



# UNIVERSITY OF CALCUTTA

## DEPARTMENT OF BIOTECHNOLOGY & DR. B. C. GUHA CENTRE FOR GENETIC ENGINEERING & BIOTECHNOLOGY

### FACULTY ACADEMIC PROFILE/ CV

1. Full name of the faculty member: PROF. KOUSTUBH PANDA
2. Designation: PROFESSOR & HEAD
3. Specialisation PROTEIN-STRUCTURE FUNCTION, DISEASE BIOLOGY, PHYSIOLOGY OF NITRIC-OXIDE & NITRIC OXIDE SYNTHASE, OXIDATIVE STRESS & PROTEOMICS
4. Passport size photograph :

*Please attach a digital passport size coloured photograph with the soft copy.*



5. Contact information :

*Please provide contact address, email, phone number (optional), etc.*

**Department of Biotechnology & Dr. B.C. Guha Centre for Genetic Engineering & Biotechnology,  
University of Calcutta, 35, Ballygunge Circular Road, Kolkata – 700019.**

**Email: kpbcg@caluniv.ac.in & pandak66@yahoo.co.uk**

6. Academic qualifications:

*Please mention here the degrees (graduation onward):*

College/ University from which the degree was obtained	Name of Degree
Presidency College, Kolkata	B.Sc (Chemistry) [Hons]
University of Calcutta	M.Sc (Biochemistry)
Jadavpur University	M.Tech (Biotechnology)
University of Calcutta	Ph.D (Biochemistry)
Cleveland Clinic, USA	Fellowship

## 7. Positions held/ holding:

- **Head & Coordinator:** Department of Biotechnology & GCGEB, University of Calcutta, Kolkata, India
- **Professor:** Department of Biotechnology & GCGEB, University of Calcutta, Kolkata, India
- **Director:** West Bengal Biotech Development Corporation, Govt. of West Bengal
- **Adviser:** Dept. of Science & Technology and Biotechnology, Govt. of West Bengal
- **Associate Professor:** Department of Biotechnology, University of Calcutta, Kolkata, India.
- **Assistant Professor:** Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, Department of Molecular Medicine (2004-2006)
- **Project Scientist:** Department of Immunology & Pathobiology, Lerner Research Institute, Cleveland Clinic Foundation, USA (2004 to 2005).
- **Research Associate Staff:** Department of Immunology & Pathobiology, Lerner Research Institute, Cleveland Clinic Foundation, USA (2002 to 2003).

## 8. Research interests:

*Please cite briefly the areas of research interests*

- Nitric-Oxide Biology & Structure-Function Relationship of Nitric-Oxide Synthase
- Inflammatory Lung Diseases: Mechanism & Prevention
- Oxidative Damage and Antioxidant Therapeutics
- Arsenic Poisoning: Mechanism & Prevention

## 9. Awards & Honours :

Elected **Fellow of the West Bengal Academy of Science & Technology (WAST)**, 2017

Recipient of **UGC-UKIERI (United Kingdom-India Education and Research Initiative) Thematic Partnership Award (2014-2015)** for collaborating with University of Oxford for the translation of an in-vivo probe for a key enzyme in human pathophysiology -inducible nitric-oxide synthase

Recipient of '**Khorana Technology Transfer Award**' for 2013 jointly awarded by the Department of Biotechnology (DBT), Govt. of India and the Indo-US Science and Technology Forum (IUSSTF).

Received the '**Innovator Award**' for 2006 from the Cleveland Clinic Foundation, USA for inventing a live probe for Nitric Oxide Synthase an enzyme involved in the pathogenesis of diseases like Parkinson's Disease, Alzheimer's disease and cardiovascular diseases.

Conferred the '**Gordon Research Conference Best Young Investigator Award**' at the Gordon Research Conference on Nitric Oxide, Il Ciocco, Barga, Italy (2005).

Recipient of the '**Research Star Award**' of the Cleveland Clinic Foundation, USA for exceptional contribution to research. (2003).

Conferred the '**Alois Niederwieser Award**' for being selected the '**Best Young Scientist**' among 62 selected international speakers in the 13<sup>th</sup> International Conference on Pterins, Foliates and Related Biogenic Amines, Maui, Hawaii, USA (2003).

Recipient of the **William Lower Award** of the Cleveland Clinic, USA for original investigation and professional excellence in the preparation of scientific paper for 2001.

Recipient of the '**Postdoctoral Award**' of the American Society for Biochemistry and Molecular Biology (ASBMB) for the years 2002 and 2003.

Recipient of the '**Shining Star**', lapel of distinction of the Department of Immunology, Cleveland Clinic Foundation (2003).

Recipient of the Indian Science Congress Association's '**Young Scientists' Award' (First Prize)**, 1999, in Biochemistry, Biophysics and Molecular Biology [**National Award**]

Awarded the **Shanti Bhakta Memorial Award** for delivering the best Post-Graduate talk in Biochemistry by the Department of Biochemistry, University of Calcutta for the academic year 1991.

## 10. List of publications:

### a) Peer-Reviewed Journals:

1. Nitric oxide sensing by chlorophyll a. Bhattacharya, A; Biswas, P; Kar, P; Roychoudury, P; Basu, S.; Ghosh, S, Ganguly, S.; Pal, R; **Panda, K.**, Dasgupta, A.K. *Anal. Chim. Acta* 985:101-113. Sep 8, 2017.
2. Chitosan-induced immunity in *Camellia sinensis* (L.) O. Kuntze against blister blight disease is mediated by nitric-oxide. Chandra S, Chakraborty N, **Panda K**, Acharya K. *Plant Physiol Biochem*.115: 298-307. doi:10.1016/j.plaphy. 2017.04.008. Apr 7, 2017.
3. Ascorbate attenuates pulmonary emphysema by inhibiting tobacco-smoke and Rtp801 triggered lung protein modification and proteolysis. Gupta, I, Ganguly, S. Rozanas, C.R., Stuehr, D.J, **Panda K (corresponding author)** *Proc. Natl. Acad. Sci. USA [PNAS]*. 113(29):E4208-17. July 19, 2016
4. Simultaneous Determination of Black Tea-Derived Catechins and Theaflavins in Tissues of Tea Consuming Animals Using Ultra-Performance Liquid-Chromatography Tandem Mass Spectrometry. Ganguly, S., G.T.Kumar, Mantha, S., **Panda K (corresponding author)** *PLoS One*. (10):e63498. doi: 10.1371/journal.pone.0163498. Oct 3, 2016
5. mRNA and Protein levels of rat pancreas specific protein disulphide isomerase are downregulated during Hyperglycemia. Gupta R, Bhar K, Sen N, Bhowmick D, Mukhopadhyay S, **Panda K**, Siddhanta A. *Indian J Exp Biol*. 54(2):100-7. Feb, 2016
6. Chitosan Nanoparticles: A positive modulator of innate immune responses in plants. Chandra, S., Chakraborty, N., Dasgupta, A., Sarkar, J, **Panda, K.**, Acharya, K. *Scientific Reports*. 5:15195; Oct 16, 2015
7. Characterization of calmodulin-free murine inducible nitric-oxide synthase. Nagpal L, **Panda K.** *PLoS One*. Mar 30, 2015;10(3) : e0121782.
8. Mechanism of Inducible Nitric-Oxide Synthase Dimerization Inhibition by Novel Pyrimidine Imidazoles. Nagpal, L., Haque, M.M., Saha, A., Mukherjee, N., Ghosh, A., Ranu, B.C., Stuehr, D.J., **Panda, K.** *Journal of Biological Chemistry*. Vol. 288(27): pp-19685-19697. Jul, 5, 2013 (Epub: May 21, 2013)

9. Development of a multiple-bile-ion-sensing membrane electrode. Chatterjea S.M., **Panda K.** *Analytical Biochemistry*. Vol. 441(2): pp- 218-224. Oct 15, 2013. (Epub Jul 16. 2013)
10. Cigarette smoke induces p-benzoquinone-albumin adduct in blood serum: implications on structure and ligand binding properties. Ghosh, A., Choudhury, A., Das, A., Chatterjee, N.S., Chowdhury, R., **Panda, K.**, Banerjee, R., Chatterjee, I.B. *Toxicology*, 292, 78-89, Feb, 2012.
11. Nitric oxide blocks cellular heme insertion into a broad range of heme proteins. Waheed SM, Ghosh A, Chakravarti R, Biswas A, Haque MM, **Panda K** and Stuehr D.J. *Free Radic Biol Med*. 1;48(11):1548-58. Jun, 2010
12. Neutralizing a surface charge on the FMN subdomain increases the activity of neuronal nitric-oxide synthase by enhancing the oxygen reactivity of the enzyme heme-nitric oxide complex. Haque MM , Fadlalla M , Wang ZQ, Ray SS, **Panda K** and Stuehr D.J. *Journal of Biological Chemistry*; 284(29):19237-47. Jul, 2009
13. Cellular and molecular mechanisms of cigarette smoke-induced lung damage and prevention by vitamin C. Banerjee S, Chattopadhyay R, Ghosh A, Koley H, **Panda K**, Roy S, Chattopadhyay D, Chatterjee IB. *Journal of Inflammation*. ;5:21. 2008
14. Versatile regulation of neuronal nitric-oxide synthase by specific regions of its C-terminal tail. Tiso M, Tejero J, **Panda K**, Aulak K. & Stuehr D.J. *Biochemistry*.18;46:14418-28.Dec,2007
15. A Connecting Hinge Represses the Activity of Endothelial Nitric Oxide Synthase. Haque, M., **Panda, K. (joint first author)**, Tejero, J., Aulak, K., Fadlalla, M., Mustovich, A. & Stuehr, D.J. *Proc. Natl. Acad. Sci. USA.*;104(22):9254-9259,May 2007
16. Black tea prevents cigarette smoke-induced apoptosis and lung damage. Banerjee, B., Maity, P., Mukherjee,S., Sil, A.K., **Panda, K.**, Chattopadhyay, D.J., and Chatterjee I.B. *Journal of Inflammation*, Biomed Central, Feb, 2007
17. Surface Charge Interactions of Electron Transport Modules Govern Catalysis by Nitric-oxide Synthase. **Panda K.** Haque, M., Garcin-Hosfield, E. Deborah, D., Elizabeth D. Getzoff, E.D. and Stuehr, D.J. *Journal of Biological Chemistry*, Vol. 281 (48), 36819–27, December, 2006
18. Regulation of Monomer-Dimer Equilibrium in Inducible Nitric Oxide Synthase by NO. Li, David, Hayden, E.Y, **Panda, K.**, Stuehr, D.J., Rousseau, D.L. and Yeh, S. *Journal of Biological Chemistry*, Vol. 281(12), pp-8197-8204, Mar, 2006
19. How distinct structural elements combine to regulate NOS electron transfer and catalysis. Konas, D., Takaya, N., Tiso, M., **Panda, K.**, Adak, S., Garcin, E., Getzoff, E.D and Stuehr, D.J. *Nitric Oxide Biology & Chemistry* .Vol. 14(4):pp- 14-19. Jan, 2006
20. Visualizing Inducible Nitric-Oxide Synthase in Living Cells with a Heme-Binding Fluorescent Inhibitor. **Panda K. (corresponding author)**, Chawla-Sarkar, M., Cecil Santos, Koeck, T., Erzurum, S.C, Parkinson, J.F. and Stuehr, D.J. *Proc. Natl. Acad. Sci. USA* . Vol. 102(29), pp-10117-10122., Jul, 2005.
21. C-terminal Tail Residue Arg 1400 Enables NADPH to Regulate Electron Transfer in Neuronal Nitric-Oxide Synthase. Tiso, M., Konas, D., **Panda, K.**, Garcin, E, Sharma, M., Getzoff, E.D and Stuehr, D.J. *Journal of Biological Chemistry*, Vol. 280(47), pp- 39208-39219, Nov, 2005

22. A Tryptophan that Modulates Tetrahydrobiopterin-Dependent Electron Transfer in Nitric-Oxide Synthase Regulates Enzyme Catalysis by Additional Mechanisms. Wang, Z.Q., Wei, C., Santolini, J., **Panda, K.**, Wang, Q. & Stuehr, D.. *Biochemistry*. Vol. 44, pp-4676-90, Mar, 2005
23. A conserved Aspartate (Asp1393) Regulates NADPH Reduction of Neuronal Nitric-Oxide Synthase: Implications for Catalysis. **Panda, K.**, Adak, S., Konas, D. and Stuehr, D.J. *Journal of Biological Chemistry*, Vol.279, pp-18323-18333, Apr, 2004.
24. Distinct Influence of N-terminal Elements on Neuronal Nitric Oxide Synthase Structure and Catalysis. **Panda, K.**, Adak, S., Aulak, K.S., Santolini, J. Mc Donald, J.F., Stuehr, D.J. *Journal of Biological Chemistry*, Vol.278 (39), pp-37122-37131, Sep 2003.
25. Distinct Dimer Interaction and Regulation in Nitric Oxide Synthases Types I, II and III. **Panda K.**, Rosenfeld, R.J., Ghosh, S., Meade, A., Getzoff, E.D, Stuehr, D.J. *Journal of Biological Chemistry* Vol. 277(34), pp-31020-30.,Aug, 2002.
26. Conformational Changes in Nitric Oxide Synthases Induced by Chlorzoxazone and Nitroindazoles: Crystallographic and Computational Analyses of Inhibitor Potency. Rosenfeld, R.J., Garcin, E.D., **Panda, K.**, Anderson, G., Wallace, A.V., Morris, G.M., Olson, A.J., Stuehr, D.J., Tainer, J.A., Getzoff, E.D. *Biochemistry*. Vol.41(47) 13915-25. Nov, 2002
27. Cloning, Expression, and Characterization of a Nitric Oxide Synthase Protein from *Deinococcus radiodurans*. Adak, S., Bilwes, A.M, **Panda, K.**, Hosfield, D., Aulak, K.S, McDonald, J.F, Tainer, J.A., Getzoff, E.D, Crane, B.R, Stuehr, D.J. *Proc. Natl. Acad. Sci. USA*, Vol. 99, Issue 1, pp- 107-112, Jan, 2002
28. Control of Nitric-Oxide Synthase Dimer Assembly by Heme-NO Dependent Mechanism. Chen, Y., **Panda, K.**, Stuehr, D.J. *Biochemistry*, Vol 41(14), 4618-25, April, 2002.
29. Calmodulin Activates Intersubunit Electron Transfer in the Neuronal Nitric Oxide Synthase Dimer. **Panda, K.**, Ghosh, S., Stuehr D.J. *Journal of Biological Chemistry*, Vol. 276(26), pp-23349-23356, Jun, 2001
30. Cigarette Smoke-Induced Protein Oxidation and Proteolysis is Exclusively Caused by its Tar Phase: Prevention By Vitamin C. **Panda, K. (corresponding author)**, Chattopadhyay, R., Chattopadhyay, D.J, Chatterjee, I.B. *Toxicology Letters*, Vol 123(1), pp–21-32, Aug, 2001
31. Vitamin C Prevents Cigarette Smoke Induced Oxidative Damage in vivo. **Panda, K.**, Chattopadhyay, R., Chattopadhyay, D.J, Chatterjee, I.B. *Free Radical Biology and Medicine*, Vol 29 (2), pp – 115 -124, Jul, 2000
32. Vitamin C Prevents Cigarette Smoke Induced Oxidative Damage of Proteins and Increased Proteolysis. **Panda,K.**, Chattopadhyay, R., Ghosh, M.K., Chattopadhyay, D.J, Chatterjee, I.B. *Free Radical Biology and Medicine*, Vol 27 (9-10), p-1064-79, Nov, 1999

**b) Books/ book chapters :**

1. Ion-sensing membrane electrodes in study of surfactant-biopolymer interaction. Chatterjea, S.M, **Panda K.**, Moulik, S.P. *Encyclopedia of Biocolloid and Bointerface Science*, Volume 2, Chapter 58 (2 Volume Set). Hiroyuki Ohshima (Editor). ISBN: 978-1-118-54276-7. June 2016. John Wiley and Sons.

2. Failure of Alpha-Tocopherol to Prevent Cigarette Smoke-Induced Protein Oxidation: Comparison with Other Antioxidant Vitamins. **Panda K.** and Chatterjee I.B. *Encyclopedia of Vitamin E*. Oxford University Press (CABI), Oxfordshire, UK. Editor, Victor R. Preedy, King's College, London, UK. Chapter 63.p-883-893
3. The Tetrahydrofolate to Tetrahydrobiopterin Dependence Transition in Nitric Oxide Synthase Evolution **Panda, K.** & Stuehr, D.J. *Pterins, Folates and Neurotransmitters in Molecular Medicine*. 16-17. SPS Publications, Heilbronn, Germany. Editors; Nenad Blau & Beat Thony, University of Zurich, Switzerland.

**C) Other publications:**

**Nostalgia: An Illustrated History of Hindu-Presidency College. Editor: Koustubh Panda**

**11. Patents:**

1. A novel probe for longitudinal imaging of inducible nitric-oxide synthase in live cells and animals

**12. Invited lectures delivered:**

1. Oxidant(s) in tobacco smoke are the key etiopathogenic trigger for cigarette smoke induced lung damage and remodelling. Fourth International Conference on Translational Research. Gupta, I, Ganguly, S., **K. Panda** Oct 11-13, 2018, Bogmallo Beach Resort, Goa.
2. Gene Editing Using the CRISPR-CAS9 Technology: The Double Edged Sword for India. **K. Panda**. International Conference on 'Ethical and Scientific Issues of Gene Editing using the CRISPR-Cas9 Technology'. April 27-28, 2017. National Institute of Immunology, New Delhi.
3. Insights into the Pathogenesis of COPD. **K. Panda**. April 23, 2017. Summer Symposium on Understanding, Assessment and Management of COPD. The Sonnet Hotel, Salt Lake City, Kolkata. (Plenary Speaker).
4. Perspectives of cigarette smoke-induced lung damage. **K. Panda**. September 22, 2016. Lerner Research Institute, Cleveland Clinic, Ohio, USA. (Invited Talk)
5. Oxidative mechanisms in tobacco-induced lung damage. **K. Panda**. September 20, 2016. Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD. (Invited Talk)
6. Vitamin C prevents cigarette smoke-induced pulmonary emphysema by inhibiting tobacco-smoke and Rtp801 triggered lung protein modification and proteolysis. Gupta, I, Ganguly, S., Rozanas, CR, Stuehr, D.J, **Panda, K.** April 17, 2016. International Conference on Translational Research, Bose Institute, Kolkata.
7. Using a novel pyrimidine imidazole for inhibition and detection of Nitric-Oxide-Synthase. Nagpal, L, Saha, S., Ranu, B.C., Suehr, D.J, **Panda, K.** March 18, 2016. National Conference on New Avenues in Microbiology and Biotechnology: Challenges and Prospects, Dept. of Microbiology, State University of West Bengal.
8. Differential binding of Calmodulin to Nitric Oxide Synthase I, II and III: Implications on Catalytic Activity. Nagpal, L, Haque, M, Kumar, S. Stuehr, D., **Panda, K.** December 4, 2015, Dept. of Pathobiology, Lerner Research Institute, Cleveland Clinic, OH, USA

9. Inhibition to exhibition of inducible Nitric-Oxide Synthase, a key enzyme in human pathophysiology using novel pyrimidine imidazoles. **Panda, K.** December 3, 2015. Dept. of Medical Physiology, College of Medicine, Texas A&M University, Temple, Texas, USA
10. The need for Innovation in India. **Panda, K.** August 18, 2015. Department of Biotechnology, North Eastern Hill University (NEHU), Shillong, Meghalaya, India
11. A novel in-vivo probe for the longitudinal monitoring of inducible nitric-oxide synthase expression in live cells and animals. Nagpal, L. Saha, S., Ranu, B.C., **Panda, K.** February 5-7, 2015. First International Conference on Translational Research: Basic Science to Clinical Application. KIT University, Bhubaneswar, Orissa, India
12. Innovation and Technology Transfer: The Survival Challenge for the Developing World. **Panda K.** May 23, 2014. International Workshop on Wealth Creation through Innovation, Sri Lankan Institute of Nanotechnology, Nanoscience and Technology Park, Homagama, Sri Lanka
13. The Kolkata Biotech Park: An effective step towards bridging biotech industry and academia. **Panda, K.** June 7, 2012. Workshop on Knowledge Economy Partnership of University of Calcutta and ISIS Innovation, University of Oxford. Centre for Research in Nanoscience and Nanotechnology, University of Calcutta, Salt Lake, Kolkata
14. Exploring a High Potency Tea Tablet for Prevention of Cigarette Smoke Induced Lung Damage. **Panda, K.** November 23, 2011, World Tea Science Congress, Tea Research Association, Jorhat, Assam, India
15. Eliminating Toxicity of Smoking through Tea. **Panda, K.** October 12, 2011. National Conference on Health & Longevity Through Chai: Recent Scientific Findings on Tea Components & Health Effects, Hotel Le Meridien, New Delhi
16. Development of novel dimerization inhibitors for therapeutic control of Inducible Nitric Oxide Synthase (iNOS). **Panda, K.** Aug 15, 2011, Department of Pathobiology, Lerner Research Institute, Cleveland Clinic, Cleveland, Ohio, USA
17. Vitamin C Prevents Arsenicosis. **Panda, K.** , Feb 18-19, 2011 Workshop on Nutrition Science, Nutrigenomics and Human Science Variome: Present and Future, Centre for Research in Nanoscience and Nanotechnology, University of Calcutta, Salt Lake, Kolkata.
18. Studying the bioefficacy and bioavailability of tea polyphenols using animal and cellular models. **Panda, K.** July 14, 2010, Tea Research Association, Tocklai, Jorhat, Assam.
19. The Kolkata Biotech Park: A New Beginning for the Biotech Industry in Eastern India. **Panda, K.** April 20, 2010. ASSOCHAM Conference on Bio Pharma Hub: Advantage West Bengal–Hotel Taj Bengal, Kolkata
20. Using DIGE to detect small changes in protein levels. **Panda, K.** Seminar on Synchronized solution in 2D- Gel Electrophoresis. June 26, 2009, Park Hotel, Kolkata
21. Proteomic elucidation of lung protein expression changes during cigarette smoke exposure. **Panda K.** November 4, 2008. Dept. of Microbiology and Cell Biology, Indian Institute of Science, Bangalore, India
22. Application of Difference Fluorescence-In-Gel Electrophoresis in Proteomics. **Panda K.** July 18, 2008. Workshop on Modern Proteomic Tools. Indian Habitat Centre, New Delhi

23. Probing Nitric Oxide-synthase in live cells and animals. **Panda K.** April 7, 2008, Society of Biological Sciences (Kolkata Chapter). CSIR-Indian Institute of Chemical Biology, Kolkata
24. Visualizing Nitric Oxide Synthase in Live Cells and Animals. **Panda K.** March 11, 2007. Special Centre for Molecular Medicine, Jawaharlal Nehru University, New Delhi, India
25. Cigarette smoke-induced oxidative lung damage: Emerging mechanisms in emphysema. **Panda, K.** March 12, 2007 Department of Biotechnology, Indian Institute of Technology, New Delhi.
26. Studying Small Changes in Protein Expression Using Difference Fluorescence 2-D Gel Electrophoresis (DIGE). **Panda K.** June 7- 9, 2007. Bangalore Bio 2007, Bangalore, India
27. Applications and Caveats of Confocal Microscopy. **Panda K.** Symposium and Work-shop on Confocal Microscopy. May 23-25, 2007. Institute of Life Sciences, Department of Biotechnology, Govt. of India, Bhubaneswar, Orissa, India.
28. Proteomic Tools in Preventive Medicine. **Panda K.** and Rozanas, C. Biomagination 2007: International Symposium on Evolving Tools in Proteomics. April 13, 2007. Jack Welch Research Centre, GE Biosciences, Bangalore, India
29. A Novel Probe for Visualizing Nitric Oxide Synthase in Living Cells and Animals. **Panda K.,** Chawla-Sarkar, M., Santos, C., Koeck, T., Erzurum, S.C, Parkinson, J.F. and Stuehr, D.J. Gordon Research Conference, May 22-27, 2005, Il Cioco, Barga, Italy.
30. Emerging Mechanisms of Cigarette-Smoke Induced Emphysema. **Panda, K.** , Rozanas, C. Chawla-Sarkar, M., Beckett, P., Stuehr, D.J. WATCH 2004: International Conference on Tobacco Control and Diseases, March, 2004. New Delhi, India.
31. NO Way Back: Is the Neuronal Nitric Oxide Synthase the Evolutionary Link between Primitive Bacterial Nitric Oxide Synthase Proteins and Mammalian Nitric Oxide Synthases? **Panda, K.** Adak, S. and Stuehr, D.J. Experimental Biology 2003 Meeting (ASBMB Meeting), Apr 11-15, 2003, San Diego, California, USA.
32. The Tetrahydrofolate to Tetrahydrobiopterin Dependence Transition in Nitric Oxide Synthase Evolution. **Panda, K.** Adak, S. and Stuehr, D.J. 13th International Conference on Pterins, Foliates and Related Biogenic Amines, Mar 30-Apr 4, 2003, Maui, Hawaii, USA.
33. Neuronal Nitric Oxide Synthase: Role of N-Terminal Hook Region and PDZ Domain in Dimerization and Catalysis. **Panda, K.,** Adak, S., Santolini, J., Aulak, K.S., Stuehr, D.J. Second International Conference on Biology, Chemistry and Therapeutic Applications of Nitric Oxide. Jun 3-7, 2002, Prague, Czech Republic
34. Role of N-Terminal Hook Region and PDZ Domain of Neuronal Nitric Oxide Synthase in Dimerization and Catalysis. **Panda, K.,** Adak, S., Santolini, J., Stuehr, D.J. Experimental Biology 2002 Meeting (ASBMB Meeting), April 20-24, 2002, New Orleans, Louisiana, USA.
35. Electron Transfer in Neuronal Nitric Oxide Synthase Occurs Exclusively Between Adjacent Subunits and Involves Calmodulin. **Panda K.,** Ghosh, S., Stuehr, D.J. 12th International Conference on Cytochrome P450, Sept 11-15, 2001, Montpellier, France.
36. Calmodulin Activates Intersubunit Electron Transfer in the Neuronal Nitric Oxide Synthase Dimer. **Panda K.,** Ghosh, S., Stuehr, D.J. Gordon Research Conference. Feb 4-9, 2001, Ventura, California, USA.



37. Subunit Dissociation and Re-association in Nitric Oxide Synthase: Comparative Analysis of the Role of Arginine and Tetrahydrobiopterin among the Three Isoforms. **Panda K.**, Ghosh, S., Stuehr D.J. First International Conference on Biology, Chemistry and Therapeutic Applications of Nitric Oxide. Jun 3-7, 2000, San Francisco, California, USA.
38. Vitamin C Prevents Cigarette Smoke Induced Oxidative Damage. **Panda, K.**, Chattopadhyay, R., Chattopadhyay, D.J, Chatterjee, I.B International Conference on Emerging Potentials Of Antioxidant Therapy (EPAT), Jan 11–14, 1999, Goa, India.
39. Vitamin C Prevents Oxidative Damage of Guinea Pig Lung. **Panda, K.**, Chattopadhyay, R., Chattopadhyay, D.J, Chatterjee, I.B. Indian Science Congress. Jan 3–9, 1996, Patiala, India.

**13. Membership/Fellowships of Learned Societies:**

1. Member of American Association for the Advancement of Science (AAAS), USA
2. Member of American Society of Biological Chemists (ASBMB), USA
3. Fellow of the West Bengal Academy of Science & Technology (WAST)
4. Executive Committee Member, Indian Society for Translational Research
5. Convenor, Society of Biological Chemists of India (Kolkata Chapter)
6. Life Member of the Proteomic Society of India
7. Life Member of the Indian Science Congress Association

**14. Other activities:**

1. Convenor, Ph.D Program in Biotechnology, University of Calcutta
2. Academic Editor, Plos One Journal.
3. Expert & Observer, Dept. of Biotechnology, Govt. of India
4. Coordinator, UGC Refresher Course in Biotechnology
5. Member of various Selection Committees and Study Boards as well as Govt. Expert Committees