



Government of West Bengal
Institute of Postgraduate Medical Education & Research
Centre of Excellence in Medical Education & Research

Physiology

FACULTY

1. Dr. Arnab Sengupta, MD	Professor & Head
2. Dr. Kakali Roy Basu, MD	Professor
3. Dr. Sangita Sen, MD, PhD	Professor
4. Dr. Piyali Das, MD, DNB, PhD	Professor
5. Dr. Subhankar Kumar, MD, DNB	Associate Professor
6. Dr. Sucheta Biswas, MD	Assistant Professor
7. Dr. Rupa Goswami, MD	Assistant Professor
8. Dr. Kuntalika Mani, MD	Assistant Professor
9. Dr. Aditi Bandopadhyay, MD	Demonstrator
10. Dr. Subhabrata Ghosh, MD	Demonstrator

Senior Resident

1. Dr. Satarupa Das, MD	Joined on September, 2022
2. Dr. Anisha Dutta, MD	Joined on September, 2022

Ph. D Scholar

1. Ms. Tania Ghosal, M.Sc.	Joined on June, 2021
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Postgraduate Students

1. Dr. Rajyashree Ghosh	PGT 2020-2023
2. Dr. Monalisa Sahu	PGT 2020-2023
3. Dr. Andrevich Saha	PGT 2020-2023
4. Dr. Soimontika Nandy	PGT 2021-2024
5. Dr. Sajid Islam	PGT 2022-2025
6. Dr. Ashok Baidya	PGT 2022-2025

Medical Technologists (Laboratory)

1. Mrs. Sovabati Paul (Karmakar)

Non-teaching staff

1. Mr. Latif Molla
2. Mr. Jugweshwar Prasad
3. Ms. Ami Valmiki

ACADEMIC ACTIVITIES

Physiology courses conducted by the department for:

- MBBS (200 seats/year)

- MD Physiology (5 seats/year)
- Regular lecture and practical classes for these courses.
- Seminar, Journal Club & Microteaching for PG course.
- Regular assessments and periodic evaluation (including Semester) for UG course.
- Periodic evaluation of PG course.
- Regular PG seminars.
- Regular journal clubs.

Research and Laboratory facilities

1. Neurophysiology lab for NCV studies.
2. Biochemistry lab for routine biochemical parameters like urea, creatinine, glucose, lipid profile by spectrophotometer.
3. Hematology lab for routine hematology investigation like Hb%, TC, DLC, PCV, ESR, Platelet count, reticulocyte count & bone marrow study.
4. Yoga Lab for studying effect of Yoga on different systems.
5. Cardio-respiratory Lab, including Exercise Physiology Lab.
6. Vectorcardiography evaluation Lab.
7. Autonomic function Lab, including Heart Rate Variability.
8. Sports Physiology Lab. including CPET, D-Wall, Finometry etc. at Sports Medicine Centre

Ongoing Funded Research Project:

SERB-DST Core Research Grant sponsored project entitled, "An Objective Evaluation of Coronary Artery Disease using Spatial Vectorcardiography and Digital Phonocardiography". Ref. Number: CRG/2020/004318.

Total cost of the project: Rs. 57, 64, 240/- (Govt. of India).

Duration: 3 years.

PI: Prof. Arnab Sengupta

FACULTY NEWS

Prof. Arnab Sengupta

Acting as PI in SERB-DST Core Research Grant sponsored project entitled, "An Objective Evaluation of Coronary Artery Disease using Spatial Vectorcardiography and Digital Phonocardiography".

Guided thesis work of:

1. Dr. Monalisa Sahu: Topic: "Evaluation of the Autonomic profile in Type 2 DM by Heart Rate Variability"

Guiding thesis work of:

1. Ms. Tania Ghosal: Topic: "An Objective Evaluation of Coronary Artery Disease using Spatial Vectorcardiography and Digital Phonocardiography"
2. Dr. Soimontika Nandy: Topic: Evaluation of Heart Rate variability and Blood Pressure changes of patients of Generalised Anxiety Disorders during Graded Isotonic Exercise.

Publications

1. **Sengupta A**, Goswami DP. The undergraduate MBBS curriculum of physiology 2019: A cognitive compromise. IJPP. 2021 Jan 25;64:S21-s23.
2. Rajeshwari B, Sinha A, **Sengupta A**, Patra M, Sahoo KP, Ghosh N. Synchro-squeezed Transform based Click Event Segmentation in Phonocardiogram of Mitral Valve Prolapse. In: 2022 44th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC) [Internet]. Glasgow, Scotland, United Kingdom: IEEE; 2022 [cited 2022 Dec 25]. p. 1997–2000. Available

from: <https://ieeexplore.ieee.org/document/9871853/>

3. Patra M, Bs R, **Sengupta A**, Patra A, Ghosh N. Wavelet based event detection in the phonocardiogram of prolapsed mitral valve. In: 2021 43rd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC) [Internet]. Mexico: IEEE; 2021 [cited 2022 Dec 25]. p. 841–4. Available from: <https://ieeexplore.ieee.org/document/9629864/>
4. Roy S, Goswami DP, **Sengupta A**. Geometry of the Poincaré plot can segregate the two arms of autonomic nervous system – A hypothesis. Medical Hypotheses. 2020 May;138:1 09574.
5. Bhattacharyya S, Goswami DP, **Sengupta A**. Spatial velocity of the dynamic vectorcardiographic loop provides crucial insight in ventricular dysfunction. Medical Hypotheses. 2020 Feb;135:109484.

Conducted several webinars on Physiological Signal processing with colleges of West Bengal.

Prof. Kakali Roy Basu

Conference: attended as Delegate AMASICON 2022, Guwahati, Assam from 17th to 19th November, 2022

Prof. Sangita Sen

Guided thesis work of

Dr. Subhendu Bag – Topic: "Effect of graded isometric hand grip exercise in normal healthy adults of eastern India".

Prof. Piyali Das

Guided thesis work of

Dr. Andrevich Saha– Topic: Peripheral nerve conduction studies among the middle aged male diabetics without any neurological symptoms.

1. Planning and Conducting Research work in Neurophysiology.
2. Currently conducting a study on "H reflex study in Diabetic Neuropathy".
3. Running the Neurophysiology lab in the Department, upgraded the machine for NCS, trained the postgraduate students and the faculties, with patient care service in Neuophysiological investigations since 1.1.2022.
4. Currently acting as Coordinator, Medical Education Unit of IPGME&R and participated in various activities pertaining to planning and implementation of over all Medical Education System of the Institute.
5. Organized and participated as resource person in Revised Basic Course Workshops in Medical Education (rBCW) for the full time faculties of the College, under supervision by National Medical Commission.
6. Selected for and attended 1st contact session of FAIMER fellowship at Christian Medical College, Ludhiana.

Publications

1. Das P, Biswas S. Association of tobacco addiction, oxidative stress, and abnormal seminogram profile among middle-aged Indian males. Ann Med Sci Res. 2022;1(1):10.
2. Electrophysiological assessment of auditory transmission by Brainstem Evoked Response Audiometry in subclinical hypothyroidism without any clinical hearing loss. JMSCR Volume 07 Issue 04 April 2019.

Dr. Subhankar Kumar

Guided thesis work of,

Dr. Satarupa Das– Topic: Diastolic blood pressure during non-isometric exercise and family history of hypertension in young adults.

Publication

'Transcarpal Motor Conduction Velocity: Repeatability and Application in Carpal Tunnel Syndrome.' Pinaki Das, Parasar Ghosh, Subhankar Halder, Subhankar Kumar.

Accepted in Annals of Neurosciences.

Conference

Sleep Apnoea Conference (IASSACON 2022 & Calcutta Sleep Course) 16th to 18th December, 2022.

Dr. Sucheta Biswas

Publications

1. Char D, **Biswas S**, Das S, Mandal P. A prospective study on placental migration in mid trimester low lying placenta. Int J Reprod Contracept Obstet Gynecol. 2022 Oct 28;11(11):3083.
2. Das Arunabha, Hasan Md Kamal, Char Debasish, **Biswas Sucheta**. Pre- Induction Cervical Ripening with Unfavorable Bishop Score Using Two Different Dinoprostone Vaginal Preparation: A Prospective Randomized Comparative Study between Controlled Release Dinoprostone Gel & Dinoprostone Vaginal Insert. IJTPR. 2022; 12(12); 103-109. e-ISSN: 0975-5160, p-ISSN: 2820-2651.
3. Biswas Palash, Char Debasish, Mandal Priyadarshi, **Biswas Sucheta**. Comparison between WHO (1999) Vs IADPSG Diagnostic Criteria of Gestational Diabetes Mellitus and their Association with Maternal & Neonatal Outcome. IJPCR. 2022; 14(12); 360-365. e-ISSN: 0975-1556, p-ISSN:2820-2643.

Dr. Kuntolika Mani

Publications

1. **Mani K**, Karini J, Mani K, Amrit A. Hypoxia inducible factor stabilizers: a promising treatment for chronic kidney disease. Int J Basic Clin Pharmacol 2020;9:1766-9.

Dr. Aditi Bandyopadhyay

1. Trainings imparted on 'Awareness of Autism- developing communication' at Faculty Induction Program, Calcutta University in March and November, 2022.

Publications

1. Association between Short term Heart Rate Variability and different grades of Chronic Obstructive Pulmonary Disease. Somsubhra Sarkar, Suranjan Banerjee, Aditi Bandyopadhyay, Jayanta Bhattacharya. International Journal of Medical Science and Current Research (IJMSCR), Volume 5, Issue 3, Page no: 879-886, May- June 2022

Dr. Subhabrata Ghosh

Conference

AOTS Trauma update 20-22nd September, 2022. Kolkata.

Thesis Submitted in 2021

Dr. Subhendu Bag	Effect of graded isometric hand grip exercise in normal healthy adults of eastern India.
Dr. Satarupa Das	Diastolic blood pressure during non-isometric exercise and family history of hypertension in young adults.
Dr. Anisha Dutta	Study of acute effects of single bout isometric handgrip exercise on blood pressure, heart rate and blood glucose and correlation of handgrip strength with spirometry in young healthy subjects.
Dr. Rajyashree Ghosh	Assessment of Ventricular Repolarization in Patients with Ischaemic Heart Disease using Ventricular Gradient.
Dr. Monalisa Sahu	Objective evaluation of progressive changes in autonomic profile in patients of acute myocardial infarction using heart rate variability parameters.
Dr. Andreovich Saha	Peripheral nerve conduction studies among the middle aged male diabetics without any neurological symptoms.

Thesis work ongoing

Dr. Soimontika Nandy: Topic: Evaluation of Heart Rate variability and Blood Pressure changes of patients of Generalised Anxiety Disorders during Graded Isotonic Exercise.
