



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

Sector 43, Aravalli Hills, Manav Rachna Campus Rd, Faridabad,

Dr Gurseen Rakhra

Designation: Assistant Professor

Qualifications: Ph.D (Life Sciences)

Email: gurseen.fas@mriu.edu.in

Experience: 05 years



- **Research Interest:**
- Physical activity and body composition
- Metal estimation
- Metal Bioavailability studies
- Biochemical Assays
- Nutritional status taking into account intake, body levels and excretion of nutrients.
- Inflammatory marker studies
- Obesity and metabolic health
- Nutrition studies related to public health.
- Association of diet and diseases.

Journal Publication Details:

1. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Saroj K. Verma, Vijay K. Singh, Vandana Kirar, Som Nath Singh (2021). Effect of endurance training on copper, zinc, iron and magnesium status. **"THE JOURNAL OF SPORTS MEDICINE AND PHYSICAL FITNESS"** DOI: [10.23736/S0022-4707.21.11647-0](https://doi.org/10.23736/S0022-4707.21.11647-0)
2. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Aatira Vijay, Mohammad Zahid Ashraf, Som Nath Singh (2020). Study of metal-metal interactions and their biomarkers using an intestinal human cell line. Biological Trace Element Research (SPRINGER PUBLICATION). (<https://doi.org/10.1007/s12011-019-01831-2>)
3. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Saroj K. Verma, Vijay K. Singh, Rashmi Tomar Rana, Vandana Kirar, Som Nath Singh (2017). Effect of physical activity and age on plasma Cu, Zn, Fe and Mg in physically active healthy males. Nutrition Journal (ELSEVIER); 43-44: 75-82.
4. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Saroj K. Verma, Vijay K. Singh, Vandana Kirar, Archana Singh, Mallika Manral, Som Nath Singh (2015). Copper, iron, zinc and magnesium status of physically active young Indian males. IOSR: Journal Of sports and physical education; Volume 2, Issue 5 (Sep. – Oct. 2015), PP 25-32.
5. Daisy Masih, Jitendra Kumar Tripathi, **Gurseen Rakhra**, Annu Vats, Saroj Kumar Verma, Prabhash Kumar Jha, Manish Sharma, Mohammad Zahid Ashraf and Som Nath Singh . Deciphering Biochemical and Molecular Signatures Associated with Obesity in Context of Metabolic Health; Genes 2021, 12, 290. <https://doi.org/10.3390/genes12020290>
6. Vandana Kirar, Mallika Manral, Vijay Kumar Singh, Saroj Kumar Verma, **Gurseen Rakhra**, Daisy Masih, Annu Vats and Som Nath Singh (2019). Controlled study on short term calorie restriction as possible nutritional approach to sustain and survive during emergency situations. International Journal of Physiology, Nutrition and Physical Education; 4(2): 230-235.

7. Saroj Kumar Verma, Vandana Kirar, Vijay Kumar Singh, **Gurseen Rakhra**, Daisy Masih, Annu Vats, Rashmi Tomar Rana, and Som Nath Singh. Energy Expenditure and Nutritional Status of Sailors During One Month of Extensive Physical Training. Defence Life Science Journal, Vol. 3, No. 3, July **2018**, pp. 216-223. (scopus)

8. Rashmi Tomar Rana, Sneha Chopra, **Gurseen Rakhra**, Som Nath Singh. A journey of dietary nitrate as a health promoter. International Journal of Pharmaceutical Sciences and Research. Vol. 9, Issue 5; May, **2018**. (SCI)

9. Annu Vats, **Gurseen Rakhra**, Daisy Masih and Som Nath Singh. Concurrent analysis of fat and water soluble vitamins in biological fluids using reverse phase-high performance liquid chromatography technique. Al Ameen J Med Sci **2018**; 11(3) : 147-153

10. Daisy Masih, **Gurseen Rakhra**, Annu Vats, Saroj Kumar Verma, Yogendra Kumar Sharma, Som Nath Singh (**2018**). Assessing body composition by bioelectric impedance analysis and dual-energy X-ray absorptiometry in physically active normal and overweight Indian males. National Journal of Physiology, Pharmacy and Pharmacology. Vol 8(5);755-761.(UGC)

11. Daisy Masih, **Gurseen Rakhra** and Som Nath Singh, Effect of Thylakoid Supplementation on Activities of Glucose Metabolizing Enzymes in Rats, Advances in Weight Loss Management and Medical Devices, Vol 1(1), **2016**

Conference details:

ORAL PRESENTATION

Presented an oral talk in the conference on “Biotechnology in Medicine and Herbal Drug development” held on January 23-24 held at Faridkot, Punjab, BIOTECHON-2014

POSTER PRESENTATION

- Presented a poster entitled “ **The levels of copper, zinc and magnesium in plasma and red blood cells for individuals belonging to different physical activity groups**” at 46th NSICON-2014 of Nutrition Society of India held on 6-8 November, 2014 at Dayanand Medical College and Hospital, Ludhiana, Punjab, 2014.
- Presented a poster entitled “**Plasma and red blood cell magnesium concentration in healthy active male Indians using Atomic Absorption Spectrophotometry**” at 102nd Indian Science Congress, 3-7th January, 2015
- Presented a poster entitled “**Study of interaction of nutritionally important metals using HT-29 cell line**” at 48th NSICON-2016 of Nutrition Society Of India held on November, 2017 at St. John’s Research Institute, Bangalore.
- Presented a poster entitled “**Nutritional status of metals: effect of endurance training**” at an International Conference organized by FIPSPHYSICON 2017, XXIXth Annual Conference of the Physiological Society of India (PSI) & VIIth Congress of the Federation of Indian Physiological Societies (FIPS) held on 5th -7th November, 2017 at Vallabhbai Patel Chest Institute, Delhi.
- **Presented a poster entitled “PREVENTING THE BUILD UP OF HOTOHOUSE EARTH: A BEGINNING OF A BETTER EARTH** at National workshop on Impact on Global Warming: Ozone Layer (IGWOL 2018) on September 16, 2018 at Shiv Nadar University, Noida

ABSTRACT PUBLISHED

1. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Vijay K. Singh, Saroj K. Verma, Som Nath Singh. (2014). The levels of copper, zinc and magnesium in plasma and red blood cells for individuals belonging to different physical activity groups. Abstract published in 46th NSICON-2014 of Nutrition Society of India held on 6-8 November, 2014 at Dayanand Medical College and Hospital, Ludhiana, Punjab, 2014
2. **Gurseen Rakhra**, Vijay K. Singh, Saroj K. Verma, Som Nath Singh (2015). Plasma and red blood cell magnesium concentration in healthy active male Indians using Atomic Absorption Spectrophotometry. Abstract published in 102nd Indian Science Congress held in Mumbai, 2015
3. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Som Nath Singh. (2016). Study of interaction of nutritionally important metals using HT-29 cell line. Abstract published in 48th NSICON-2016 Nutrition Society Of India.
4. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Som Nath Singh. Levels of plasma Copper, Zinc, Magnesium and Iron of Indians belonging to different activity groups. Abstract published at 17th International Conference on Food and Nutrition (World Food and Nutrition Congress) held during 22nd May, 2017 to 24th May, 2017 at Las Vegas, USA.
5. **Gurseen Rakhra**, Daisy Masih, Annu Vats, Saroj K. Verma, Vijay K. Singh, Vandana Kirar, Som Nath Singh. Nutritional status of metals: effect of endurance training. Abstract published at an International Conference organized by FIPSPHYSICON 2017, XXIXth Annual Conference of the Physiological Society of India (PSI) & VIIth Congress of the Federation of Indian Physiological Societies (FIPS) held on 5th -7th November, 2017 at Vallabhbai Patel Chest Institute, Delhi.
6. Daisy Masih, **Gurseen Rakhra** and Som Nath Singh. Effect of thylakoid Supplementation on Food Intake and Biochemical Indices of Rats. Abstract published in (BIOTECHON-2014).

7. Daisy Masih, Gurseen Rakhra, Annu Vats, Som Nath Singh. Bioelectric Impedance Based Body Composition Analysis: Comparison with Dual Energy X-Ray Absorptiometry (DEXA). Abstract published in 48th Annual National Conference of Nutrition Society of India-2016).

8. Daisy Masih, Gurseen Rakhra, Annu Vats, Som Nath Singh. Metabolic health profile of normal weight and overweight/obese Indians. Abstract published in FIPSPHYSICON 2017, XXIXth Annual Conference of the Physiological Society of India (PSI) & VIIth Congress of the Federation of Indian Physiological Societies (FIPS).

9. Saroj K. Verma, Vandana Kirar, Vijay K. Singh, Gurseen Rakhra, Daisy Masih, Annu Vats, Som Nath Singh. Changes in lipid profile and plasma fatty acids following one month of extensive physical training. Abstract published in FIPSPHYSICON 2017, XXIXth Annual Conference of the Physiological Society of India (PSI) & VIIth Congress of the Federation of Indian Physiological Societies (FIPS).

10. Vishwendra Vikram Singh, Mrinalini, Vijay Kumar Singh, Saroj Kumar Verma, Gurseen Rakhra, Annu Vats, Daisy Masih, Som Nath Singh. Effect of dried apricots (*Prunus Armeniaca*) on bone mineral density (BMD): A pilot study. Abstract published in FIPSPHYSICON 2017, XXIXth Annual Conference of the Physiological Society of India (PSI) & VIIth Congress of the Federation of Indian Physiological Societies (FIPS).

11. Gurseen Rakhra, Gurmeen Rakhra (2019). Future prospects in the use of medicinal plants as radioprotectors. Abstract published in National conference on conservation, cultivation and sustainable use of medicinal and aromatic plants held on February 21 - 22, 2019, by Department of Biotechnology, Faculty of Engineering & Technology, Manav Rachna International Institute of Research & Studies, Haryana, India, in collaboration with National Medicinal Plant Board, Ministry of AYUSH, GOI.

12. Tanu Mangal, Gurseen Rakhra (2019). Effect of mobile phone use on academic performance, behavior, dietary pattern and physical activity of College going students (19-25 years). Abstract published in Second National Conference on Community Health and Nutrition (NCCHN-2019), 28th June, 2019, Ramaiah Medical College, Bangalore, Karnataka, India

13. Salestina Pamei, Gurseen Rakhra (2019). Nutritional knowledge attitude and practice of balanced diet and RDA on healthy population (19-45 years). Abstract published in Second National Conference on Community Health and Nutrition (NCCHN-2019), 28th June, 2019, Ramaiah Medical College, Bangalore, Karnataka, India

14. Anjali Tyagi, Gurseen Rakhra (2019). Effect of sleep on obesity and hypertension among rural and urban residents in faridabad city. Abstract published in Second National Conference on Community Health and Nutrition (NCCHN-2019), 28th June, 2019, Ramaiah Medical College, Bangalore, Karnataka, India.

Book/Chapter Publications:

1. **Gurseen Rakhra**, Mallika Manral, Som Nath Singh (2013). Role of Strontium in bone health. Osteoporosis- A review.
2. **Gurseen Rakhra**, Sumit Kumar Jaiswal, Gurmeen Rakhra (2019). Bioactive Peptides and Carbohydrates from Natural Products: A Source of Functional Foods and Nutraceuticals in the **Springer** book entitled "Bioactive Natural Products in Drug Discovery" published in May 2020

Administrative Responsibilities:

1. Class mentor for B.Sc 2 Nutrition & Dietetics
2. NAAC 3 departmental coordinator
3. Lab in-charge -Biochemistry

Professional Affiliation

Member of Nutrition Society of India

Member of Indian Science Congress

Event Organized (Conference/Seminar/FDP/Workshops)

Moderator for FDP "INTEGRATIVE APPROACH TOWARDS CURRENT PRACTICES IN FOOD PRODUCT DEVELOPMENT" organized by department of Nutrition & Dietetics, FAHS

Awards

- Qualified **GATE-Life Sciences, February, 2012**
- Qualified Indian Council of Medical Research-Junior Research Fellowship [**ICMR-JRF**], **July 2012**
- Qualified **ARS-National Eligibility Test, 2017**
- Awarded "**Young scientist award**" for oral presentation presented in the conference on "Biotechnology in Medicine and Herbal Drug development" held on January 23-24 held at Faridkot, Punjab, India.
- Awarded "**Best poster presentation**" award at a National workshop on Impact on Global Warming: Ozone Layer (IGWOL 2018) on September 16, 2018 at Shiv Nadar University, Noida