

CURRICULUM VITAE

Dr. Priya Nandy, Ph.D.

Assistant Professor, Department of Medical Laboratory Technology (MLT)
School of Allied Health Sciences, Swami Vivekananda University
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EXECUTIVE SUMMARY

Academician and researcher with over 9 years of combined experience in higher education, laboratory diagnostics, and physiological evaluation. Holds a Ph.D. in Physiology with core specialization in Sports and Exercise Physiology, neuromuscular electromyography, and diagnostic biomarkers. Extensive record of research publications, academic book chapters, and hands-on athlete conditioning profiling with the Sports Authority of India (SAI). Currently engaged in undergraduate and postgraduate teaching, clinical diagnostics training, and academic editorial coordination.

CURRENT INSTITUTIONAL AFFILIATION

- **Assistant Professor**, Department of Medical Laboratory Technology (MLT) , School of Allied Health Sciences, Swami Vivekananda University, West Bengal
January 2025 – Present
 - **Responsibilities:** Delivering clinical instruction in Physiology, Histology, Pathology, and Diagnostic Medicine; curriculum planning; laboratory practical supervision; and interdisciplinary research mentorship.

CORE RESEARCH & ACADEMIC SPECIALIZATIONS

- **Sports & Exercise Physiology:** Aerobic/anaerobic capacity assessment, ventilatory kinetics, pulmonary function testing, and athletic conditioning.
- **Neuromuscular Mechanics:** Surface electromyography (sEMG), motor unit recruitment dynamics, and fatigue index modeling.
- **Clinical Diagnostics & Biomarkers:** Diagnostic hematology, serological markers, serum enzymes (CK, LDH), and electrolyte homeostasis.
- **Biostatistics & Analytics:** Predictive modeling, linear regression analysis, SPSS, and GraphPad Prism.

EDUCATIONAL QUALIFICATIONS

- **Doctor of Philosophy (Ph.D.) in Physiology**
Department of Physiology, University of Calcutta
 - **Award Date:** June 7, 2024
 - **Enrolment:** August 2017
- **Master of Science (M.Sc.) in Human Physiology**
University of Calcutta (Serampore College) | Year: 2015
 - **Specialization:** Sports and Exercise Physiology
 - **Score:** 75.6% (First Class)
- **Bachelor of Science (B.Sc. Hons.) in Physiology**
University of Calcutta (Surendranath College) | Year: 2013
 - **Score:** 62.75% (First Class)

PROFESSIONAL EXPERIENCE

Assistant Professor | Department of Medical Laboratory Technology (MLT)
School of Allied Health Sciences, Swami Vivekananda University, West Bengal
January 2025 – Present

- Delivering undergraduate and postgraduate instruction in **Physiology, Histology, Pathology and Diagnostic Medicine**.
- Conducting theoretical and laboratory-based practical classes.

- Supervising laboratory practical sessions and student academic activities.
- Contributing to curriculum planning and academic development.
- Providing interdisciplinary research mentorship and student guidance.

Assistant Professor | Paramedical Section

Bengal Institute of Pharmaceutical Sciences, Kalyani, Nadia, West Bengal

April 2021 – December 2024

- Taught BMLT and BPT students in **Physiology, Pathology, Immunology and Histopathology**.
- Delivered theoretical and practical instruction in medical and allied health sciences.
- Supervised laboratory-based academic activities and practical training.
- Mentored students in academic and research-related activities.
- Contributed to curriculum development and scholarly activities.

Research Fellow | Sports Authority of India (SAI), Sonapat

August 2017 – January 2018

- Worked as an Exercise Physiologist with National teams in **hockey, wrestling, judo, kabaddi, boxing, archery and athletics**.
- Conducted aerobic and anaerobic fitness assessments of National campers and athletes.
- Performed periodic physiological evaluation of athletes.
- Collected, analyzed and interpreted physiological and fitness-related data.
- Prepared exercise physiology assessment reports with training recommendations.
- Communicated assessment findings to coaches and support staff.
- Participated in SAI Regional and Head Office meetings.
- Conducted statistical analysis for assigned research projects.

Research Fellow | Sports Authority of India (SAI), Guwahati

June 2016 – July 2017

- Worked with National teams in **athletics, archery, boxing, table tennis, football, taekwondo, fencing, weightlifting and swimming**.
- Conducted aerobic and anaerobic fitness assessments.
- Monitored blood pressure, height, weight and anthropometric parameters.
- Conducted periodic physiological evaluation of athletes.
- Collected, analyzed and interpreted physiological data.
- Prepared exercise physiology test reports and training recommendations.
- Discussed assessment findings with coaches and support staff.
- Conducted statistical analysis for assigned project work.

RESEARCH AND TEACHING EXPERIENCE

Research Experience

Research Scholar | Department of Physiology, University of Calcutta

August 2017 – June 2024

- Conducted doctoral research in the field of **Physiology with specialization in Sports and Exercise Physiology**.
- Completed research coursework and obtained approval from the Human Ethical Committee.
- Designed and executed experimental protocols according to proposed research objectives.
- Conducted data collection, processing and statistical analysis.
- Investigated **neuromuscular activity, respiratory muscle function and surface electromyography (sEMG)**.
- Applied statistical methods for interpretation of experimental findings.
- Prepared research proposals, summary of research work and doctoral thesis.
- Published research findings in peer-reviewed journals.
- Presented research findings at national and international scientific conferences.

Research Fellow | Sports Authority of India

June 2016 – January 2018

- Conducted physiological, aerobic, anaerobic and anthropometric assessment of athletes.
- Worked with multiple National sports teams as an Exercise Physiologist.

- Collected, analyzed and interpreted physiological and fitness-related data.
- Prepared athlete assessment reports and training recommendations.
- Contributed to research projects involving physical and physiological profiling of athletes.

Teaching Experience

Assistant Professor | Medical Laboratory Technology & Physiotherapy Education

April 2021 – December 2024

- Teaching undergraduate students in **BMLT and BPT** programmes.
- Teaching core subjects including **Physiology, Pathology, Immunology and Histopathology**.
- Conducting theoretical lectures and practical laboratory sessions.
- Supervising practical demonstrations and laboratory-based learning.
- Mentoring students in academic, laboratory and research activities.
- Supporting curriculum planning and interdisciplinary academic activities.
- Promoting conceptual understanding, critical thinking and application-oriented learning.

Total Research & Teaching Experience: 10+ Years

PUBLICATIONS

Book Chapters

1. **Nandy, P.** (2025). Neuromuscular adaptations to exercise. In R. Singh (Ed.), *Advances in physical education, physiology and yoga* (Vol. 4, pp. 37–52). Integrated Publications. **Paperback ISBN: 978-93-5834-081-5; E-book ISBN: 978-93-5834-325-0.**
2. **Nandy, P.** (2026). Health and its dimensions. In R. H. N. Ravindra (Ed.) & D. S. Chouhan (Co-Ed.), *Fundamental of health and basic health care system* (Vol. 9, pp. 77–99). AkiNik Publications. **Paperback ISBN: 978-93-7150-604-5; E-book ISBN: 978-93-7150-120-0.**
3. **Nandy, P.** (2026). Kinanthropometry. In R. Kumar (Ed.), *Current advances in physical education and sports science* (Vol. 5, pp. 93–114). AkiNik Publications. **Paperback ISBN: 978-93-7150-907-7; E-book ISBN: 978-93-7150-549-9.**
4. **Nandy, P.** (n.d.). Introduction to metabolic biochemistry. In O. Banerjee (Ed.), *Inborn and acquired metabolic disorders: A biochemical approach* (pp. 1–20). **ISBN: 978-93-5469-789-0.**
5. **Nandy, P.** (2026). Cardiovascular pharmacology. In O. Banerjee (Ed.), *Pharmacology for modern health sciences* (pp. 91–106). **ISBN: 978-93-5737-883-3.**
6. **Nandy, P.** (2026). Immunodiagnosis of parasitic diseases. In O. Banerjee (Ed.), *Principles of parasitic diseases in clinical diagnostics* (pp. 95–114). **ISBN: 978-93-5759-572-8.**
7. **Nandy, P.** (2026). Recent advances and future perspectives in hematology. In O. Banerjee (Ed.), *Foundations and frontiers of hematology* (pp. 269–283). **ISBN: 978-93-5717-560-9.**
8. **Nandy, P.** (2026). Foundations of diagnostic parasitology: Protozoology and helminthology. In O. Banerjee (Ed.), *Pathogens in practice: Laboratory diagnosis of infectious disease* (pp. 137–150). **ISBN: 978-93-5737-883-3.**

Peer-Reviewed Journal Publications

1. **Nandy, P., Chatterjee, P., & Bandyopadhyay, A.** (2016). A comparative morphometric analysis of trained young male and female swimmers and table tennis players. *American Journal of Sports Science*, 4(1-1), 37–43. <https://doi.org/10.11648/j.ajss.s.2016040101.17> **ISSN: 2330-8559 (Print); 2330-8540 (Online)**
2. Chatterjee, P., **Nandy, P.**, Chakraborty, S., Maji, B., & Bandyopadhyay, A. (2016). Critical swim speed and metabolic activities in trained male and female swimmers after 400 m free style swimming with their full effort. *Progress in Health Sciences*, 6(2), 46–50. **ISSN: 2083-1617 (Print); 2083-6260 (Online)**
3. Chatterjee, P., **Nandy, P.**, & Bandyopadhyay, A. (2017). At what extent physical training can minimize gender differences in male and female trained swimmers? A comparative analysis. *International Journal of Sports and Physical Education*, 3(1), 24–28. <https://doi.org/10.20431/2454-6380.0301005> **ISSN: 2454-6380**
4. **Nandy, P.**, & Bandopadhyay, A. (2017). Influence of training on myocardial oxygen consumption (MVO₂) and electrical activity of the heart: A comparative study. *International*

Journal of Scientific & Engineering Research, 8(12), 1849–1857.

ISSN: 2229-5518

5. Saha, P., **Nandy, P.**, & Bandyopadhyay, A. (2018). Performance oriented upper arm anthropometric measurements in dominant endomorph, mesomorph and ectomorph (9–11 years) trained male tennis players. *International Journal of Yogic, Human Movement and Sports Sciences*, 3(1), 1097–1102.
ISSN: 2456-4419
6. Biswas, A., **Nandy, P.**, Prasad, S. K., Singh, S., & Bandyopadhyay, A. (2018). Interpretation of resting ECG waves in 6–11 years trained male and female tennis players. *International Journal of Physiology, Nutrition and Physical Education*, 3(2), 110–113.
ISSN: 2456-0057
7. Chatterjee, P., Bandyopadhyay, A., Chatterjee, P., & **Nandy, P.** (2019). Assessment and comparative analysis of different lung capacities in trained athletes according to somatotype. *American Journal of Sports Science*, 7(2), 72–77.
<https://doi.org/10.11648/j.ajss.20190702.14>
ISSN: 2330-8559 (Print); 2330-8540 (Online)
8. **Nandy, P.**, Sawoo, R., Bhattacharyya, S., & Bandyopadhyay, A. (2020). Motor unit involvement and activities in respiratory muscles during spirometric measurements of obstructive and restrictive lung diseases in 14–20 years male. *Progress in Health Sciences*, 9(1), 234–238.
ISSN: 2083-1617 (Print); 2083-6260 (Online)
9. **Nandy, P.**, Bhattacharyya, S., Dutta, S., & Bandyopadhyay, A. (2021). Associative strength and activities of motor units in diaphragm, intercostal and latissimus dorsi during forceful and normal respiration of 15–20 years young male athletes and non-athletes. *International Journal of Sports and Physical Education*, 7(1), 1–6. <https://doi.org/10.20431/2454-6380.0701001>
ISSN: 2454-6380
10. **Nandy, P.**, & Bandyopadhyay, A. (2021). How far does physical training modulate the motor unit activities of respiratory muscles in female athletes: An electromyographic study. *American Journal of Sports Science*, 9(4), 73–77.
<https://doi.org/10.11648/j.ajss.20210904.11>
ISSN: 2330-8559 (Print); 2330-8540 (Online)
11. Chatterjee, P., **Nandy, P.**, & Bandyopadhyay, A. (2021). Formulation of regression equation on the basis of endurance time and fatigue indices in biceps brachii by using surface-EMG of 14–19 years aged trained male volleyball players. *International Journal of Physical Education, Sports and Health*, 8(6), 6–10.
<https://doi.org/10.22271/kheljournal.2021.v8.i6a.2270>
ISSN: 2394-1685 (Print); 2394-1693 (Online)
12. **Nandy, P.**, Chatterjee, P., & Bandyopadhyay, A. (2023). A linear regression between maximum voluntary contraction and motor unit activity of respiratory muscles during forceful and normal respiration of male athletes using surface electromyography. *International Journal of Physical Education, Sports and Health*, 10(2), 88–95.
<https://doi.org/10.22271/kheljournal.2023.v10.i2b.2841>
ISSN: 2394-1685 (Print); 2394-1693 (Online)
13. Dutta, S., & **Nandy, P.** (2025). The role of BMI in predicting body fat percentage and trunk lean mass: A linear approach. *International Journal of Applied Research*, 11(2), 254–257.
<https://doi.org/10.22271/allresearch.2025.v11.i2d.12366>
ISSN: 2394-7500 (Print); 2394-5869 (Online)
14. **Nandy, P.** (2025). The role of artificial intelligence in sports physiology: Advancing performance and supporting athlete wellness—Innovative applications of AI in monitoring and enhancing athletic health. *International Journal for Research Trends and Innovation*, 10(4), a740–a744.
ISSN: 2456-3315
15. **Nandy, P.** (2025). Exploring the diagnostic value of lymphocytes in dengue fever, beyond leukopenia and thrombocytopenia. *International Journal of Advanced Research and*

Development, 10(2), 32–36.

ISSN: 2455-4030

16. **Nandy, P.** (2026). Neuromuscular adaptations and motor unit activities of respiratory muscles in athletes and pathological conditions: A systematic review. *International Journal of Research and Analytical Reviews*, 13(1), 448–452.
ISSN: E-ISSN 2348-1269; P-ISSN 2349-5138
17. **Nandy, P.** (2026). From sensor to success: A comprehensive review of wearable technology for athlete monitoring and performance optimization. *International Journal of Innovative Research in Technology*, 12(9), 4460–4468.
ISSN: 2349-6002
18. Maity, B., & **Nandy, P.** (2026). Beyond hemoglobin: Re-evaluating iron status in women's sports. *International Journal of Research and Review*, 13(4), 97–100.
<https://doi.org/10.52403/ijrr.20260410>
ISSN: Print – 2454-2237; Online – 2349-9788

Abstract Publications

1. **Nandy, P., & Bandyopadhyay, A.** “Analysis of linear regression equation based on motor unit activity and maximum voluntary contraction of respiratory muscles in female athletes.” *National Conference on Recent Trends in Sciences*, Fakir Chand College, 28 April 2023.
2. **Nandy, P., & Medabala, T.** “Comparison of selected physiological parameters of sub-elite boxers and karate players of North-East region of India – A cross-sectional study.” *International Conference on Sports Medicine and Sports Science, 1st SAICON 2017*, Sports Authority of India, Jawaharlal Nehru Stadium, New Delhi, 7–9 December 2017.
3. **Nandy, P., & Medabala, T.** “Influence of training on myocardial oxygen consumption (MVO₂) and electrical activity of the heart: A comparative study.” *FIPSPHYSIOCON 2017*, VII Congress of the Federation of Indian Physiological Societies (FIPS) & XXIX Annual Conference of the Physiological Society of India (PSI), Defence Institute of Physiology & Allied Sciences, Delhi, 5–7 November 2017.
4. **Nandy, P., & Bandyopadhyay, A.** “Resting electrocardiographic recording and comparison with Seattle criteria in trained male volleyball players.” *PHYSICON 2018*, XXX Annual Conference of the Physiological Society of India (PSI), Department of Physiology, Serampore College, 22–24 November 2018.

SCIENTIFIC PROGRAMMES ATTENDED

Oral Presentations

1. **Annual Student Seminar**, Department of Physiology, Dr. Kanailal Bhattacharyya College — **5 May 2023**
Title: *Physical Training and Motor Unit Activities of Respiratory Muscles in Athletes.*
2. **National Conference on Recent Trends in Sciences**, Fakir Chand College — **28 April 2023**
Title: *Analysis of linear regression equation based on motor unit activity and maximum voluntary contraction of respiratory muscles in female athletes.*
3. **SAICON 2017 – International Conference on Sports Medicine & Sports Sciences**, Sports Authority of India, New Delhi — **7–9 December 2017**
Title: *Comparison of selected physiological parameters of sub-elite boxers and karate players of North-East region of India – A cross-sectional study.*
Role: Speaker and Paper Presenter.

Poster Presentations

4. **PHYSICON 2018 – XXX Annual Conference of the Physiological Society of India**, Department of Physiology, Serampore College — **22–24 November 2018**
Title: *Resting electrocardiographic recording and comparison with Seattle criteria in trained male volleyball players.*
5. **FIPSPHYSIOCON 2017 – VII Congress of FIPS & XXIX Annual Conference of PSI**, Defence Institute of Physiology & Allied Sciences, Delhi — **5–7 November 2017**
Title: *Influence of training on myocardial oxygen consumption (MVO₂) and electrical activity of the heart: A comparative study.*

Seminars / Conferences / Webinars

6. Webinar on “*Bitter Salt: The Impact of Climate Change on Reproductive Health of Women in Coastal Areas*”, Dr. Kanailal Bhattacharyya College — **4 December 2021**.
7. Two-Day National Seminar on “*Scientific Approach to Sports Performance and Assessment*”, Department of Sports Science and Yoga, RKMVERI — **15–16 March 2019**.
8. One-Day Scientific Programme of *The Physiological Society of India*, University of Calcutta — **30 June 2018**.
9. RPMC Distinguished Lecture Series on “*Mechanism of Survival of Intracellular Pathogen in the Host Cell*”, Raja Peary Mohan College — **5 May 2018**.
10. National Symposium on “*Molecular Aspects of Human Diseases*”, Department of Physiology, Serampore College — **19 March 2016**.
11. National Seminar on “*Recent Trends: Research in Sports Science and Yoga*”, Department of Sports Science and Yoga, RKMVERI — **9–10 March 2018**.
12. UGC-Sponsored National Level Seminar on “*Frontiers of Microbiology: Prospects and Challenges*”, Ramakrishna Mission Vidyamandira in collaboration with CSIR-IICB, Kolkata — **20–21 November 2014**.

Workshops / Training Programmes

13. **Summer School on “Use and Application of SPSS”**, Biological Anthropological Unit, Indian Statistical Institute, Kolkata — **27–31 August 2018**.
14. **ISAK Level Two Anthropometrist Training Course**, International Society for the Advancement of Kinanthropometry — **20–25 February 2017**.
15. **ISAK Level One Anthropometrist Training Course**, International Society for the Advancement of Kinanthropometry — **28 January–3 February 2015**.
16. **Preconference Workshop on Electrophysiology and Experimental Physiology**, Medical College, Kolkata — **13 June 2014**.

Certifications, Fellowships & Professional Memberships

- **ISAK Level 2 Anthropometrist** (International Society for the Advancement of Kinanthropometry, 2017)
- **Life Member**, The Physiological Society of India (PSI) (Since May 2023)
- **Swami Vivekananda Merit-cum-Means Scholarship** for Non-NET Research Fellow (2019–2021)
- **Surendranath College Excellence Award** for Academic Distinction in B.Sc.

Declaration

I hereby declare that the particulars provided above are authentic and accurate to the best of my knowledge.

Dr. Priya Nandy

Place: Barrackpore, West Bengal, India