Tomar D, Lakshmi S, Prajapati P, Singh R. MITA induces cell death by regulation of NF-κB in MCF-7 breast cancer cell line. XXXVI All India Cell Biology Conference & International Symposium On "Stress Adaptive Response and Genome Integrity", Bhabha Atomic Research Centre, Mumbai, India, October 17-19, 2012.*