



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. Sangita Sen, MD, PhD	Professor
3. Dr. Piyali Das, MD, DNB, PhD	Professor
4. Dr. Subhankar Kumar, MD, DNB	Associate Professor
5. Dr. Deepankshu Sekhar Mandal, MD	Associate Professor
6. Dr. Anish Bhowmik, MD	Associate Professor
7. Dr. Swasti Banerjee, MD	Associate Professor
8. Dr. Sucheta Biswas, MD	Assistant Professor
9. Dr. Rupa Goswami, MD	Assistant Professor
10. Dr. Kanad Bag, MD	Assistant Professor
11. Dr. Kuntalika Mani, MD	Assistant Professor
12. Dr. Subrata Nag, MD	Demonstrator
13. Dr. Avijit Kanrar, MD	Demonstrator
14. Dr. Aditi Bandyopadhyay, MD	Demonstrator

Senior Resident

1. Dr. Prasenjit Mandal, MD	Joined in October, 2021
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PhD Scholar

1. Ms. Tania Ghosal	Joined in June, 2021
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Postgraduate Students

1. Dr. Subhendu Bag	PGT 2019-2022
2. Dr. Anisha Dutta	PGT 2019-2022
3. Dr. Satarupa Das	PGT 2019-2022
4. Dr. Rajyashree Ghosh	PGT 2020-2023
5. Dr. Monalisa Sahu	PGT 2020-2023
6. Dr. Andrevich Saha	PGT 2020-2023

Medical Technologists (Laboratory)

1. Mrs. Sovabati Paul (Karmakar)

Non-teaching staff

1. Mr. Girish Lal
2. Mr. Latif Molla
3. Mr. Jugweshwar Prasad

ACADEMIC ACTIVITY

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 on-line classes, both theory and practical of UG and PG students during the period of pandemic.
- 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.

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".

Guiding thesis work of:

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

Publications

1. 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.
2. 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 5 webinars on Covid-19 awareness with 5 colleges of West Bengal and also in collaboration with NSS.

Prof. Sangita Sen

Guiding thesis work of

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

Dr. Piyali Das

Guiding 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. Prepared the Neurophysiology lab in the Department, upgraded the machine for NCS, and trained the postgraduate students and the faculties to commence the patient care service in Neurophysiological investigations by the Department of Physiology for the first time in this Institute from 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 two successful Revised Basic Course Workshops in Medical Education (rBCW) for the full time faculties of the College, under supervision by National Medical Commission.

Publication

- 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

Guiding thesis work of

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

Working at Rodent Memory Laboratory in the Dept. of Physiology with radial mazes (8-arm & 24-arm), Multi unit 'T' maze & Morris Water Maze to study spatial learning & memory in rat model of relevant diseases. A new work on the effect of antihistaminic drugs on performance in Morris water maze has been completed.

Currently in progress are research works on effect of enriched environment on non-spatial and spatial cognitive performance and on the effect of one maze training upon learning curve in another maze.

Publication

- Mandal DS, Kumar S, Sarkar SD. Recurrent fetal loss- a cross sectional study. Authors Journal of Medical Science & Clinical Research 2019; 7: 442-4.

Dr. Deepankshu Sekhar Mandal

Publications

- Mandal, DS, Kumar S, Sarkar SD. Recurrent fetal loss- a cross sectional study. Authors Journal of Medical Science & Clinical Research 2019; 7: 442-4.
- Tantri P, Mandal DS, Samajdar K, Sarkar SD. Analyzing performance of successful high endurance athletes on the basis of anthropometric indices & pulmonary functions. International Journal Of Scientific Research 2019; 8(1). DOI : 10.15373/22778179.
- Mandal DS, Vashisth S, Sarkar SD. Deficiency of heritable coagulation inhibitors (Protein C, Protein S and Anti Thrombin III) in unexplained multiple abortions. International Journal Of Scientific Research 2019; 8(2). DOI : 10.15373/22778179.

Dr. Anish Bhowmik

Publications

- Dasgupta D, Bhowmik A, pattern of thyroid profile with advancing age in South Bengal: A cross sectional study. International Journal of Scientific Research 2019; 8(3).

Dr. Swasti Banerjee

Publications

- Banerjee S, Gorai S, Mishra J, Nayak PK. Anthropometric determinants of peak expiratory flow rate and forced expiratory volume in first second in healthy young adults of eastern India. Natl J Physiol Pharm Pharmacol 2021;11(07):733-741.

Dr. Kanad Bag

Publication

- Das Indrani, Waliullah Md., Bag Kanad. Circumstances affecting women's vulnerability to sexual offence as reported in a tertiary level health care institute of a metro city in India. International Journal of Health and Clinical Research, 2021; 4(16):27-29.

Dr. Kuntolika Mani

Publication

- 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. Contribution during Covid -19 pandemic crisis
Served as physician with COVID crisis support network for persons with disabilities under Disability Activists' Forum (DAF) and Parivaar Bengal to reach out to families of persons with disabilities in the underdeveloped rural areas of West Bengal, reaching them medicine supplies after reviewing prescriptions for their chronic ailments.
2. Invited as resource person in faculty induction program at University of Calcutta (online) in both the semesters during 2021, training faculties from different colleges under the University on 'Autism and other neurodevelopmental disabilities - identification and interventions'.
3. Invited as a resource person in faculty induction program at Jadavpur University on 22/11/2021 for delivering a lecture on 'Pathophysiology of stress and its management through Art based therapies'.
4. Completed an online Diploma course (Diploma in Community Mental Health for Doctors) from NIMHANS (National Institute of Mental Health and Neurosciences) in May 2021.
5. Invited by the Rehabilitation Council of India to write a teaching module for children with developmental disabilities, to train teachers in mainstream school.
6. Interviewed on Doordarshan on 2/2/2021, Bangla in a program named 'Corona Mokabila', to speak about the physical and mental stress created by the pandemic upon people's lives.

Publication

- Bandyopadhyay. A, GuhaThakurta T. Study on T wave Morphology and QT interval in Diabetic Patients with or without Hypokalaemia. International Organization of Scientific Research Journal of Dental and Medical Science, vol 18, Issue 7, series 6, July 2019.

Thesis Submitted in 2020

Dr. Sovan Mitra	Effect of pranayama on pulmonary functions in patients with chronic moderate COPD. (under Prof. Sangita Sen).
Dr. Prasenjit Mandal	Effect of tempo of music on cardio-respiratory parameters. (under Dr. Deepankshu Sekhar Mandal).

Thesis work ongoing and under submission

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. Andrevich Saha	Peripheral nerve conduction studies among the middle aged male diabetics without any neurological symptoms.
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Department's special contribution to the COVID-19 battle

1. The teachers and postgraduate students are regularly attending the Telemedicine Helpline Centre of IPGME&R, and providing valuable help and assistance to the ailing patients and relatives of Covid-19.
 2. The teachers and postgraduate students are regularly attending the Vaccination Centre of IPGME&R, and providing valuable help and assistance to the immunization program of Covid-19.
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