



# ARITRI BIR

MBBS, MD (Biochemistry), DNB (Gold Med), MNAMS  
Assistant Professor  
Dept of Biochemistry  
Dr. B.C. Roy Multispeciality Medical Research Centre  
Indian Institute of Technology Kharagpur

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## Area of Interest:

- **Mitochondrial Bioenergetics**
- Neuropathology and Molecular characterization of neurodegeneration (Alzheimer's disease & Parkinson's Disease)
- **Aging**
- **Sarcopenia**
- **Medical Education:** Faculty training & Curriculum development and implementation
- **Clinical Chemistry:** Laboratory organization, automation
- **Quality Control:** Total quality management in of clinical biochemistry lab.

## EXPERIENCE:

**Nov 2021 –present:** Assistant professor, Dr. B.C. Roy Multispeciality Medical Research Centre, IIT Kharagpur

**July 2020 – Oct 2021:** Associate Professor  
MGM Medical College, Kishanganj, Bihar

**July 2018 – July 2020:** Associate Professor  
IQ City Medical College, West Bengal

**June 2016 – June 2018:** Assistant Professor  
IQ City Medical College, West Bengal

**July 2014 – June 2016:** Assistant Professor  
IIMSAR, West Bengal

## EDUCATION

- **MD ( Biochemistry ) : 2011 - 2014**  
IPGMER, Kolkata (West Bengal University of Health and Sciences)
- **MBBS : 2003 - 2008**  
Medical College, Kolkata (West Bengal University of Health and Sciences)  
*Honours in Ophthalmology & ENT*
- **DNB (Biochemistry) : 2021**  
National Board of Education in Medical Sciences  
*President Gold Medal from NBEMS*

## TRAINED IN:

- Advanced Medical Course Education (ACME)
- Laboratory Quality Management System and Internal Auditing as per ISO:15189:2012

## List of Publication:

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Visceral adiposity index and lipid accumulation product index: the promising role in assessing cardiometabolic risk in non-obese patients of PCOS. Bir A, Ghosh A, Chowdhury.S J Edu Health Promot 2022: 12 Accepted in press.

Ganguly U, Bir A, Chakrabarti S (2022) Cytotoxicity of mitochondrial Complex I inhibitor rotenone: a complex interplay of cell death pathways. 2022.13. <https://doi.org/10.26124/mitofit :2022-0013>

Ghosh A, Bir A. Role of written examination in the assessment of attitude ethics and communication in medical students: Perceptions of medical faculties. J Edu Health Promot 2021;10:23.

Ghosh A, Bir A. Need of evolution in mci teacher's training programs: faculty perceptions of a tertiary care medical college in India. J. Evid. Based Med. Healthc. 2020; 7(23), 1113-1118. DOI: 10.18410/jebmh/2020/240

Sinha S, Ghosh A, Bir A. Role of six sigma metrices in assessing quality check of analytical errors in clinical laboratory. Volume-7 | Issue-4 | April-2018 | ISSN No 2277 - 8179

Bir A, Ghosh A, Sinha S, et al. Quality indicators are effective to monitor the performance level of preanalytical phase- a study in a clinical laboratory of Eastern India. J. Evid. Based Med. Healthc. 2018; 5(13), 1140-1145. DOI: 10.18410/jebmh/2018/236

Ghosh A, Bir A. (2018) Relationship of proinflammatory cytokines with microalbuminuria in patients of type 2 diabetes mellitus- implications in the pathogenesis of diabetic nephropathy. J. Evid. Based Med. Healthc. 2018; 5(10), 862-865. DOI: 10.18410/jebmh/2018/174

Chakrabarti SS, Bir A, Poddar J, Sinha M, Ganguly A, Chakrabarti S. (2016) Ceramide and Sphingosine-1-Phosphate in Cell Death Pathways: Relevance to the Pathogenesis of Alzheimer's Disease. Curr Alzheimer Res. 2016;13(11):1232-1248. DOI: 10.2174/1567205013666160603004239

Sinha M, Bir A, Banerjee A, Bhowmick P, Chakrabarti S. Multiple mechanisms of age-dependent accumulation of amyloid beta protein in rat brain: Prevention by dietary supplementation with N-acetylcysteine,  $\alpha$ -lipoic acid and  $\alpha$ -tocopherol. Neurochem Int. 2016 May;95:92-9. doi: 10.1016/j.neuint.2015.10.003. Epub 2015 Oct 14. PMID: 26463138.

Banerjee, P., Sahoo, A., Anand, S., Bir, A., & Chakrabarti, S. (2016). The Oral Iron Chelator, Deferasirox, Reverses the Age-Dependent Alterations in Iron and Amyloid- $\beta$  Homeostasis in Rat Brain: Implications in the Therapy of Alzheimer's Disease. Journal of Alzheimer's disease : JAD, 49(3), 681–693. <https://doi.org/10.3233/JAD-150514>

Kabiraj, A., Khaitan, T., Bhowmick, D., Ginjupally, U., Bir, A., & Chatterjee, K. (2016). Screening of Oral Potentially Malignant Disorders Using Exfoliative Cytology: A Diagnostic Modality. Journal of cancer epidemiology, 2016, 8134832. <https://doi.org/10.1155/2016/8134832>

Kaur U, Banerjee P, Bir A, Sinha M, Biswas A, Chakrabarti S. Reactive oxygen species, redox signaling and neuroinflammation in Alzheimer's disease: the NF- $\kappa$ B connection. Curr Top Med Chem. 2015;15(5):446-57. doi: 10.2174/1568026615666150114160543. PMID: 25620241.

Bir A, Sen O, Anand S, Khemka VK, Banerjee P, Cappai R, Sahoo A, Chakrabarti S.  $\alpha$ -Synuclein-induced mitochondrial dysfunction in isolated preparation and intact cells: implications in the pathogenesis of Parkinson's disease. J Neurochem. 2014 Dec;131(6):868-77. doi: 10.1111/jnc.12966. Epub 2014 Nov 18. PMID: 25319443.

Khemka VK, Bagchi D, Bandyopadhyay K, Bir A, Chattopadhyay M, Biswas A, Basu D and Chakrabarti S. (2014). Altered Serum Levels of Adipokines and Insulin in Probable Alzheimer's Disease. *J Alzheimers Dis.* 2014;41(2):525-33. doi: 10.3233/JAD-140006

Khemka VK, Ganguly A, Bagchi D, Ghosh A, Bir A, Biswas A, Chattopadhyay S, Chakrabarti S. Raised serum proinflammatory cytokines in Alzheimer's disease with depression. *Aging Dis.* 2014 Jun 1;5(3):170-6. doi: 10.14336/AD.2014.0500170. eCollection 2014 Jun.

Sahoo A, Banerjee P, Khemka VK, Bir A, Anand S and Bandyopadhyay K. (2014). Lipid Peroxidation And Antioxidant Status In Cancer: Implication In Carcinogenesis. *Int J Biol Med Res.*5,3755-3758

Khemka VK, Bagchi D, Ghosh A, Sen O, Bir A, Chakrabarti S and Banerjee A. (2013). Raised Serum Adenosine Deaminase Level in Nonobese Type 2 Diabetes Mellitus. *Scientific World Journal.* doi:10.1155/2013/404320

Khemka VK, Choudhuri S, Ganguly A, Ghosh A, Bir A, Banerjee A. Lipid peroxidation and antioxidant status in non-obese type 2 diabetes mellitus. *Adv Endocrinol* 2014;2014:1-6. doi:10.1155/2014/830761