### Radhakrishnan E R

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Chief Technologist - Nuclear Medicine & RSO II



# Work experience

- Working as the Chief Technologist -Nuclear Medicine & RSO II (Diagnostic, Low & High Dose 131-I therapy) and Professor of Nuclear Medicine, Dept of Nuclear Medicine, Kovai Medical Centre & Hospitals Limited, Avinashi Road, Coimbatore 641 014 since 2nd September, 2012.
- Worked as a Nuclear Medicine Technologist at Kidwai Memorial Institute of Oncology, Regional Cancer Centre, Dr. M.H.Marigwoda Road, Bangalore from 31st August 1987 to 27th August 2010.
- Worked as Nuclear Medicine Technologist from 7th October 1985 to 29th August 1987 at Kasturba Medical College Hospital, Manipal (Deemed University).

# Knowledge and Abilities

35 Years of experience in well-established Nuclear Medicine Departments.

- ➤ Planning and Commissioning of Nuclear Medicine Department at Kovai Medical Center & Hospitals Limited,
  Coimbatore with SIEMENS 'SYMBIA T' SPECT CT & "BIOGRAPH -6" PET CT.
- ➤ Carried out Acceptance NEMA Quality Assurance Test for SIEMENS "SYMBIA T" SPECT CT & "BIOGRAPH -6"
- Carried out NEMA Quality Assurance Test SIEMENS "SYMBIA T" SPECT CT & BIOGRAPH -6 PET CT for renewal of License
- Installation and Commissioning of Dual Head SPECT Gamma Camera Variable angle "E -Cam" Signature Series
- Installation and Commissioning of Dual Head SPECT Gamma Camera "MULTISPECT II"
- Installation and Commissioning of PC Based Fast Medical Scanner "ECIL MDS 4051"
- Decommissioning of Phillips "Gamma Diagnost A" Planar Gamma Camera
- Conducted Classes for M.D(Radiotherapy)., M.Ch(Surgical Oncology), DM (Medical Oncology) at Kidwai Memorial Institute of Oncology, Bangalore
- Faculty in Nuclear Medicine for M.Sc Medical Physics, Dr.NGP College for Arts Science, Affiliated to Bharathiyar University, Coimbatore
- Guest faculty for M.Sc Medical Physics, Bharathiyar University, Coimbatore
- > Senior Faculty in Nuclear Medicine for B.Sc Nuclear Medicine Technology, Affiliated to Dr.MGR Medical University, Tamil Nadu.
- Examiner for M.Sc. Radiation Physics Examination, Manipal University.
- > Examiner for M.Sc. Nuclear Medicine Examination, Manipal University
- Examiner for Post Graduate Diploma Nuclear Medicine Technology, Manipal University
- Examiner for B.Sc. Nuclear Medicine Technology, Manipal University.

# **Educational Qualification**

Exam Passed	University	Year of Passing	Division
S.S.L.C.	KSEB	1978	2 <sup>nd</sup>
Pre-Degree	Calicut	1980	2 <sup>nd</sup>
B.Sc. Physics	Calicut	1983	1 <sup>st</sup>
M.Sc. Physics	Annamalai	1992	2 <sup>nd</sup>

## **Professional Qualification**

- ➤ Post Graduate Diploma in Medical Radio Isotope Techniques (DMRIT) from University of Bombay and trained at Radiation Medicine Centre, Bhabha Atomic Research Centre, Mumbai, in the year 1984-85.
- ➤ Radiation Safety Officer (RSO) Level II Certificate from Division of Radiological Physics, Bhabha Atomic Research Centre, Mumbai, in the year 1994.
- Undergone Field training for Safety Officer (RSO) Level II in Nuclear Medicine (High Dose 131-I Therapy).
- Accreditation Certificate in Hospital Radio pharmacy from Radiopharmaceuticals Committee (RPC), DAE and Board of Radiation and Isotope Technology (BRIT), Mumbai in the year 1997.

# Work Experience

Nuclear Medicine Instrumentation		
PET CT	SIEMENS BIOGRAPH -6 With 6 Slice CT Since July, 2011	
	SIEMENS Simbya T SERIES WITH SYNGO WORK STATION (SPECT CT), since August 2011	
SPECT Gamma Camera Computer Systems	SIEMENS "E- CAM" SINGNATURE SERIES WITH SYNGO WORK STATION (2004 -2010)	
	SIEMENS MULTI SPECT – 2 (1994 – 2010)	
	G.E. SPECT System (During DMRIT Training)	
Planar Gamma Camera	PHILIPS Gamma Diagnost- A with PDP 11	
Per Operative Gamma Probe	Neo 2000 Gamma Detection System – Neo-probe Gamma Probe System GS-04	

Rectilinear Scanners	ECIL PC based Fast Medical Scanner	
Reculinear Scarners	ECIL Fast Medical Scanner	
	PICKER MAGNA Colour Scanner	
Thyroid Update Probe	ECIL Thyroid Uptake Probe,	
	Captus 300 Thyroid uptake probe & well counter	
	BRETHOLD Multi Crystal Gamma Counter	
Well Counter for I-125 Counting	LB2104 I-125 Counter	
	ECIL I-125 Counter	
Radionuclide Therapeutic Applications		
Benign Thyroid Disease	I-131 for Hyper Thyroid and Grave disease	
	I-131 for post-operated well defined Carcinoma of Thyroid	
Carcinoma of Thyroid	Cases.	
	I-131 MIBG for Modularly Carcinoma of Thyroid Cases	
	Sr-89 Therapy in cases of Bone Metastasis	
	P-32 Therapy in cases of Bone Metastasis	
	Sm-157 Therapy in cases of Bone Metastasis	
Bone Pain Palliation	Lu- 177 EDTMP Therapy in cases of Bone Metastasis	
	Re-188 HEDP Therapy in cases of Bone Metastasis	
	Tm-170 EDTMP Therapy in cases of Bone Metastasis	
	Lu-177 DOTMP Therapy	
Neuroblastoma	I-131 MIBG therapy in Neuroblasotma	
PNET Cancer	Lu -177 DOTATATE Therapy PNET Cancers	
	Y-90 DOTATATE Therapy PNET Cancers	
	177 Lu- Hydroxyapatite,	
Radio Nuclide Synovectomy	32 P colloid,	
	90-Y Hydroxyapatite  188Re-Tin Colloid	
	90 Y labelled Microspheres	
Treatment of Hepatocellular Carcinoma	188 Re labelled Lipiodol	
	131-I Lipiodol	
Treatment for Prostate Cancer	177Lu-PSMA 617	
Treatment for Freshate Ganger	225Ac PSMA	
Radio Pharmacy		
	Elution of 99m-Tc from NaMoO4 using Solvent Extraction	
	Techniques.	
Diagnostic	Elution of 99m-Tc from Column & Gel generators	
	Formulation of various Radiopharmaceuticals using Cold kits.	

	Preparation of 68Ga-radiopharmaceuticals like, DOTA-NOC,	
	DOTA -NOC, PSMA-11, BPAMD & Ubiquicidi	
	Elution of 188W/188Re generator Preparation 188Re radio-	
	pharmaceuticals 188Re-HEDP wet chemistry and Kit	
	188Re-DMSA(V) wet chemistry and Kit,	
	188Re-Tin Colloid - wet chemistry	
	Preparation 177 Lu -PSMA(617),	
	177Lu-DOTATATE	
Therapeutic	177Lu-EDTMP	
	177Lu-BPAMD	
	177Lu-DOTMP	
	177Lu-HA	
	90Y-HA	
	90Y-DOTATATE	
	225Ac-PSMA(617)	
Diagnostic Nuclear Medicine		
	Tomographic imaging of various organs using SPECT Gamma	
	Camera Computer System	
	Planar imaging of various organs using Gamma Camera	
	Computer System	
	Planar imaging of various organs using Rectilinear Scanne Computer System	
	Detection Sentinel Nodes using per-operative/Gamma probes	
	Thyroid uptake studies using Thyroid Uptake Probes	
In Vitro Studies	Thyroid uptake studies using Thyroid Optake Frobes	
	T3,T4 and TSH Assays by using RIA, IRMA Methods	
	G.F.R. by Plasma clearance method.	
Quality Assurance		
	SIEMENS-Biograph-6 PET CT	
	SIEMENS -Dual Head -Symbia T SIEMENS MULTI SPECT -II	
	SIEMENS E-Cam	
	Planar Gamma Camera,	
	Planar Gamma Camera, PC Based Rectilinear Scanner,	

	Quality Assurance of various Radio-pharmaceuticals using chromatographic method		
Computer Knowledge and practical Experience			
Programming Languages	Advance basic, & Pascal		
Operating System	MS-DOS, RT-11, Windows 98, Window XP Professional & Macintosh. Microsoft Office 2003, Windows 8 & 10		
Programming of Clinical Software	<ul> <li>Programmed Clinical software for</li> <li>Salivary Scintigraphy</li> <li>Thyroid to Parotid Ratio (TPR)</li> <li>Correction Rénal T max &amp; T ½ in ICON Clinical software         Created protocols for dual isotope acquisition for         different Radionuclides     </li> <li>Created protocols for whole body acquisition &amp;         processing for scatter corrected images</li> </ul>		
Clinical Package	SIEMENS 'ICON' WORK STATION SIEMENS 'SYNGO' WORK STATION		
Special Interest	Programming of Clinical Software using Microenvironments in Nuclear Medicine.		

### **Publications**

#### Research Publications, as First Author

1. Rhenium 188 Hydroxyethane 1,1 Diphosphonic Acid (HEDP) for Bone Pain Palliation Using BARC HEDP Kits versus Pars HEDP Kits: A Comparison on Preparation and Performance Aspects at Hospital Radiopharmacy Indian Journal of Nuclear Medicine 2018;33:302-5.

#### **Research Publications Co-authored**

- 2. "Comparison of 99m-Tc Phytate and 99m Tc sulphur colloid in Primary Bone Tumours" (European Journal of Nuclear Medicine 1990-16:847-853)
- 3. 'Technetium 99m phytate Uptake in Bone Fracture "(Journal of Nuclear Medicine Technology 1990:18)
- 4. "Assessment of patient Radioactive body burden of 131 I in the management of thyroid cancer "IJNM, 11, 1996.
- 5. "18F-FDG PET/CT Findings in Voltage-Gated Potassium Channel Limbic Encephalitis" Clin Nucl Med 2013;38: 392-394)
- Rare case of extradural spinal metastasis from primary lung malignant melanoma detected with fluorine 18 fluoro-deoxyglucose positron emission tomography/computed tomography -Letter to editor - Indian Journal of Nuclear Medicine, Page 56-57, Vol 29, Jan-March 2014.
- 7. Primary neuroendocrine carcinoma of breast with liver and bone metastasis detected with fluorine-18fluorodeoxyglucose-positron emission tomography/computed tomography- case report- Indian Journal of Nuclear Medicine, Page 31-32, Vol 29, Jan-March 2014.
- 8. Rare case of extradural spinal metastasis from primary lung malignant melanoma detected with fluorine-18 fluorodeoxyglucose-positron emission tomography/computed tomography Indian J Nucl Med. 2014

- Jan;29(1):57-8.
- 9. Primary central nervous system lymphoma in an human immunodeficiency virus-infected patient mimicking bilateral eye sign in brain seen in fluorine-18 fluorodeoxyglucose-positron emission tomography/computed tomography Indian J Nucl Med. 2014 Apr;29(2):92-3.
- Fluorine-18 fluorodeoxyglucose positron emission tomography/computed tomography imaging of an isolated subcutaneous loin metastasis from primary papillary carcinoma of the thyroid Indian J Nucl Med. 2014 Apr;29(2):97-8.
- 11. Image findings of a false positive radioactive I-131 uptake mimicking metastasis in pulmonary aspergillosis identified on Single photon emission computed tomography computed tomography Thyroid Research and Practice | September-December 2014 | Vol 11 | Issue 3
- 12. Primary central nervous system lymphoma in an human immunodeficiency virus-infected patient mimicking bilateral eye sign in brain seen in fluorine-18 fluorodeoxyglucose-positron emission tomography/computed tomography. Indian J Nucl Med. 2014 Apr;29(2):92-3.
- 13. Fluorine-18 fluorodeoxyglucose positron emission tomography/computed tomography imaging of an isolated subcutaneous loin metastasis from primary papillary carcinoma of the thyroid. Indian J Nucl Med. 2014 Apr;29(2):97-8.
- 14. Image findings of monomorphic nonhogdkin lymphoproliferative disorder in a post renal transplant patient diagnosed with fluorine-18 fluorodeoxyglucose-positron emission tomography/computed tomography. Indian J Nucl Med 2014;29:189-90.
- 15. Persistent High Grade Flurodeoxyglucose Uptake in Lipomatous Hypertrophy of the Interatrial Septum on Dual Time Point Imaging and with Ambient Warming. World J Nucl Med 2014;13:62-3.
- 16. Use of yttrium-90 hydroxyapatite radiosynovectomy as a primary modality of treatment in diffuse pigmented villonodular synovitis of the knee joint: A first case report Indian J Nucl Med 2015;30:47-50.
- 17. Detection of Unknown sites of multiple enchondroma (Ollier's Disease) mimicking like metastasis using bone scintigraphy Clin Cancer Investig J 2015;4:581-3
- 18. Radiosynovectomy of ankle joint synovitis in juvenile rheumatoid arthritis treated with rhenium-188 tin colloid and imaging with SPECT/CT.Egyptian Rheumatology & Rehabilitation 2015, 42:159–161
- 19. A Freeze-Dried Kit for the Preparation of (188)Re-HEDP for Bone Pain Palliation: Preparation and Preliminary Clinical Evaluation Cancer Biother Radiopharm.2016 May;31(4):139-44.
- 20. Clinical 68Ga-PET: Is radiosynthesis module an absolute necessity? Nucl Med Biol. 2017 Mar;46:1-11
- 21. Image findings of rare case of peritoneal carcinomatosis from non small cell lung cancer and response to erlotinib in F-18 FDG positron emission tomography/computed tomography.Indian J Nucl Med 2017;32:140-2.
- 22. Image findings of polyostotic fibrous dysplasia mimicking metastasis in F-18 FDG positron emission tomography/computed tomography. Indian J Nucl Med 2017;32:137-9.
- 23. A "mix-and-use" approach for formulation of human clinical doses of 177 Lu-DOTMP at hospital radiopharmacy for management of pain arising from skeletal metastases J Labelled Comp Radiopharm. 2017 Jul;60(9):410-419
- 24. First case report of F-18 FDG PET/CT in a Rare case of Bilateral adrenal and lung metastasis from primary hepatic angiosarcoma. OGH Reports. 2018;7(1):75-6.
- 25. Clinical utility of 188Rhenium-hydroxyethylidene-1,1-diphosphonate as a bone pain palliative in multiple malignancies.World J Nucl Med. 2018 Oct-Dec;17(4):228-235

### Conferences Attended

- 50 th Annual conference of Society of Nuclear Medicine(India) November 22- 25, 2018 at PGIMER, Chandigarh.
   Presented an e poster titled "EVALUATION OF THE RADIOCHEMICAL PURITY OF PREPARED GALLIUM RADIOPHARMACEUTICALS BY TWO DIFFERENT"
- 2. 49th Annual conference of Society of Nuclear Medicine(India) held at INMAS New Delhi from 14th to 17th December 2017. Presented and scientific paper titled "Significance of Trial Labeling before patient dose preparation of 177Lu-DOTA-TATE"
- 3. 23rd Annual Society of Nuclear Medicine India-Southern Chapter Congress, 2nd World Rhenium Congress and t WARMTH Teaching Academy held at Kovai Medicial Center & Hospitals, Coimbatore from 12th to 16 August 2017.
- 4. 1st Annual conference for Nuclear Medicine Physicist Association of India (NMPAI) held at AMRI Hospital, Kolkata on 25th& 26th February 2017
- 5. Internation Atomic Energy Agency training Course on Radionuclide Therapy & the 1St World Rhenium Congress held at KMCH, Coimbatore from 8th to 13th September 2015.
- 6. 46th Annual Conference of Society of Nuclear Medicine(India) from 11th-14th Dec, 2014 at Kolkata and presented papers titled "Preparation and evaluation of 188Rhenium AHDD-Lipiodol for treatment of hepatocellular carcinoma", "In-house preparation of 188Rhenium tin colloid for radiation synovectomy" & "In-house Preparation of 188Re-HEDP for the Treatment of Painful Bone Metastases
- 20th Annual conference of SNMI southern Chapter from 16 & 17 August 2014 at Kidwai Memorial Institute of Oncology, Bangalore 560 029
- 8. 19th SNM I Southern Chapter (South Indian Society of Nuclear Medicine) form 16 to 18, August 2013 at KMCH Coimbatore 641 014 and presented a e-poster titled "RADIATION SYNOVECTOMY WITH INTRA-ARTICULAR 177Lu-HA (HYDROXY-APATITE) COLLOID IN THE THERAPY OF CHRONIC KNEE JOINT SYNOVITIS"
- 18th Annual conference of Society of Nuclear Medicine India Southern Chapter at Baby Memorial Hospital, Calicut during the period November 11 & 12, 2012 and presented a poster titled "Use of Scenium software analysis in PET brain studies for confident diagnosis"
- 10. 17th Annual conference of Society of Nuclear Medicine India Southern Chapter at SVIM, Thirupathi, during the period July 13 & 14, 2011.
- 11. Recent Advance in Molecular Imaging & Radiation Oncology (RAMIRO-2009) held at NIMHANS, Bangalore during the period 18th & 19th January 2009.
- 12. 9th Asia Oceania Congress of Nuclear Medicine and Biology, 2008 held at All India Institute of Medical Sciences, New Delhi, during the period 31st October to 4th November, 2008.
- 13. 14th Annual Conference of Society of Nuclear Medicine India Southern Chapter held at West Fort High Tech Hospital, Trichur, Kerala During the period 9th & 10th August 2008, and presented a paper titled 'RENAL CELL CARCINOMA UNUSUAL PRESENTATION'
- 14. 37 th Annual Society of Nuclear Medicine India (SNMI) form December 08 to 11, 2005 held at Malabar Institute of Medical Sciences, Calicut and presented a paper titled "Useful change in the standard GFR/Differential Renal Function programme".
- 15. 11th Annual conference of Southern Chapter, Society of Nuclear Medicine India (SNMI) held at Shirdi Saibaba Cancer Hospital, KMC Manipal & Chaired Nuclear Medicine Technology Section from August 20 & 21, 2005.
- 16. 3rd Annual Conference of Southern Chapter Society of Nuclear Medicine India (SNMI) 7 th September 1997 held at Manipal Hospital, Bangalore.
- 17. National Conference on Advances in Nuclear medicine & 5th Annual Conference of Society of Nuclear Medicine (India), Southern Chapter on 2nd & 3rd October, 1999 held at Gamma Imaging & Thyroid Centre Cochin
- 18. 32nd Annual Conference of Society of Nuclear Medicine (India) (Millennium Conference) held at Radiation

- Medicine Centre & Jaslok Hospital, Mumbai between 15th & 18th, 2000 Presented a poster titled "Unusual Accumulation of 99mTc MDP in Hepatic Secondary.
- 19. 9th National Consensus Conference for Differentiated Thyroid Cancer held at Amrita Institute of Medical Sciences and Research Centre, Kochi on 12th & 13th April, 2003
- 20. Annual conference of Society of Nuclear Medicine India (SNMI) southern chapter and 1st Annual Conference of Association of Nuclear Medicine Physicians of India(ANMPI), held at Vijaya Health Centre, Isotope Scanning in Well Differentiated Carcinoma of Thyroid Patients.

#### Workshops attended

- One Day Workshop on Quality Control of Nuclear Medicine Imaging Equipment's (PET/CT & SPECT/CT)" conducted by AERB
- 2. First national workshop on Positron Emission Tomography, from February 10-12, 2006 held at Radiation Medicine Centre (BARC), Mumbai. (IAEA Project on Tumour Imaging with Isotopes)
- 3. National symposium on statistical and Mathematical Technique and Radiation Safety in Nuclear Medicine All India Institute of Medical Science New Delhi
- 4. Workshop on Quality Assurance in Nuclear Medicine Instrumentation, at All India Institute of Medical Science, New Delhi.
- 5. Atomic Energy Regulatory Board workshop on Radiation Safety in Nuclear Medicine Laboratories and uptake, BARC, Mumbai
- 6. WHO workshop on Quality Control in Nuclear Medicine Instrumentation, Kidwai Memorial Institute of Oncology, Bangalore
- 7. Workshop on Nuclear Cardiology, Nizams Institute of Medical Science, Hyderabad
- 8. International Atomic Energy Agency Workshop on Maintenance of Nuclear Medicine Instrumentation, BARC, Mumbai.

### Personal Details

Name in full	Radhakrishnan Edathuruthy Kalarickal Ramakurup	
Date of Birth	15/04/1963 (Fifteenth April Nineteen Sixty Three)	
Place of Birth	Pazhuvil, Trichur, Kerala Pin 680 564	
Sex	Male	
Marital Status	Married	
Communication Address	#159, "KRISHNADARSHANAM", Green Park Avenue, Behind Dr.N.G.P. Institute of Technology, P.O.Kalapatti, COIMBATORE 641 018. TAMIL NADU. Res: Ph. No. +919489178118 & 8220005957 e-mail: radhakrishnan.er@gmail.com,	
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## Referees

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## **Declaration**

I hereby solemnly affirm that all the information furnished above is true to the best of my knowledge.

Coimbatore Radhakrishnan E R