**PALLOB KUNDU, Ph.D.**

Associate Professor

Division of Plant Biology

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**Education:**

**Bachelor of Science: Agriculture (Honors)**, 1989 (result published in 1990), Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal

**Master of Science: Biotechnology**, 1992, Madurai Kamaraj University, Tamil Nadu, India

**Ph.D. in Science: Biochemistry**, 1999, University of Calcutta, Calcutta, India. Thesis title: Virus coat protein gene expression and resistance to viral infection in transgenic plant. This work was carried out in the Department of Biochemistry, Bose Institute, Calcutta.

**Fellowships:**

**1.** Merit Fellowship during M.Sc. in Biotechnology. Qualified in National level test conducted by Jawaharlal Nehuru University (JNU), New Delhi, India, 1990.

**2.** Research Fellowship during Ph.D. Qualified in National Eligibility Test (NET) conducted by Council for Scientific and Industrial Research (CSIR) and University Grant Commission (UGC), Govt. of India, 1992.

**3.** Qualified at the National Eligibility Test (NET) for Lecturership/Associate Professorship in the subject Biotechnology (Agricultural Science) conducted by Indian Council of Agricultural Research (ICAR), Govt. of India, 1997.

**Professional Experience:**

**Research Associate:** May 1998 to Dec 1999. Dept. of Botany, Bose Institute, Calcutta.

**Post Graduate Researcher:** Jan 2000 to Jan 2005, Department of Microbiology and Immunology, University of California Los Angeles (UCLA) School of Medicine, USA.

Feb 2005 to Dec 2007, Division of Molecular Medicine, Anesthesiology Department, UCLA School of Medicine, USA.

**Assistant Researcher:** Jan 2008 to Dec 2008,Anesthesiology Department, Division of Molecular Medicine, UCLA School of Medicine, USA.

**Assistant/Associate Professor:** Jan 2009 onwards, Division of Plant Biology, Bose Institute, Kolkata, India.

**Publications**

**Peer Reviewed**

Sarkar D, Maji RK, Dey S, Sarkar A, Ghosh Z and Kundu P, Integrated miRNA and mRNA expression profiling reveals the response regulators of a susceptible tomato cultivar to early blight disease, DNA Research, 2017.

Jana J, Mondal S, Bhattacharjee P, Sengupta P, Roychowdhury T, Saha P, Kundu P, Chatterjee S. Chelerythrine down regulates expression of VEGFA, BCL2 and KRAS by arresting G-Quadruplex structures at their promoter regions. Sci Rep. 2017 Jan 19;7:40706. doi: 10.1038/srep40706.

Bhattacharjee P, Das R, Mandal A, Kundu P. Functional characterization of tomato membrane-bound NAC transcription factors. Plant Mol Biol. 2016.

Mandal A, Sarkar D, Kundu S and **Kundu P**, Mechanism of regulation of tomato TRN1 gene expression in late infection with tomato leaf curl New Delhi virus (ToLCNDV), Plant Science, 2015, in press.

Datta A, Ghosh A, Airoldi C, Sperandeo P, Mroue KH, Jiménez-Barbero J, **Kundu P**, Ramamoorthy A, Bhunia A. Antimicrobial peptides: Insights into membrane permeabilization, lipopolysaccharide fragmentation and application in plant disease control. Sci Rep. 2015 Jul 6;5:11951.

**Kundu P**\*, Li M, Lu R, Stefani E, Toro L. Regulation of transcriptional activation function of rat estrogen receptor α (ERα) by novel C-terminal splice inserts. Mol Cell Endocrinol. 2015 Feb 5;401:202-12. doi: 10.1016/j.mce.2014.11.001. Epub 2014 Nov 7. \*, Corresponding author from Bose Institute.

Morera FJ, Alioua A, **Kundu P**, Salazar M, Gonzalez C, Martinez AD, Stefani E, Toro L, Latorre R, The first transmembrane domain (TM1) of beta 2-subunit binds to the transmembrane domain S1 of alpha-subunit in BK potassium channels, FEBS Letters, 2012, 586(16), 2287-2293.

Danesh SM\*, **Kundu P**\*, Stefani E and Toro L, Distinct transcriptional regulation of human large Conductance voltage- and calcium-activated K+ channel Gene (hslo1) by activated estrogen receptor alpha and c-src, J Biol Chem. 2011 Sep 9;286(36):31064-71. \*, Equal Authorship.

Li M, Tanaka Y, Alioua A, Wu Y, Lu R, **Kundu P**, Sanchez-Pastor E, Marijic J, Stefani E, Toro L., Thromboxane A2 receptor and MaxiK-channel intimate interaction supports channel trans-inhibition independent of G-protein activation. Proc Natl Acad Sci U S A. 2010 Nov 2;107(44):19096-101

**Kundu P,** Ciobotaru A, Foroughi S, Toro L, Stefani E, Eghbali M. Hormonal regulation of cardiac KCNE2 gene expression. Mol Cell Endocrinol. 2008 Sep 24;292(1-2):50-62.

Lu R, Alioua A, Kumar Y, **Kundu P**, Eghbali M, Weisstaub NV, Gingrich JA,Stefani E, Toro L. c-Src tyrosine kinase, a critical component for 5-HT2A receptor-mediated contraction in rat aorta. J Physiol. 2008 Aug 15;586(16):3855-69.

Alioua A, Lu R, Kumar Y, Eghbali M, **Kundu P**, Toro L, Stefani E. Slo1 caveolin-binding motif, a mechanism of caveolin-1-Slo1 interaction regulating Slo1 surface expression. J Biol Chem. 2008 Feb 22;283(8):4808-17.

**Kundu P**, Alioua A, Stefani E and Toro L, Regulation of mouse slo gene expression: multiple promoters, transcription start sites, and genomic action of estrogen., Journal of Biological Chemistry, 2007 Sep 14; 282(37):27478-92.

**Kundu P**, Raychaudhuri S, Tsai W, Dasgupta A., Shutoff of RNA polymerase II transcription by poliovirus involves 3C protease-mediated cleavage of the TATA-binding protein at an alternative site:incomplete shutoff of transcription interferes with efficient viral replication. Journal of Virology, 2005 Aug; 79(15):9702-13.

Jhaveri R, **Kundu P**, Shapiro AM, Venkatesan A, Dasgupta A., Effect of heptitis C virus core protein on cellular gene expression: specific inhibition of cyclooxygenase 2., The Journal of Infectious Diseases. 2005 May 1;191(9):1498-506. Epub 2005 Mar 30.

Banerjee R, Weidman MK, Echeverri A, **Kundu P**, Dasgupta A. Regulation of poliovirus 3C protease by the 2C polypeptide. 2004, Journal of Virology. Sep;78(17):9243-56.

Weidman MK, Sharma R, Raychaudhuri S, **Kundu P**, Tsai W, Dasgupta A. The interaction of cytoplasmic RNA viruses with the nucleus. 2003, Virus Research. Sep;95(1-2):75-85. Review. Erratum in: Virus Res. 2004 Jan;99(1):101.

Mandal S, **Kundu P**, Roy B and Mandal R K, Precursor of the inactive 2S seed storage protein from the Indian mustard Brassica juncea is a novel trypsin inhibitor. 2002, Journal of Biological Chemistry, 277 (40), 37161-37168.

**Invited Reviews**

**Kundu P.,** A. Alioua., R. Lu, Y. Kumar, J. Ou., E. Stefani, and L. Toro. BK Channels: Regulation of Expression and Physiological Impact, In: Structure, Function and Pharmacology of Neuronal Voltage-Gated Ion Channels. 2009, Eds. V. Gribkoff and G. Kaczmarek. Wiley Publishers.

Alioua, A., **Kundu, P**., Lu, R., Kumar, Y., Ou, J., Stefani, E., and Toro, L. Structure and Function of Ion Channels: Large Conductance Calcium-activated Potassium Channels. In Squire, L. R., editor. 2007, *New Encyclopedia of Neuroscience*, Elsevier Ltd., Oxford, UK. In press.

Dasgupta A., Yalamanchili P., Clark M., Kliewer S., Fradkin L., Rubinstein S., Das S., Shen Y., Weidman K., Banerjee R., Datta U., Igo M., **Kundu P**., Barat B. and Berk A. J. Effects of Picornavirus proteinases on host cell transcription. 2002, Molecular Biology of Picornaviruses, pp 321-335, eds. B.L.Semler and E. Wimmer, ASM Press, Washington DC

**Kundu P**. and Mandal R. K., Transgenic approaches for producing virus resistant plants. 2001, Proceedings of Indian National Science Academy B 67, 53-80.

**Abstracts Published**

30 posters/talk presented/delivered in different meetings and abstracts were published.

**Grant support**

01/01/2008 - 12/31/2011, "Mechanisms of transcriptional regulation and alternative splicing of KCNMA1 (Slo) gene by sex hormones", American Heart Association-National Center (USA), Scientist Development Grant. It was relinquished effective from 1st Jan, 2009.

1/6/2010 - 31/5/2015, “Regulation of microRNA transcription and biogenesis by fungal-stress in tomato”, DBT, India, Co-PI: Prof S. Das, Division of Plant Biology, Bose Institute.

Functional analysis of the DNA polymerase lambda gene and the protein from indica rice cultivars, DST, SERB, (PI: Prof. D.N.SenGupta, CoPI: Pallob Kundu), 3 years, (Funded, 2013).

Exploring membrane-associated NAC-transcription factors (NAC MTFs) in tomato to apprehend membrane-mediated signaling during pathogenesis, CSIR, (PI: Pallob Kundu), 3 years, Granted from October 2014.

Genome wide transcriptome analysis to identify MYMIV-stress related genomic resources of blackgram, WB, DBT, (PI: Prof. Amita Pal, Co-Investigator: Pallob Kundu), 3 years, 2016

**Number of Ph.D. students registered: 7**