

**Dr. Mahadev Kalyankar**

Associate Professor

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**Education:**

Sl No.	Degree	Subject	University/Institution
1.	Ph.D.	Life Sciences	University of Hyderabad, India
2.	M.Phil.	Life Sciences	University of Hyderabad, India
3.	M.Sc.	Life Sciences (Biochem)	University of Hyderabad, India
4.	B.Sc.	Botany, Zoology, Chemistry	Osmania University, India

**Work experience:**

Sl. No.	Positions held	Name of the Institute	From (Date)	To (date)
1.	Associate Professor	University of Hyderabad, India	24-03-2014	Present
2.	Reader	University of Hyderabad, India	24-03-2011	24-03-2014
3.	Instructor (Junior Faculty) (Metabolic Disorders).	University of Pennsylvania Philadelphia, USA	03-05-2010	28-02-2011
4.	Instructor (Junior Faculty) (Metabolic Disorders).	Thomas Jefferson University, Philadelphia, USA	07-01-2006	31-03-2010
5.	Post-doctoral fellow (Metabolic Disorders).	Thomas Jefferson University, Philadelphia, USA	05-01-2000	30-06-2006
6.	Post-doctoral fellow	Temple University, Philadelphia, USA	01-02-1999	30-04-2000

**Research Interest:**

Non-Alcoholic Fatty Liver Disease (NAFLD) / Non-Alcoholic Steatohepatitis (NASH), Metabolic Disorders, Insulin Signaling and Type-2-Diabetes.

**Highlights of my research work:**

- Discovery of perilipin staining (a lipid-droplet protein) that distinguishes between Simple Steatosis (NAFLD) and Non-Alcoholic Steatohepatitis (NASH) in Adults and Children.
- Discovery of insulin generated oxidant signal that enhances insulin sensitivity in Type 2 diabetes and other clinical states of insulin resistance. Insulin stimulated ROS generation, its impact on inhibition of

protein tyrosine phosphatases, in specific PTP1B, and establishment of new technique for live cell imaging of ROS. (Mahadev et al., 2001a, JBC. 276: 21938-21942. Mahadev et al., 2001b, JBC. 276: 48662-48669.

- Discovery of a novel protein NADPH Oxidase 4 (NOX 4) in insulin sensitive cells and enhancement of insulin sensitivity in Type 2 diabetes and other clinical states of insulin resistance. (Mahadev et al, 2004, MCB, 24: 1844-1854.
- Restoration of cytoskeletal protein tropomyosin-1 expression in breast cancer cells that stabilizes adherent junctions and contributes to anti-oncogenic properties of tropomyosin-1 protein. (Mahadev et al., 2002, Experimental Cell Research, 279: 40-51.

**Total Publications / Citations can be accessed through the link –**

<https://scholar.google.co.in/citations?user=tuX2VKYAAAAJ&hl=en&oi=ao>

<b>Total Citations:</b>	<b>5805</b>
<b>h-index</b>	<b>23</b>
<b>i10-index</b>	<b>26</b>

**Selected Publications:**

- Talari NK, Mattam U, Meher N, Paripati AK, **Mahadev K**, Krishnamoorthy T, and Sepuri NBV. Lipid Droplet Associated Mitochondria Promotes Fatty Acid Oxidation Through Distinct Bioenergetics Pattern in Wistar Male Rats. *Nature Communications* 2023; 14: 766
- Carr RM, Dhir R, **Mahadev K**, Comerford M, Chalasani NP, Ahima RS. Perilipin Staining Distinguishes Between Steatosis and Nonalcoholic Steatohepatitis in Adults and Children. *Clin Gastroenterol Hepatol*. 2017; 15: 145-147.
- Mandal CC, Ganapathy S, Gorin Y, **Mahadev K**, Block K, Abboud HE, Ghosh-Choudhury G, and Ghosh-Choudhury N. Nox4-Derived Physiologic Reactive Oxygen Species Mediate Bmp-2-Induced Bmp-2 Gene Transcription and Osteoblast Differentiation *Biochem J* 2011; 15:433:393-402.
- **Mahadev K\***, Wu X, Donnelly S, Quedraogo R, Eckhart AD, Goldstein BJ. Adiponectin inhibits vascular endothelial growth factor-induced migration of human coronary artery endothelial cells. \*Co-corresponding Author. *Cardiovascular Research* 2008; 78: 376-384.
- Xu SQ\*, **Mahadev K\***, Wu X, Fuchsel L, Donnelly S, Quedraogo R, Goldstein BJ. Adiponectin protects against angiotensin II or tumor necrosis factor-alpha induced endothelial cell monolayer hyperpermeability: Role of cAMP/PKA signaling. \*Equal contribution. *ATVB*. 2008; 28: 899-905.
- Quedraogo R, Gong Y, Berzins B, Wu X, **Mahadev K**, Hough K, Chan L, Goldstein BJ, Scalia R. Adiponectin deficiency increases leukocyte-endothelium interactions via upregulation of endothelial cell adhesion molecules in vivo. *JCI* 2007; 117: 1718-1726.
- **Mahadev K**, Motoshima H, Wu X, Cheng G, Lambeth JD, Goldstein BJ. The NADPH Oxidase Homolog Nox4 Modulates Insulin-Stimulated Generation of H<sub>2</sub>O<sub>2</sub> and Plays an Integral Role in Insulin Signal Transduction. *MCB* 2004, 24: 1844-1854.

- **Mahadev K.**, Raval G, Bharadwaj S, Willingham MC, Lange EM, Vonderhaar B, Salomon D, Prasad GL. Suppression of the transformed phenotype of breast cancer by tropomyosin-1. *Experimental Cell Research* 2002, 279: 40-51.
- **Mahadev K**, Wu X, Zilbering A, Zhu L, Lawrence T, Goldstein BJ. Hydrogen peroxide generated during cellular insulin stimulation is integral to activation of the insulin signaling cascade in 3T3-L1 adipocytes. *JBC* 2001, 276: 48662-48669.
- **Mahadev K**, Zilbering A, Zhu L, Goldstein BJ. Insulin-stimulated generation of hydrogen peroxide reversibly inhibits PTP1B and enhances the early insulin action cascade. *JBC* 2001; 276: 21938-21942.

**Books/Reports/Chapters/General articles etc.:1 - Book Chapter**

S.No.	Title	Author's Name	Publisher	Year of Publications
1.	<i>Insulin-Stimulated Reactive Oxygen Species and Insulin Signal Transduction..</i>	Goldstein BJ, Mahadev K, Wu XD.	<i>Boca Raton, FL: Taylor and Francis</i>	2007

Goldstein BJ, **Mahadev K**, Wu XD. Insulin-Stimulated Reactive Oxygen Species and Insulin Signal Transduction. In: Packer L, Sies H, eds. *Oxidative Stress and Inflammatory Mechanisms in Obesity, Diabetes, and the Metabolic Syndrome*. pp 178-187. Boca Raton, FL: Taylor and Francis, 2007.