

Detailed CV



Name: H M Somashekarappa

Educational Qualification: M. Sc., Ph. D. in Physics

Designation: Professor

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Research Areas:

- i. Environmental Radioactivity.
- ii. Radiation and Radioisotope Applications.
- iii. Nanoparticles and Nanocomposites.
- iv. Radiation Dosimetry and Radiation Protection
- v. Gamma Backscattering Studies and Nucleonic Gauges

Professional Teaching and Research Experience: 25 years

- i. Worked as **Head**, University Science Instrumentation Centre (USIC) during 12.06.1997 - 08.02.2002 and from 01.06.2006 till date
- ii. Worked as **Centre-in-Charge of Centre** for Application of Radioisotopes and Radiation Technology (CARRT) during 2010-2020.
- iii. Worked as founder **Coordinator** of M. Sc. in Medical Physics Programme offered under Medical Physics Division (created under Department of Physics) during 2018-2020.

Research Guidance (Ph.D.): 10 Nos.

Completed Students' List: 5 Nos.

Sl. No.	Student Name	Title of the thesis	Year of Award
1	Dr Ravindraswami K	Studies on Gamma Ray Backscattering of Some Selected Materials	2015
2	Dr Kiran K U	Studies on Gamma Backscattering Technique for Characterization of Composite Materials	2016
3	Dr Chandrashekar K	Studies on Concentration of Radionuclides and Trace Elements in Some Selected Medicinal Plants	2018
4	Dr Swaroop K	Gamma Radiation Assisted Synthesis and Characterization of Hydrogel Nanocomposites for Biomedical Applications	2018
5	Dr Thrilochana Shetty	Design, Installation and Characterization of a Walk-in Kind of Radon Calibration Chamber	2020

Ongoing Registered Students' List: 5 Nos.

Sl. No.	Student Name	Status
1	Mr Vinayak Ananda Kamath	Submitted
2	Mr Thirumalesh	Synopsis submitted for Pre-submission colloquium
3	Mr Jayachandran	Work in progress
4	Ms Sharmila Charan	Work in progress
5	Ms Geethanjali	Work in progress

Research Projects (List):**Completed:**

Sl. No.	Project title	Funding Agency	Principal investigator
As Principal Investigator			
1	Epidemiological study of <i>Helicobacter pylori</i> infection in the communities of coastal region of Karnataka: A diagnostic study by using the ¹⁴ C urea capsule breath test and setting up of diagnostic service.	BRNS	Prof. H. M. Somashekarappa USIC, Mangalore University
2	Principal Investigator - Development of nucleonic density gauge funded by UGC (Major Research Project)	UGC	Prof. H. M. Somashekarappa USIC, Mangalore University
3	Polonium-210 studies in medicinal plants funded by UGC (Minor Research Project)	UGC	Prof. H. M. Somashekarappa USIC, Mangalore University
As Co-investigator			
1	Radioiodination of C-peptide and development an assay.	BRNS	Prof. K. Bhaska Shenoy Dept. of Applied Zoology Mangalore University
2	Evaluation and comparison of radioprotective potential of some bioflavonoids in mice exposed to gamma radiation.	BRNS	Prof. Rajeshekara K. Patil Dept. of Applied Zoology Mangalore University
3	Application of radiation in forestry: Effect of gamma irradiation on storage, viability and germination of seeds and relative growth rate and tolerance of seedlings of some endemic plants of Western Ghats.	BRNS	Prof. K R Chandrashekar Dept. of Applied Botany Mangalore University
4	Synthesis and development of novel polymers with enhanced optoelectronic property by gamma irradiation of meso-ionic compounds	BRNS	Prof. Balakrishna Kalluraya Dept. of Chemistry Mangalore University
5	Proof of concept studies to understand the after effects of ionising radiation IR on human stem cells	BRNS	Dr. Rajarshi Pal Manipal Institute of Regenerative Medicine Manipal University, GKV Bangalore.
6	Field trails of radiation assisted accelerated germination of seeds of endemic forest plants.		Prof. K R Chandrashekar Dept. of Applied Botany Mangalore University

7	Studies on Environmental Radioactivity and Impact Assessment of Kaiga power reactors	BRNS	Dr Karunakara N USIC, Mangalore University
8	Studies on radioactivity in aquatic and atmospheric environs of Coastal Karnataka, Kaiga and Goa (1995 – 2000)	BRNS	Dr Karunakara N USIC, Mangalore University
9	To Study Radon/Thoron levels in Mangalore area (<i>part of the national level coordinated research project on Radon mapping of India, 1996 – 2002</i>).	BRNS	Coordinated by Dr Mayya BARC, Mumbai

On-going

Sl. No.	Project title	Funding Agency	Principal investigator
As Principal Investigator			
1	Synthesis, radiolabelling and characterisation of some selected metal and polymer based nanoparticles.	BRNS	Prof. H. M. Somashekarappa USIC, Mangalore University
As Co-investigator			
1	Radiation tolerance mechanisms in insects: possible source of methods for development of future radioprotection strategies	BRNS	Prof. Rajeshkara K. Patil Dept. of Applied Zoology Mangalore University Mangalagangothri, Mangalore
2	Effect of gamma radiation on the germination and growth of wild forest species and their pharmacological evaluation BRNS	BRNS	Prof. K R Chandrashekar Dept. of Applied Botany Mangalore University Mangalagangothri Mangalore
3	C-reactive protein-Development and validation of sensitive radioimmunoassay for the inflammatory marker	BRNS	Prof. K. Bhaska Shenoy Dept. of Applied Zoology Mangalore University Mangalagangothri, Mangalore
4	PUFAs as potential radiomodifiers: Implications in radiotherapy and countermeasures	BRNS	Prof Monika Sadanand Dept. of Biosciences Mangalore University

Professional Collaboration:

International:

Sl. No.	Organisation with which MoU is signed	Year of Signing MoU	Activities covered under MoU.
1.	Technical University of Liberec Czech Republic	2015	Cooperation in the field of Research, Education and exchange of faculty/ researchers

National:

Sl. No.	MoU Signed with	Year of Signing MoU	Activities covered under MoU.
1.	Mangalore Institute of Oncology Mangalore.	2016	Co-operation in the field of research and Teaching & Training (Medical Physics)
2.	A J Hospital and Research Centre Mangalore.	2016	Co-operation in the field of research and Teaching & Training (Medical Physics)
3.	NITTE University, Deralakatte Mangalore	2019	Co-operation in the field of research and Teaching & Training (Medical Physics)

Research Journal Publications (list)**International Journals:**

1. **Somashekarappa H M**, Narayana Y, Radhakrishna A P & Siddappa K, Atmospheric radon levels and its emanation rate in the environment of Kaiga, Radiation Measurements (USA), Vol. 26, No. 1, (1996), pp. 35-41.
2. **Somashekarappa H M**, Narayana Y, Radhakrishna A P, Karunakara N, Balakrishna K M & Siddappa K, Radioactivity in the tropical forest vegetation of Kaiga environment, Journal of Environmental Radioactivity (UK), Vol. 31, No. 2, (1996), pp. 189-198.
3. Radhakrishna A P, **Somashekarappa H M**, Narayana Y & Siddappa K, A New Natural Background Radiation Area on the Southwest Coast of India, Health Physics (USA), Vol. 65, No. 4, (1993), pp. 390-395.
4. Narayana Y, **Somashekarappa H M**, Radhakrishna A P, Balakrishna K M & Siddappa K, External gamma radiation dose rates in coastal Karnataka, Journal of Radiological Protection (UK), Vol. 14, No. 3, (1994), pp. 257-264.
5. Karunakara N, Radhakrishna A P, **Somashekarappa H M**, Narayana Y, Balakrishna K M & Siddappa K, Prominent alpha emitting radionuclides in Kaiga environ, Indian Journal of Environmental Protection, Vol. 14, No. 4, (1994), pp. 241-245.
6. Narayana Y, Radhakrishna A P, **Somashekarappa H M**, Karunakara N, Balakrishna K M & Siddappa K, Distribution and enrichment of radionuclides in the newly discovered high background area in Ullal on the south west coast of India, Health Physics (USA), Vol. 69, No. 2, (1995), pp. 178-186.
7. Narayana Y, Radhakrishna A P, **Somashekarappa H M**, Karunakara N, Balakrishna K M & Siddappa K, Distribution of some natural and artificial radionuclides in the environment of coastal Karnataka of south India, Journal of Environmental Radioactivity (UK), Vol. 28, No. 2, (1995), pp. 113-139.
8. Narayana Y, Radhakrishna A P, **Somashekarappa H M**, Karunakara N, Balakrishna K M & Siddappa K, Internal exposure to the population of coastal Karnataka of south India from dietary

intake, Radiation Protection Dosimetry (UK), Vol. 62, No. 3, (1995), pp. 131-138.

9. Radhakrishna A P, **Somashekarappa H M**, Narayana Y & Siddappa K, Distribution of some natural and artificial radionuclides in Mangalore environment of south India, Journal of Environmental Radioactivity (UK), Vol. 30, No. 1, (1996), pp. 31-54.
10. Narayana Y, **Somashekarappa H M**, Karunakara N, Balakrishna K M, Siddappa K, Kumar S, Gopalani D & Ramaseshu P, Seasonal variation of indoor radon levels in coastal Karnataka on the south west coast of India, Radiation Measurements, USA, Vol.29, No.1, pp.19-25, 1998.
11. Karunakara N, **Somashekarappa H M**, Narayana Y, Avadhani D N, Mahesh H M, Balakrishna K M & Siddappa K, Caesium-137 concentration in Kaiga Environment, Radiation Physics and Chemistry, (UK), Vol.51, No.4-6, pp.623-624, 1998.
12. Karunakara N, Avadhani D N, Mahesh H M, **Somashekarappa H M**, Narayana Y and Siddappa K, Distribution and Enrichment of ^{210}Po in the environment of Kaiga in South India, J. Environmental Radioactivity (UK), Vol. 51, No. 3, pp.349-362, 2000.
13. Karunakara N, **Somashekarappa H M**, Avadhani D N, Mahesh H M, Narayana Y and Siddappa K, ^{226}Ra , ^{232}Th and ^{40}K Distribution in the environment of Kaiga of South West Coast of India, Health Physics, Vol 80, No.5, 2001
14. Avadhani D N, Mahesh H M, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K. Distribution and Behaviour of ^{210}Po and ^{210}Pb in Soil samples of Goa, South West coast of India. Journal of Radiation Protection and Environment. India. Vol. 24, Nos. 1&2, pp 401-405, 2001.
15. Mahesh H M, Avadhani D N, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K. ^{210}Pb Concentration in Air and Water samples in the environment of coastal Karnataka and Kaiga. Journal of Radiation Protection and Environment, India. Vol. 24, Nos. 1&2, pp 406-409, 2001.
16. Avadhani D N, Mahesh H M, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K. Natural Radioactivity in the Environment of Goa of South-West coast of India. Journal of Radiation Protection and Environment, India. Vol. 24, Nos. 1&2 (Suppl.), pp S136-S142, 2001.
17. Mahesh H M, Avadhani D N, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K. $^{210}\text{Po}/^{210}\text{Pb}$ Ratio in Air and Rain water samples in the Environment of coastal Karnataka and Kaiga. Journal of Radiation Protection and Environment, India. Vol. 24, Nos. 1&2 (Suppl.) pp S71-S75, 2001.
18. Narayana Y, **Karunakara N**, **Somashekarappa H M**, Avadhani D N, Mahesh H M and Siddappa K. Distribution of Natural radionuclides in soil samples of coastal Karnataka of south west coast of India. Health Physics, USA, Vol. 80, No.1, pp. 24-33, 2001.
19. **Karunakara N**, **Somashekarappa H M**, Narayana Y, Avadhani D N, Mahesh H M and Siddappa K. ^{226}Ra , ^{232}Th and ^{40}K concentrations in soil samples of Kaiga of south west coast of India. Health Physics, USA, No.5, pp. 470-476, 2001.
20. **Karunakara N**, Avadhani D N, Mahesh H M, **Somashekarappa H M**, Narayana Y and Siddappa K. ^{137}Cs Concentration in Environment of Kaiga in the south west coast of India. Health Physics, USA, Vol. 81, No 2, pp 148-155, 2001.

21. Avadhani D N, Mahesh H M, **Karunakara N**, Narayana Y, **Somashekarappa H M** and Siddappa K. Dietary intake of ^{210}Po and ^{210}Pb in the environment of Goa of south west coast of India. Health Physics, USA, Vol.81, No. 4, pp 438-445, 2001.
22. Mahesh H M, Avadhani D N, **Karunakara N**, **Somashekarappa H M**, Narayana Y and Siddappa K Radon-222 concentration in Ground waters and associated health effects in the environment of coastal Karnataka and Kaiga on south west coast of India. Health Physics, USA, Vol.81, No. 6, pp 724-728, 2001.
23. Karunakara N, **Somashekarappa H M**, Narayana Y, Avadhani, D N, Mahesh, H M and Siddappa, K. ^{226}Ra , ^{40}K and ^7Be activity concentrations in plants in the environment of Kaiga of south west Coast of India. Journal of Environmental Radioactivity, Vol. 65, pp 255-266, 2003.
24. Avadhani D N, Mahesh H M, Karunakara N, Narayana Y, **Somashekarappa H M**, and Siddappa, K. Distribution and behaviour of natural radionuclides in soil samples of Goa on the southwest coast of India. Radioactivity in the Environment, Vol. 7, ISSN 1569-4860, pp 1131-1140, 2005.
25. Karunakara N, **Somashekarappa H M** and Siddappa, K. Natural radioactivity in South West Coast of India. International Congress Series, Vol. 1276, pp 346-347, 2005.
26. Karunakara N, **Somashekarappa H M** and Siddappa, K. Indoor and outdoor radon levels and their diurnal variations in the environs of southwest coast of India. International Congress Series, Vol. 1276, pp 341-343, 2005.
27. Karunakara. N. and **Somashekarappa. H. M.** ^{210}Pb measurement in soils - A Comparison of gamma ray spectrometry and alpha counting methods. Journal of Radiation Protection and Environment
28. Chetan Rao, Ujwal Prabhu, Karunakara N, **Somashekarappa H M**, Nayak P D and Ravi P M. Site specific transfer factors of ^{226}Ra , ^{228}Ra , ^{40}K and ^{137}Cs for vegetables in Kaiga region. Radiation Protection and Environment, Vol 31, No. 1-4, 435-455, 2008.
29. Shrikant L. Patil, **H. M. Somashekarappa**, Rajashekar Patil. Ameliorative Effect of Rutin against Oxidative Stress in Mice Induced By Gamma-Irradiation. Research Journal of Pharmaceutical, Biological and Chemical Sciences, 2011; 2 (4): 694-701.
30. Swaroop K, Jayachandran, Srikanth L Patil, **H M Somashekarappa**, "A study of *Helicobacter pylori* infection using the ^{14}C UBT method", Radiation Protection and Environment; (Jul-Sept 2011); Vol.34; 206-209.
31. Srikanth L Patil, **H M Somashekarappa**, Rajashekar K P, Evaluation of the radioprotective action of Rutin in mice exposed to gamma radiation (2012); International Journal of Biological and Pharmaceutical research, 3(1); 12-18.
32. Shrikant L. Patil, **H. M. Somashekarappa**, Rajashekar Patil. Antioxidative and radioprotective potential of rutin and quercetin in Swiss albino mice exposed to gamma radiation. Journal of Medical Physics. 2013; 38:2, 87-92.
33. Swaroop K, Jayachandran, Shrikant L Patil, **H.M. Somashekarappa**. A study of helicobacter pylori infection using the ^{14}C UBT method. Radiation Protection and Environment, 2012, 34(3): 206-209.

34. Shrikant L. Patil, **H. M. Somashekarappa**, Rajashekar Patil. Evaluation of the radioprotective action of rutin in mice exposed to gamma-radiation. *International Journal of Biological & Pharmaceutical Research*, 2012; 3 (1): 12-18.
35. K Ravindraswami, Kiran K U, K M Eshwarappa, **H M Somashekarappa**, “An integrated Gamma ray spectrometer system for non-destructive testing of materials and multiple scattering of thick samples”, *International Journal of Physics and Mathematical Sciences*; (2013) Vol 03(2); 16-20.
36. Kiran K U, K Ravindraswami, K M Eshwarappa, **H M Somashekarappa**, “Experimental evaluation of dMCA based NaI (Tl) detector system for studying multiple Compton backscattering of gamma rays using iron” *International Journal of Interdisciplinary Research and Reviews*, (2013) Vol.1(7); 20-27.
37. Srikanth L Patil, **H M Somashekarappa**, Rajashekar K P, Antioxidative and radioprotective potential of rutin and quercetin in Swiss albino mice exposed to gamma radiation, *Journal of Medical Physics*, (2013), Vol. 38, 11-16.
38. Akshatha, Chandrashekar K R, **Somashekarappa H M**, Souframanien J, “ Effect of gamma irradiation on germination, growth and biochemical parameters of *Terminalia Arjuna* Roxb, *Radiation Protection and Environment*, (2013), Vol 36, 38-44.
39. Kiran K U, K Ravindraswami, K M Eshwarappa, **H M Somashekarappa**, “An investigation of energy dependence on saturation thickness for 59.54, 123, 360, 511, 662, 1115 and 1250 keV gamma photons in carbon and aluminium, *Radiation Physics and Chemistry*, (2014) Vol.97; 107-112.
40. R. R. Rasmi, K. Bhasker Shenoy, V. B. Kadwad, Jayula Sarnaik, **H. M. Somashekarappa**, “Application of novel magnetizable cellulose particles in the development of immunoradiometric assay for C-peptide”, *J Radioanal Nucl Chem*; (2014); DOI 10.1007/s10967-015-3925-8.
41. R. R. Rasmi, K. Bhasker Shenoy, Jayula Sarnaik, V. B. Kadwad, **H. M. Somashekarappa**, N. Sivaprasad, “Standardisation of radioimmunoassay for human insulin employing magnetizable cellulose particles”, *J Radioanal Nucl Chem* (2014), 302:1271–1275.
42. Swaroop K and **H M Somashekarappa**, “Effect of pH values on surface morphology and particle size variation in ZnO nanoparticles synthesised by co-precipitation method”, *Research Journal of Recent Sciences*, (2015), ISC-2014, 197-201.
43. Chandrashekara K, Karunakara N and **Somashekarappa H M**, “Activity Distribution and Uptake of Radionuclides in Medicinal Plants of Coastal Karnataka, India”, *Research Journal of Recent Sciences*, (2015), ISC-2014, 101-109.
44. Naik, H.; Shivashankar, B. S.; Prakash, H. G. Raj; Raj, Deves; Sanjeev, Ganesh; Karunakara, N.; **Somashekarappa, H. M.**; Ganesan, S.; Kim, G. N.; Goswami, A. (2014) - “Measurements of fission yield in 8 MeV bremsstrahlung induced fission of Th-232 and U-238”, *Journal of Radioanalytical and Nuclear Chemistry*, 299, 127-137.
45. S Patil, N Rao, **H Somashekarappa**, K Rajashekhar, (2014) Antigenotoxic potential of rutin and quercetin in Swiss mice exposed to gamma radiation, *Biomedical journal* 37 (5).
46. Kiran K U, K Ravindraswamy, K M Eshwarappa, **H M Somashekarappa**, (2014) - “An investigation of energy dependence on saturation thickness for 59.54, 123, 360, 511, 662, 1115 and 1250 keV gamma photons in carbon and aluminium, *Radiation Physics and Chemistry*, 97, 107-112.

47. R. R. Rasmi, K. Bhasker Shenoy, V. B. Kadwad, Jayula Sarnaik, **H. M. Somashekarappa**, (2014) - "Application of novel magnetizable cellulose particles in the development of immunoradiometric assay for C-peptide", J Radioanal Nucl Chem, DOI 10.1007/s10967-015-3925-8.
48. R. R. Rasmi, K. Bhasker Shenoy, Jayula Sarnaik, V. B. Kadwad, **H. M. Somashekarappa**, N. Sivaprasad, (2014) - "Standardisation of radioimmunoassay for human insulin employing magnetizable cellulose particles", J Radioanal Nucl Chem, 302:1271–1275.
49. Kiran K U, K Ravindraswamy, K M Eshwarappa, **H M Somashekarappa**, (2014) - "Experimental and simulated validation of the energy dependence of saturation thickness of multiple scattered gamma rays", Central European Journal of Physics, 792-798.
50. K Ravindraswami, KU Kiran, KM Eshwarappa, **HM Somashekarappa**, (2014) Non destructive evaluation of selected polymers by multiple scattering of 662 keV gamma rays, Journal of Radioanalytical and Nuclear Chemistry 300 (3), 997-1003.
51. VJ Angadi, B Rudraswamy, E Melagiriappa, **HM Somashekarappa**, (2014) Effect of gamma irradiation on dielectric properties of manganese zinc nanoferrites, AIP Conference Proceedings 1591 (1), 296-298.
52. S Sheik, KR Chandrashekar, K Swaroop, **HM Somashekarappa**, (2015) Biodegradation of gamma irradiated low density polyethylene and polypropylene by endophytic fungi, International Biodeterioration & Biodegradation 105, 21-29.
53. KU Kiran, K Ravindraswami, KM Eshwarappa, **HM Somashekarappa**, (2015) Experimental and simulated study of detector collimation for a portable 3"×3" NaI(Tl) detector system for *in-situ* measurements, Journal of Radiation Research and Applied Sciences 8 (4), 597-605.
54. K Chandrashekara, AP Radhakrishna, **HM Somashekarappa**, (2015) Concentration of natural and artificial radionuclides in Mesua Ferea auct. Linn-a medicinal plant, Life Sciences International Research Journal, ISSN, 2347-8691.
55. K Eshwarappa, K Kiran, K Ravindraswami, **H M Somashekarappa**, (2015) Experimental and simulated validation of the energy dependence of saturation thickness of multiple scattered gamma rays, Open Physics 12 (11), 792-798.
56. Swaroop K., Sana Sheikh, Chandrashekar K. R., and **Somashekarappa H. M.**, (2015) - "Antibacterial Studies of Gamma Irradiated Zinc Oxide Nanoparticles on Klebsiella pneumonia and Pseudomonas aeruginosa", IOSR Journal of Applied Physics, 58-63.
57. Kiran K U, K Ravindraswamy, K M Eshwarappa, **H M Somashekarappa**, (2015) - "Effective atomic number of selected construction materials using gamma backscattering technique", Annals of Nuclear Energy, 245.
58. Swaroop K., Naveen C. S., Jayanna H. S. and **Somashekarappa H. M.** (2015). Effect of Gamma Irradiation on dc Electrical Conductivity of ZnO Nanoparticles. AIP Conf. Proc., 1665, 050100.
59. Chandrashekara K, and **Somashekarappa H M**, (2015) - "Soil to plant transfer factors of radionuclides in Ficus racemosa (L.), a medicinal plant", Int. Res. J. Biological Sci., 4, 43-47.

60. M. Veena, A.Somashekarappa, G.J.Shankaramurthy, H.S.Jayanna, **H.M. Somashekarappa**, (2016) - "Effect of ^{60}Co gamma irradiation on dielectric and complex impedance properties of Dy^{3+} substituted Ni-Zn nanoferrites", *Journal of Magnetism and Magnetic Materials*, 419, 375–385.
61. Kiran K U, K Ravindraswamy, K M Eshwarappa, **H M Somashekarappa** (2016) - "Albedo factors of 123, 320, 511, 662 and 1115 keV gamma photons in carbon, aluminium, iron and copper", *European Physical Journal Plus*, 131, 87.
62. Angadi, V. Jagadeesha, Anupama, A. V. Kumar, R, **Somashekarappa, H. M**, Praveena, K, Rudraswamy, B, Sahoo, B. (2016) - "Evidence of structural damage in Sm and Gd co-doped Mn-Zn ferrite ceramics due to high-energy gamma irradiation", *Ceramics International*, 42, 14, 15933-39.
63. Chandrashekara, K., **Somashekarappa, H. M.** (2016) - " ^{210}Po and ^{210}Pb in medicinal plants in the region of Karnataka, Southern India". *Journal of Environmental Radioactivity*, 160, 87-92.
64. Swaroop K., Sanju Francis, and **Somashekarappa H. M.** (2016). Gamma irradiation synthesis of Ag/PVA hydrogels and its antibacterial activity. *Materials Today: Proceedings*, 3, 1792–1798.
65. KU Kiran, K Ravindraswami, KM Eshwarappa, **HM Somashekarappa**, (2016) Experimental response function of a 3×3 in NaI (TI) detector by inverse matrix method and effective atomic number of composite materials by gamma backscattering technique, *Applied Radiation and Isotopes* 111, 56-65.
66. KU Kiran, K Ravindraswami, KM Eshwarappa, **HM Somashekarappa**, (2016) Albedo factors of 123, 320, 511, 662 and 1115 keV gamma photons in carbon, aluminium, iron and copper, *The European Physical Journal Plus* 131 (4), 87.
67. KU Kiran, K Ravindraswami, KM Eshwarappa, **HM Somashekarappa**, (2016) Angular dependence of multiple scattered photons and saturation thickness for certain elements by gamma scattering method, *Radiation Physics and Chemistry* 119, 116-124.
68. BR Manupriya, KB Shenoy, SL Patil, **HM Somashekarappa**, (2016) Assessment of insect infestation in gamma irradiated wheat flour over storage, *Journal of Radiation and Cancer Research* 7 (1), 36.
69. MT Nivya, CG Joshi, R Vijay, D Ananda, HM Manjunath, KP Rajashekhar, **HM Somashekarappa**, (2016) Evaluation of post-radioprotective potential of methanolic extract of *Tragia involucrata* on cultured human lymphocytes exposed to gamma radiation, *Journal of Radiation and Cancer Research* 7 (1), 32.
70. VJ Angadi, AV Anupama, R Kumar, HK Choudhary, S Matteppanavar, **Somashekarappa H.M.**, (2017) Composition dependent structural and morphological modifications in nanocrystalline Mn-Zn ferrites induced by high energy γ -irradiation, *Materials Chemistry and Physics* 199, 313-321
71. V Jagadeesha Angadi, AV Anupama, R Kumar, **HM Somashekarappa**, (2017) Dose dependent modifications in structural and magnetic properties of $\hat{\text{P}}^3$ -irradiated nanocrystalline $\text{Mn}_0.5\text{Zn}_0.5\text{Fe}_2\text{O}_4$ ceramics, *Ceramics International* 43 (1), 523-526.
72. Shrikant Patil, Swaroop Kumaraswamy, Nilesh Kakde, and **Somashekarappa H M**, (2017), In vitro Protective Effect of Rutin and Quercetin against Radiation-induced Genetic Damage in Human Lymphocytes, *Indian Journal of Nuclear Medicine*, Vol 32, pp 289-295.

73. Shrikant L. Patil, Tanhaji Ghodke, Shilpa M. Patil, Swaroop K, **H. M. Somashekarappa**, Cytoprotective Potential of Rutin and Quercetin in Swiss Mice Exposed to Gamma Radiation, *Int. J. Life. Sci. Scienti. Res.*, Vol. 3, pp 1322-1328.
74. Swaroop K., and **Somashekarappa H.M.**, (2017) Swelling and mechanical properties of radiation crosslinked Au/PVA hydrogel nanocomposites, *Radiation Effects and Defects in Solids*, Vol. 171, pp 869-878.
75. VJ Angadi, AV Anupama, R Kumar, **HM Somashekarappa**, (2017) Dose dependent modifications in structural and magnetic properties of γ -irradiated nanocrystalline MnO . 5ZnO . $5\text{Fe}_2\text{O}_4$ ceramics, *Ceramics International* 43 (1), 523-526.
76. VJ Angadi, AV Anupama, R Kumar, **HM Somashekarappa**, K Praveena, (2017) Evidence of structural damage in Sm and Gd co-doped Mn–Zn ferrite ceramics due to high-energy gamma irradiation, *Ceramics International*, 42 (14), 15933-15939.
77. Swaroop K., Gangadhar B., Vishalakshi B., and **Somashekarappa H. M.** (2017) - Gamma irradiation synthesis and in vitro drug release studies of ZnO/PVA hydrogel nanocomposites, *Advanced Material Letters.*, Vol 8, pp. 546-552.
78. V.T.P. Vinod, S. Wacławek, C. Senan, J. Kupc'ík, K. Peřskova, M. Cern'ík, and **H. M. Somashekarappa** (2017) - Gum karaya (*Sterculia urens*) stabilized zero-valent iron nanoparticles: characterization and applications for the removal of chromium and volatile organic pollutants from water, *RSC Advances*, 7, 13997.
79. Swaroop K. and **Somashekarappa H. M.** (2017) - Swelling Characteristics and Drug Release Kinetics of Ag/PVA Hydrogel Nanocomposites, *AIP conference proceedings*, 1832, 140025.
80. K Chandrashekara, RK Padhi, KK Satpathy, **HM Somashekarappa**, (2018), Concentration Of Trace Elements In Some Selected Medicinal Plants, *Recent Advances in Materials Science and Biophysics*, 104.
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62. K M Eshwarappa, Kiran K U, Ravindra Swami K, **H M Somashekarappa**, “Experimental observation of energy dependence of saturation thickness of gamma photons in iron” International conference on “Recent Advances in Physics for interdisciplinary Developments (RAPID-2014)”, Sathyabama University, Chennai, Tamilnadu, 23 and 24 January 2014.
63. Swaroop K., Jayachandran, N. Sivaprasad, and **H. M. Somashekarappa**, “prevalence studies of *helicobacter pylori* infection by ^{14}C urea breath test in randomly selected population of coastal Karnataka region”, ICRB -2014, Delhi, 11th to 14th November 2014.
64. Swaroop K., Naveen C. S., Jayanna H. S., and **Somashekarappa H. M.**, “Effect Of Gamma Irradiation On dc Electrical Conductivity Of ZnO Nanoparticles”, 59th DAE Solid State Physics Symposium, 16th to 20th December 2014, VIT, Vellore, Tamilnadu.
65. Swaroop K., and **H. M. Somashekarappa**, “Effect of pH values on surface morphology and particle size variation in ZnO nanoparticles synthesised by co-precipitation method”, Fourth International Science Congress (ISC-2014), 8th and 9th December 2014, Pacific University, Udaipur, Rajasthan.
66. Ravindra Swami K, Kiran K U, K M Eshwarappa, **H M Somashekarappa** “Experimental evaluation of multiple Compton scattering of gamma photons in iron”. Department of Atomic Energy symposium on Nuclear Physics, Banaras Hindu University, Varanasi, India, December 08 to 12, 2014.
67. Kiran K U, Ravindra Swami K, K M Eshwarappa, **H M Somashekarappa** “Effective atomic number of granite by gamma backscattering method”. Department of Atomic Energy

symposium on Nuclear Physics, Banaras Hindu University, Varanasi, India, December 08 to 12, 2014.

68. K M Eshwarappa, Ravindra Swami K, Kiran K U, **H M Somashekarappa** “Experimental verification of angular dependence of 0.662 MeV scattered gamma photons in iron”. Department of Atomic Energy symposium on Nuclear Physics, Banaras Hindu University, Varanasi, India, December 08 to 12, 2014.
69. Swaroop K., Sanju Francis, and **Somashekarappa H. M.**, “Study on gamma irradiation assisted synthesis of zinc oxide nanocomposite hydrogels and its antibacterial properties”. Presented a paper in International Conference on “Nanoscience, Nanotechnology and Advanced Materials (NANOS-2015)” held at GITAM University, Visakhapatnam, India, 8th - 10th July, 2015.
70. Swaroop K., Sanju Francis, and **Somashekarappa H. M.**, “Gamma irradiation synthesis of Ag/PVA hydrogels and its antibacterial activity”. Presented a paper in International Conference on “Recent Advances in Nano Science and Technology (RAINSAT-2015)” held at Sathyabama University, Chennai, India, 14th - 17th December 2015.
71. Swaroop K. and **Somashekarappa H. M.**, “Swelling Characteristics and Drug Release Kinetics of Ag/PVA Hydrogel Nanocomposites”, Presented a paper in 61st DAE Solid state Physics Symposium, (DAE-SSPS-2016), KIIT, Bhubaneswar, Odissa, India, 26th to 30th Dec, 2016.
72. Vinayak Anand Kamat, K. Swaroop, K. U. Kiran, & **H. M. Somashekarappa**, “Preparation and characterization of hematite and lead oxide based flexible EPDM composites for shielding gamma rays” (63rd DAE SSPS-2018) Guru Jambheshwar University of Science & Technology, Hisar, , from 18th to 22th December, 2018.
73. Swaroop K, **Somashekarappa H M.** “Drug Release Kinetics of radiolytically synthesised Au/PVA Hydrogel nanocomposites for Skin Care Applications”, Third International Conference on Material Science (ICMS2020)” organized by Department of Physics, Tripura University during 04-06 March, 2020.

Regional

74. **Somashekarappa H M** , Radioactivity in the environment of Kaiga, Workshop on "Environmental Radioactivity", Kaiga, India, April 16-18, 1990.
75. Karunakara N, **Somashekarappa H M** , Radhakrishna A P, Narayana Y, Balakrishna K M and Siddappa K, Natural alpha activity in the environment of Kaiga, National seminar on Radiation, Environment and Man, Mysore University, Mysore, India, Oct. 8-9, 1992.
76. Isubu P, Balakrishna K M, **Somashekarappa H M** and Siddappa K, Trace element distribution in the environment of Mangalore, National seminar on Radiation, Environment and Man, Mysore University, Mysore, India, Oct. 8-9, 1992.
77. **Somashekarappa H M** , Balakrishna K M and Siddappa K, Distribution of natural and artificial radionuclides in the environment of Kaiga, Workshop on Nuclear Power and Environmental Radioactivity, Kuvempu University, Shimoga, India, March 20-21, 1993.
78. Mahesh H M, Avadhani D N, Karunakara N, **Somashekarappa H M** , Narayana Y, Balakrishna K M and Siddappa K, Radiation dose due to Radon daughters in Mangalagangothri, National Seminar on Impact of Discovery of Radioactivity on Modern Society, Kuvempu University, Shimoga, India, Nov. 4 - 5, 1996.
79. Avadhani D N, Mahesh H M, Karunakara N, **Somashekarappa H M** , Narayana Y,

- Balakrishna K M and Siddappa K, Natural radiation level in the environment of Goa, National Seminar on Impact of Discovery of Radioactivity on Modern Society, Kuvempu University, Shimoga, India, Nov. 4 - 5, 1996.
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81. **Somashekarappa H M**, Karunakara N, Narayana Y, Mahesh H M, Avadhani D N and Siddappa K, GERMON Station at Mangalore University - A Nodal Centre, National Symposium on One Hundred years of Electron Discovery, Kuvempu University, Shimoga, Dec. 29 -30, 1997.
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92. Mahesh H M, Avadhani D N, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K Concentration and distribution of polonium-210 in air and water samples in the environment of coastal Karnataka and Kaiga, National Symposium on prospectus and problems of environment in the new millennium, Mangalore University, India, December 14-16, 2000.
93. **Somashekarappa H M**, Karunakara N, Mahesh H M, Avadhani D N and Siddappa K, Radon and Thoron progeny concentration in dwellings in the environment of Mangalore, National Symposium on prospectus and problems of environment in the new millennium, Mangalore University, India, December 14-16, 2000.
94. Avadhani D N, Mahesh H M, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K. Distribution of Natural radionuclides in Potable waters of Goa environs. National Symposium on Emerging Trends in Radiation Sources and their Applications. Kuvempu University, Jnana Sahyadri, January 9-10, 2001
95. Mahesh H M, Avadhani D N, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K. Concentrations of ^{210}Po and ^{210}Pb in Atmosphere in the environment of coastal Karnataka and Kaiga. National Symposium on Emerging Trends in Radiation Sources and their Applications. Kuvempu University, Jnana Sahyadri, January 9-10, 2001
96. Avadhani D A, Mahesh H M, **Somashekarappa H M**, Karunakara N, Narayana Y and Siddappa K. Natural radioactivity in the Environment of Goa of south-west coast of India. Satellite Meeting of International Conference IARP - IC - 2k1. Kaiga , India February 26-27, 2001.
97. Mahesh H M, Avadhani D N, **Somashekarappa H M**, Karunakara N and Siddappa K. $^{210}\text{Po}/^{210}\text{Pb}$ ratio in air and rain water samples in the environment of coastal Karnataka and Kaiga. Satellite Meeting of International Conference IARP - IC - 2k1. Kaiga , India February 26-27, 2001.
98. **H M Somashekarappa**. Polonium – 210 Studies in Medicinal Plants. National Seminar on Dravya Guna Vijnana and Herbal Expo – Sanjeevini – 2006, Alva's Ayurvedic Medical College, Moodbidri, Karnataka, Moodbidri, Karnataka, May 11-13, 2006.
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102. Chetan, Rao, Karunakara N, Ujwal, P, Yashodhara I, **Somashekarappa H. M**, and Ravi P, M. Site specific studies on sediment to fish concentration ratios for Kaiga region. 30th IARP National Conference (IARPNC-2012), March 15-17, 2012, Mangalore University.

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104. Akashatha, K R Chandrashekar, H Soorya Prakash Shenoy, **H M Somashekarappa**, N Sivaprasad, K Kalpana, Effect of gamma irradiation on seed germination, growth and biochemical parameters of Flacourtia Montana Graham; Presented in 30th IARP conference(IARPNC-2012), March 15-17, 2012, Mangalore University.
105. Karunakara N., Chetan Rao., Ujwal P., Yashodhara I. Sudeep Kumara K., **Somashekarappa H M.**, Bhaskara Shenoy K and Ravi P M., Soil to rice transfer factors for ^{210}Pb : A study on rice grown in India. Proceedings of the 2nd International Conference on Po and radioactive Pb Isotopes, Mangalore University, February 10-13, 2013.
106. K Ravindraswami, Kiran K U, **H M Somashekarappa** “Nondestructive evaluation of laterite blocks by gamma backscattering technique.” National level seminar on “Applications of Isotope and Radiation Technology for Societal Benefits – AIRTS 2012” organized by Department of Environmental Sciences, Bangalore University, BARC and BRNS in Bangalore University , June 21–23, 2012.
107. Kiran K U, K Ravindraswami, **H M Somashekarappa** “Gamma Backscattering Technique for Inspecting Wood Samples” National level seminar on “Applications of Isotope and Radiation Technology for Societal Benefits – AIRTS 2012” organized by Department of Environmental Sciences, Bangalore University, BARC and BRNS in Bangalore University , June 21–23, 2012.
108. Kiran K U, Ravindra Swami K, K M Eshwarappa, **H M Somashekarappa** “Experimental evaluation of multiple Compton backscattering of gamma rays in Aluminium, Copper, Iron and Glass” National Conference on Condensed Matter Physics and Applications Department of Physics, MIT, Manipal University, December 27 – 28, 2012.
109. Udayaraj S, Swaroop K and **Somashekarappa H M**, “Effect of gamma irradiation on zinc oxide nanoparticles synthesized by co-precipitation method”, Presented in National Conference on Condensed Matter Physics and Application-2013, Manipal, Dec 27-28, 2013.
110. Trilochana shetty, Swaroop K and **Somashekarappa H M**, “Synthesis of ZnO nanoflowers using hydrothermal technique”, Presented in National Conference on Condensed Matter Physics and Application-2013, Manipal, Dec 27-28, 2013.
111. Prashantha Krishna M C, Pavitra, Swaroop K and **Somashekarappa H M**, “Studies on gamma irradiation effect on polyethylene and polypropylene”, Presented in National Conference on Condensed Matter Physics and Application-2013, Manipal, Dec 27-28, 2013.
112. Kiran K U, Ravindra Swami K, K M Eshwarappa, **H M Somashekarappa** “Effective atomic number of polymers by multiple scattering of gamma rays” 2nd National Conference on Condensed Matter Physics and Applications Department of Physics, MIT, Manipal University, December 27 – 28, 2013.
113. Ravindra Swami K, Kiran K U, K M Eshwarappa, **H M Somashekarappa** “Experimental observation of energy dependence of saturation thickness of multiply scattered gamma photons” 2nd National Conference on Condensed Matter Physics and Applications Department of Physics, MIT, Manipal University , December 27 – 28, 2013.
114. K M Eshwarappa, Kiran K U, Ravindra Swami K, **H M Somashekarappa** “Experimental evaluation multiple Compton backscattering of gamma rays in iron” 2nd National Conference

on Condensed Matter Physics and Applications Department of Physics, MIT, Manipal University, December 27 – 28, 2013.

115. Swaroop K., Jayachandran, and **H. M. Somashekarappa**, “Age and gender specific studies on Helicobacter pylori infection in coastal Karnataka region using ^{14}C Urea Breath Test”, 6th annual KSTA Conference on Science and Technology for Promoting Innovative Research and Development, 20th and 21st December 2013, Christ University, Bangalore.
116. Swaroop K, Jayachandran, and **H M Somashekarappa**, Age factor analysis of Helicobacter pylori infection in coastal Karnataka region using ^{14}C Urea Breath Test”, National conference of Radiation and environment, 5th and 6th February 2015, Puttur, Mangalore
117. Swaroop K., Jayachandran, K. Bhaskar Shenoy, and **H. M. Somashekarappa**, “Prevalence of H pylori infection using ^{14}C Urea Breath Test in Soraba region of Shimoga district”, AppZooCon 2015, Mangalore University, 13th to 15th February 2015, Mangalore.
118. Ravindra Swami K, Kiran K U, K M Eshwarappa, **H M Somashekarappa** “Nondestructive evaluation of building construction materials using gamma backscattering technique” National Conference on Condensed Matter Physics and Applications (CMPA-15), Department of Physics, MIT, Manipal University, Manipal, March 27 – 28, 2015.
119. Swaroop K., Jayachandran, and **H M Somashekarappa**, “Age factor analysis of Helicobacter pylori infection in coastal Karnataka region using ^{14}C Urea Breath Test”, Presented in national conference of Radiation and Environment, Puttur, Feb 5-6, 2015.
120. Swaroop K., Jayachandran, K. Bhaskar Shenoy, and **H. M. Somashekarappa**, “Prevalence of H pylori infection using ^{14}C Urea Breath Test in Soraba region of Shimoga district” Presented in National conference on Recent Advances in Animal Sciences, Mangalore, Feb 13-15, 2015.
121. Vinayaka Anand Kamat, Swaroop K, **Somashekarappa H M**, “Comparison of Properties of Magnetite Nanoparticles Synthesised using Co-precipitation method with different Composition of Precursors”, presented at National Seminar and Workshop on Functional Nanomaterials, Mangalore University, Mangalore, Karnataka, India, 21-22, 2016.
122. Swaroop K, Pushpanjali M G, **Somashekarappa H M**, “Gamma Irradiation synthesis of Ag/PVA Hydrogel Nanocomposites for Wound dressing Applications”, presented at National Seminar and Workshop on Functional Nanomaterials, Mangalore University, Mangalore, Karnataka, India, 21-22, 2016.
123. Swaroop K. and **Somashekarappa H. M.**, “In vitro biocompatibility of gamma ray crosslinked ZnO/PVA hydrogel nanocomposites”. Presented a paper in International Conference on “Smart Engineering Materials (ICSEM-2016)” R V College of Engineering, Bangalore, India, from 20th to 22nd October 2016.
124. Swaroop K., Shrikant L. Patil, and **Somashekarappa H. M.**, “Swelling and Mechanical Characteristics of Radiolytically Synthesised Ag/PVA Hydrogel Nanocomposites”, National Conference on “Reaching the Unreached through Science and Technology” Mangalore University and ISCA, Mangalore, Karnataka, India, on 8th and 9th September of 2017.
125. Vinayak Anand Kamat, Swaroop K, Kiran K U, Pushpanjali M G, Sharmila K, and **Somashekarappa H M.**, Studies on effect of PbO-Hematite (Fe_2O_3) on shielding properties of EPDM composites for 662 keV gamma rays, “National Conference on Reaching the Unreached Through Science and Technology” (NCRUTST-2017)” Mangalore University, Mangalore, Karnataka, India, on 8th and 9th of September 2017.
126. Pushpanjali M G, Swaroop K, Vinayak Anand Kamat, Sharmila K, and **Somashekarappa H M**, Impact of Gamma Irradiation on Ag/PVA Polymer Nanocomposites Synthesised Using

Solvent Evaporation Method, “National Conference on Reaching the Unreached Through Science and Technology” (NCRUTST-2017)” Mangalore University, Mangalore, Karnataka, India, on 8th and 9th of September 2017.

127. Swaroop K, Shrikant L Patil, and **Somashekarappa H M**, Swelling and mechanical characteristics of radiolytically synthesised Ag/PVA hydrogel nanocomposites, “National Conference on Reaching the Unreached Through Science and Technology” (NCRUTST-2017)” Mangalore University, Mangalore, Karnataka, India, on 8th and 9th of September 2017.
128. Vinayak A.K., Swaroop K, Kiran K.U. and **Somashekarappa H.M.**, “Studies on Effect of PbO-Magnetite (Fe_3O_4) on Shielding Properties of EPDM Composites for 123 keV Gamma Rays”, “Recent Trends in Applied Science and Technology” (RTAST-2017)” Alliance College of Engineering and Design, Bangalore, Karnataka, India, on 26th and 27th of October 2017.
129. Swaroop K., and **Somashekarappa H. M.**, “Radiation Synthesis of ZnO/PVA Hydrogel Nanocomposites for Skin Care Applications”, “Recent Trends in Applied Science and Technology” (RTAST-2017)” Alliance College of Engineering and Design, Bangalore, Karnataka, India, on 26th and 27th of October 2017.
130. Vinayak Anand Kamat, K. Swaroop, K. U. Kiran, & **H. M. Somashekarappa**, “Studies on effect of magnetite (Fe_3O_4) on shielding properties of natural rubber composites for 662 keV gamma ray”, “National Conference on Particle Accelerators in Interdisciplinary Research”, Mangalore University, Mangalagangothri, India, from 11th to 13th April 2017.
131. Vinayak Anand Kamat, K. Swaroop, K. U. Kiran, & **H. M. Somashekarappa**, “Studies on effect of PbO-hematite (Fe_2O_3) on shielding properties of EPDM composites for 662 keV gamma rays” National Conference on Reaching the Unreached through Science and Technology, Mangalore University, Mangalagangothri, India, from 8th to 9th September 2017.
132. Vinayak Anand Kamat, K. Swaroop, K. U. Kiran, & **H. M. Somashekarappa**, “Studies on effect of PbO-magnetite (Fe_3O_4) on shielding properties of EPDM composites for 123 keV gamma rays” National Conference on Recent Trends in Applied Science and Technology, Alliance College of Engineering and Design, Bangalore, India, from 26th to 27th October 2017.
133. Vinayak Anand Kamat, K. Swaroop, K. U. Kiran, & **H. M. Somashekarappa**, “Studies on effect of PbO-magnetite (Fe_3O_4) on shielding properties of EPDM composites for 662 keV gamma rays” National Conference on Radiation Physics” Bangalore University, Bangalore, India, from 23th to 24th November 2017.
134. Vinayak Anand Kamat, K. Swaroop, K. U. Kiran, & **H. M. Somashekarappa**, “Studies on effect of magnetite (Fe_3O_4) on shielding properties of natural rubber composites for 662 keV gamma ray” International Conference on Recent Advances in Materials Science and Biophysics, Mangalore University, Mangalagangothri, India, from 23th to 25th January 2018.
135. Vinayak Anand Kamat, K. Swaroop, K. U. Kiran, & **H. M. Somashekarappa**, “Evaluation of gamma shielding parameters of PbO-hematite (Fe_2O_3) filled EPDM composites” National Seminar on Applications of Radioisotopes and Radiation in Industry, Healthcare and Agriculture” St. Aloysius College (Autonomous), Mangaluru, from 10th to 11th September 2018.
136. Swaroop K, **Somashekarappa H M**. “Antibacterial Studies of Curcumin Loaded PVA Hydrogels Synthesised using Gamma Irradiation Technique” presented in “Future India: Science and Technology” and (ISCA), organized by Oxford College of Science, Bengaluru on October 10-11, 2018.

137. Swaroop K, **Somashekarappa H M**. “Swelling and cytocompatibility studies of Au/PVA hydrogel nanocomposites synthesized using gamma irradiation technique” International Conference on Physics of Materials and Nanotechnology (ICPN 2019) at Mangalore University, during September 19-21, 2019.

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(Source: Somashekarappa H M – Google Scholar)

Conferences /Seminars / Workshops / Symposia organized (if applicable)

- i. **Convener** – One week workshop on “*Maintenance of Opto-analytical Instruments*” in collaboration with Western Regional Instrumentation Centre (WRIC), Mumbai during Sept. 18-23, 2000, USIC, Mangalore University.
- ii. **Organising Secretary** – One day seminar on “*Radiotracer and Sealed Source Applications in Industrial Troubleshooting and Process Optimisation*” in collaboration with Isotope Application Division (IAD), Bhabha Atomic Research Centre (BARC), Mumbai on January 25, 2000, USIC, Mangalore University.
- iii. **Coordinator** – National level “*Radiography Testing Level-II*” training program during January 04 - 31, 2002 (27 days) in collaboration with Isotope Application Division (IAD), Bhabha Atomic Research Centre (BARC), Mumbai for radiographers from industries, practicing engineers and personal from radiographic companies, USIC, Mangalore University.
- iv. **Convener** – Two-day regional (South Indian) seminar on “*Applications of Radioisotopes and Radiation Technology*” and an exhibition on “*Peaceful Uses of Nuclear Energy*” in collaboration with National Association for Applications of Radioisotopes and Radiation in Industries (NAARRI), and Department of Atomic Energy, Mumbai during November 29-30, 2006, USIC, Mangalore University.
- v. **Convener** – Four-day national workshop on “*Applications of Radioisotopes in Biology*” (hands-on-training) in collaboration with BRIT, DAE, Mumbai during March 7-10, 2008, USIC, Mangalore University.
- vi. **Organising Secretary** – One day national workshop on “*Nuclear Technology for Human Welfare*” in association with BARC & BRIT, DAE, Mumbai on 28.04.2012, CARRT, Mangalore University.
- vii. **Coordinator** – One day training programme on “*¹⁴C Urea Breath Test (¹⁴C –UBT)*” for Helicobacter Pylori Infection on 29.04.2012, CARRT, Mangalore University.
- viii. **Coordinator** – One month *Summer Vacation Fellowship Programme* for M. Sc. students of science disciplines from 20.06.2012 to 20.07.2012, CARRT, Mangalore University.
- ix. **Organising Secretary** – Six day workshop on “*Radioimmunoassay (RIA)*” in association with BRIT, Mumbai from 04.02.2013 to 09.02.2013, CARRT, Mangalore University.
- x. **Organising Secretary** – Three day workshop on “*Hybridoma Technology*” in association with

BRIT, Mumbai; IIT-Madras and Sri Ramachandra University, Chennai from 02.12.2014 to 04.12.2014, CARRT, Mangalore University.

- xi. **Convener** - National Seminar on “Radiation and Radioisotopes: Tools for Scientific Research” in association with NAARRI, Mangalore Chapter on April 28th, 2014, CARRT, Mangalore University.
- xii. **Organising Secretary** - Inauguration of “Blood Irradiator” and national workshop on “Blood Irradiation: Application in Transfusion Medicine” in association with NAARRI, Mangalore Chapter on April 28th, 2014, CARRT, Mangalore University.
- xiii. Course Coordinator - GIAN course on “Nanofibers and their applications” in collaboration with Prof (Dr) Miroslav Cernik, Technical University of Liberec, Czech Republic during 27.02.2017 – 07.03.2017 (9 days), CARRT, Mangalore University

Membership of Professional Bodies (Life Membership)

- i. Indian Physics Association (IPA)
- ii. Indian Association for Radiation Protection (IARP)
- iii. Nuclear Track Society of India (NTSI)
- iii. Indian Society for Radiation Physics (ISRP)
- iv. Association of Environmental Geochemists (AEGC)
- v. Indian Aerosol Science and Technology Association, (IASTA)
- vi. National Association for Application of Radioisotopes & Radiation in Industry (NAARRI)
- vii. Secretary, NAARRI – Mangalore Chapter.

Any other Information

1. Special Training Programs Undergone:

- i. **Radiography Testing Level – 2 Training:** Completed the Training Course (27 days) conducted at Mangalore University by Bhabha Atomic Research Centre (BARC), Mumbai during January 04 - 31, 2002 (28 days). Qualified to register as **Radiological Safety Officer (RSO)**.
- ii. **Radiological Safety Aspects in the Research Application of Ionising Radiation (10 days Training):** Successfully completed the course organized by Radiological Physics and Advisory Division, Bhabha Atomic Research Centre (BARC), Mumbai during May 31 – June 8, 2010 (9 days). Qualified to register as **Radiological Safety Officer (RSO)**.

2. Other Research Projects:

(Responsible for initiating collaborative research programmes with the support of BRNS using CARRT facilities):

Sl. No.	Project title	Principal investigator
1	Effect of irradiation on coffee berry borer, <i>Hypothenemus hampei</i> in the harvested coffee	Dr. M G Venkatesha Dept. of Zoology Bangalore University Bangalore.
2	Isotope base in vivo studies on triazole ring to develop new intact ring or its metabolite as nitrification inhibitor	Dr. Bijul Lakshman A. Selvamm Arts and Science College, Namakkal Tamilnadu.
3	Isolation and characterization of noval radioprotective flavanoids from <i>Tragia</i>	Dr. Chandrashekar Gajanana Joshi Dept. of Biochemistry

	<i>involucrate</i>	Mangalore University
4	Application of irradiation for preventing post harvest losses in fish and fisheries products	Dr. B. Mnaja Naik Dept. of Fish Processing Technology College of fisheries Mangalore.
5	Development and validation of radioimmunoassay for the <i>in vitro</i> quantitative estimation of melatonin in human serum and plasma sample	Shri. Srikant L Patil Dept. of Physiology KSHEMA, Nitte University Mangalore
6	Influence of gamma irradiation on pollen viability, germinability, fruit set, seed set and induction of pathogenetic plants in Cucumis melo	Prof. H. Niranjana Murthy Dept. of Botany Karnataka University, Dharwad.
7	Adrenergic receptor subtype functional correlation in the brain and pancreas of high fat simple carbohydrate c57bl/6j mice: implication in metabolic syndrome	Dr. Asha Abraham PG dept. of Biotechnology St. Aloysius College, Mangalore.

3. Summer Fellowship Programme (2 batches in 2 years) (Conducted in CARRT with the financial support of BRNS)

i. Summer Fellowship Programmes Organised - 2012 Batch: 10 students

(10 students from different science post graduate departments with a fellowship of Rs. 5,000/- per month plus cost towards conducting experiments and preparing the report).

ii. Summer Fellowship Programmes Organised- 2013 Batch: 10 students

(10 students from different science post graduate departments with a fellowship of Rs. 5,000/- per month plus cost towards conducting experiments and preparing the report)

4. M. Sc. Student Projects Conducted in CARRT during 2015-2019: 4

[1 project (2 students) for Dept. of Physics, Mangalore University and 3 projects (3 students each) for St. Aloysius College, Mangalore with charges for students from other institutes]

5. Major Contributions to the Teaching, Research and Development:

- Instrumental in getting first mega research project from BRNS and establishing a “**Centre for Application of Radioisotopes and Radiation Technology (CARRT)**” – a multidisciplinary and central research facility and working as its **Centre-in-Charge from 2010 to 2020.**
- Instrumental in initiating a new teaching programme – **M Sc in Medical Physics** in collaboration with medical institutes and hospitals and working as a **founder Coordinator of Medical Physics Division from 2019 to 2020.**
- Instrumental in initiating **Collaborative Research Programs** with other universities and institutes using CARRT facilities funded by BRNS (10 research projects have been sanctioned to other universities and institutes under CARRT programme).
- Instrumental in getting sanctioned and installed an “**Automatic Weather Station under ISRO-BARC programme**”.

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