

**CURRICULUM VITAE – DR. G.S. UMAMAHESWARA RAO**

**Name** Dr. G.S. Umamaheswara Rao

**Date of Birth** 5<sup>th</sup> Sept 1955

**Present Address (official)** Senior Professor (Retired)  
Department of Neuroanaesthesia  
National Institute of Mental Health &  
Neurosciences (NIMHANS)  
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**Educational Qualifications**

M.B., B.S. – May 1977 from Sri Venkateswara Medical College, Tirupati

Diploma in Anaesthesia – May 1981 from Sri Venkateswara Medical College, Tirupati

M.D. (Anaesthesiology) – Jan 1982 from Sri Venkateswara Medical College, Tirupati

**Professional Experience** (at National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore)

Feb 1982 – Sept 2020

Retired as Senior Professor of Neuroanaesthesia and Neurocritical care

**Fellowships**

1. One year Fellowship in Surgical Intensive Care at La Pitié Salpêtrière Hospital, Paris VI University, Paris, France from Oct 1, 1995 to Sept 30, 1996.
2. Clinical Visitor at the Department of Anaesthesia at the London Health Sciences Centre, University of Western Ontario, London Ontario, Canada May 28 - June 3, 2000

## Awards

**BC Roy National Award for best medical teacher – 2016 presented by the President of India**

**Distinguished Teacher Award of Indian Society of Neuroanaesthesiology and Critical Care** presented at the 24<sup>th</sup> Annual Conference of the Society on 20<sup>th</sup> January 2023 at Hyderabad

## ACDEMIC WORK

### PUBLICATIONS

#### A. Peer-Reviewed and Indexed International Journals

1. Umamaheswara Rao GS. Critical care in Guillian Barre syndrome. J Neuroanaesthesiol Crit Care 2024 (Accepted for publication)
2. Sindhupriya M, Bansal S; Chakrabarti D; Umamaheswara Rao GS. Reliability of analgesia nociception index (ANI) and surgical pleth index (SPI) during episodes of bleeding – A pilot study. Indian Journal of Anaesthesia: 2022, 66: 505-510
3. Kamath S, Bharadwaj S, Shanthanna H, Umamaheswara Rao GS, Kramer BW, Sathyaprabha TN. Opioid versus non-opioid analgesia for spine surgery: a systematic review and meta-analysis of randomized controlled trials. European Spine Journal. <https://doi.org/10.1007/s00586-022-07469-4>
4. Umamaheswara Rao GS. Good Preanesthetic Evaluation Is a Prelude to Good Surgical Outcome—But Where Are the Guidelines? (Editorial) J Neuroanaesthesiol Crit Care 2022;9:73–74.
5. Umamaheswara Rao GS. Precise scalp block - Have another look at scalp innervation. (Editorial) JNRP 2023;14:1-2
6. Bharadwaj S, Umamaheswara Rao GS, Hegde A, Chakrabarti D. Survey of Family Satisfaction with Patient Care and Decision Making in Neuro-Intensive Care Unit- A Prospective Single Center Cross Sectional Study from an Indian Institute of Neurosciences. Neurol India. 2022 Jan-Feb;70(1):135-147.

7. Bilgi K, Gopalakrishna KN, Chakrabarti D, **Rao GSU**. Outcome Prediction of TBI: Are There Parameters That Affect the IMPACT and CRASH Models? *World Neurosurg*. 2020 Oct 31;S1878-8750(20)32336-6.
8. Wahatule R, Dutta D, Debnath M, Nagappa M, Mahadevan A, Sinha S, Sundaravadivel P, **Rao GSU**, Periyavan S, Binu VS, Rao S, Taly AB. Ganglioside complex antibodies in an Indian cohort of Guillain-Barré syndrome. *Muscle Nerve*. 2020 Dec;62(6):728-734.
9. Venkatapura RJ, Dubey SK, Panda N, Chakrabarti D, Venkataramaiah S, Rath GP, Kaloria N, Sharma D, **Ganne US**. Postoperative Neurological Complications after a Cranial Surgery: A Multicentre Prospective Observational Study. *J Neuroanaesthesiol Crit Care* Published online 5th Aug 2020
10. Khandelwal A, Jangra K, Katikar MD, Durga P, **Uma Maheswara Rao GS**. Choosing neuroanaesthesia as a career: Marching towards new horizons. *Indian J Anaesth* 2021;65:35-42.
11. Rao GSUM. Intraoperative Rupture of Aneurysm: Does It Add Insult to the Injury? (Editorial) *J Neurosci Rural Pract*. 2021 Apr;12(2):224-225.
12. Sriganesh K, **Rao GSU**. COVID-19: The Unseen Threat for the Healthcare Professionals. *J Neurosci Rural Pract*. 2020 Jul;11(3):367-368.
13. Bharath V, Radhakrishnan M, **Umamaheswara Rao GS**. Hemodynamic changes during surgical decompression in traumatic brain injury patients. *World Neurosurg* 2020 Apr;136:e553-e558.
14. Debnath M, Nagappa M, Dutta D, Talukdar PM, Subbanna M, Shivakumar V, Wahatule R, Sinha S, Bindu PS, Periyavan S, **Umamaheswara Rao GS**, Kumar MA, Taly AB. Evidence of altered Th17 pathway signatures in the cerebrospinal fluid of patients with Guillain Barré Syndrome. *Journal of Clinical Neuroscience* 2020 May;75:176-180.
15. Das BP, Sharma M, Bansal S, Philip M, **Umamaheswara Rao GS**. Prognostic Value of Tissue Oxygen Monitoring and Regional Cerebral Oxygen Saturation Monitoring and Their Correlation in Neurological Patients with Sepsis: A Preliminary, Prospective, Observational Study. *J Neurosurg Anesthesiol*. 2020 Jan;32(1):77-81.
16. Rao GSU. Yet Another Tool in the Armamentarium of Neuroanesthesiologist (Editorial). *J Neurosci Rural Pract*. 2019 Oct;10(4):569-570.
17. Smitha V, Sriganesh K, **Umamaheswara Rao GS**. Perioperative complications and clinical outcomes in patients with congenital cyanotic heart disease undergoing surgery for brain abscess. *J Neurosci Rural Pract* 2020 Jul;11(3):375-380
18. Theerth KA, Sriganesh K, Chakrabarti D, Reddy KRM, **Rao GSU**. Analgesia nociception index and hemodynamic changes during skull pin application for supratentorial craniotomies in patients receiving scalp block versus pin-site infiltration: A randomized controlled trial. *Saudi J Anaesth*. 2019 Oct-Dec;13(4):306-311

19. **Umamaheswara Rao GS.** Neurocritical Care: A White Elephant or an Unavoidable Obligation? *Journal of Neuroanaesthesiology and Critical Care* 2019; 06(02): 053-055
20. Venkataramaiah S, **Umamaheswara Rao GS**, Kamath S, Jadhav T, Kumar CN, Arumugham SS, Reddy M, Philip M, Thirthalli J. Duration of Pupillary Unresponsiveness to Light: A Physiological Adjunct to Electroencephalography and Motor Seizure Duration Monitoring During Electroconvulsive Therapy. *J ECT.* 2018;34(4):e61-e64.
21. Debnath M, Nagappa M, Talukdar PM, Subbanna M, Sundaravadivel P, Shivakumar V, Dutta D, Wahatule R, Sinha S, Bindu PS, Periyavan S, **Umamaheswara Rao GS**, Taly AB. Comprehensive cytokine profiling provides evidence for a multi-lineage The responses in Guillain Barré Syndrome. *Cytokine.* 2018;110:58-62.
22. Masapu D, Gopala Krishna KN, Sanjib S, Chakrabarti D, Mundlamuri RC, Manohar N, Mariamma P, Satishchandra P, **Umamaheswara Rao GS.** A Comparative Study of Midazolam and Target-Controlled Propofol Infusion in the Treatment of Refractory Status Epilepticus. *Indian J Crit Care Med.* 2018;22(6):441-448.
23. Theerth KA, Sriganesh K, Reddy KM, Chakrabarti D, **Umamaheswara Rao GS.** Analgesia Nociception Index-guided intraoperative fentanyl consumption and postoperative analgesia in patients receiving scalp block versus incision-site infiltration for craniotomy. *Minerva Anesthesiol.* 2018;84(12):1361-1368.
24. Debnath M, Nagappa M, Subbanna M, Sundaravadivel P, Talukdar PM, Shivakumar V, Wahatule R, Dutta D, Binukumar B, Sinha S, Bindu PS, Periyavan S, **Umamaheswara Rao GS**, Taly AB. Th17 pathway signatures in a large Indian cohort of Guillain Barré syndrome. *J Neuroimmunol.* 2018;323:125-130.
25. Jagannatha AT, Kamath Sriganesh K, Indira Devi B, **Umamaheswara Rao GS.** Urinary Sodium Loss following Hypertonic Saline Administration Curtails its Superior Osmolar Effect in Comparison to Mannitol in Severe Traumatic Brain Injury: A Secondary Analysis of a Randomized Controlled Trial. *J Neuroanaesthesiol Crit Care* 2018;5:164–167
26. **Umamaheswara Rao GS.** Balance the fluid.... *Neurol India.* 2018;66(5):1299-1300.
27. Mittal M, Muthuchellappan R, **Umamaheswara Rao GS**, Kavyashree K, Vishnuprasad K. Assessment of heart rate variability during different propofol effect site concentrations in patients with supratentorial tumours: A pilot study. *J Neuroanaesthesiol Crit Care* 2017;4:108-13.

28. Surve RM, Srinivas D, **Umamaheswara Rao GS**, Bansal S, Gopalkrishna KN, Sudhir V (2017) Anesthetic Management for Stereotactic Neurosurgical Treatment of Patients with Pantothenate Kinase – Associated Neurodegeneration (PKAN) – An Experience of Two Cases with Dexmedetomidine. *Int J Clin Anesthesiol* 5(6): 1087.
29. Bansal S, Surve RM, Muthuchellappan R, **Umamaheswara Rao GS**, Philip M. Comparison of illness severity scoring systems for mortality prediction in Neurointensive Care Unit in India. *J Neuroanaesthesiol Crit Care* 2017;4:42-8.
30. Venkateswaran P, Sriganesh K, Chakrabarti D, Srinivas DB, **Rao GSU**. Regional Cerebral Oxygen Saturation Changes after Decompressive Craniectomy for Malignant Cerebral Venous Thrombosis: A Prospective Cohort Study. *J Neurosurg Anesthesiol*. 2019 Apr;31(2):241-246.
31. Umamaheswara Rao GS. Complications in Neuroanaesthesia (Book Review) *Journal of Neuroanaesthesia and Critical Care* 2017; 4(1): 67
32. Venkataramaiah S, **Umamaheswara Rao GS**, Kamath S, Jadhav T, Kumar CN, Arumugham SS, Reddy M, Philip M, Thirthalli J. Duration of Pupillary Unresponsiveness to Light: A Physiological Adjunct to electroencephalography and Motor Seizure Duration Monitoring During Electroconvulsive Therapy. *J ECT*. 2018 Dec;34(4):e61-e6
33. Muthuchellappan R, Shaikh NA, Surve RM, **Ganne URS**, Philip M. Regional cerebral tissue oxygen saturation changes following blood transfusion in neuro-intensive care unit patients - a pilot observational study. *Transfus Med*. 2018 Aug;28(4):304-309
34. Muthuchellappan R, V J Ramesh, **Umamaheswara Rao GS**, et al. Correlation between time lag of arterial-plethysmographic waveforms and systemic vascular resistance: a prospective study. *J Med Eng Technol*. 2018 Jan;42(1):18-25.
35. Nagappa M, Rahul W, Sinha S, Bindu PS, Mathuranath PS, Rao S, Periyavan S, **Umamaheswara Rao GS**, Taly AB. Guillain Barre Syndrome in the elderly: Experience from a tertiary-care hospital in India. *J Clin Neurosci*. 2017 Dec;46:45-49.
36. Kommula LK, Bansal S, **Umamaheswara Rao GS**. Analgesia Nociception Index Monitoring During Supratentorial Craniotomy. *J Neurosurg Anesthesiol*. 2019 Jan;31(1):57-61.
37. Sriganesh K, Jadhav T, Venkataramaiah S, Naveen Kumar C, Armugham S, Philip M, Madhusudan Reddy KR, Thirthalli J, **Umamaheswara Rao GS**. Cerebral Oxygen Saturation During Electroconvulsive Therapy: A Secondary Analysis of a Randomized Crossover Trial. *J Neurosurg Anesthesiol*. 2018 Oct;30(4):314-318.
38. **Umamaheswara Rao GS**. The bug does not stop here: The exasperating problem of ventilator associated pneumonia (Editorial) *Neurol India*. 2017 Jul-Aug;65(4):785-786.
39. Sriganesh K, Balachandar R, Bagepally BS, Saini J, **Umamaheswara Rao GS**. Effect of propofol anesthesia on resting state brain functional connectivity in Indian population with chronic back pain. *Neurol India*. 2017 Mar-Apr;65(2):286-292.
40. Bharath RD, Panda R, Saini J, Sriganesh K, **Rao GSU**. Dynamic local connectivity uncovers altered brain synchrony during propofol sedation. *Sci Rep*. 2017 Aug 17;7(1):8501.

41. Jagannatha AT, Sriganesh K, Devi BI, Rao GS. An equiosmolar study on early intracranial physiology and long term outcome in severe traumatic brain injury comparing mannitol and hypertonic saline. *J Clin Neurosci*. 2016 May;27:68-73.
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43. Surve RM, Muthuchellappan R, **Rao GS**, Philip M. The effect of blood transfusion on central venous oxygen saturation in critically ill patients admitted to a neurointensive care unit. *Transfus Med*. 2016 Oct;26(5):343-348.
44. Rayadurg V, Muthuchellappan R, **Rao U**. Volatile anesthetic for the control of posthypoxic refractory myoclonic status. *Indian J Crit Care Med*. 2016 Aug;20(8):485-8.
45. Nagappa M, Netto AB, Taly AB, Kulkarni GB, **Umamaheswara Rao GS**, Periyavan S, Rao S. Electrophysiological observations in critically ill Guillain-Barre syndrome. *Neurol India*. 2016 Sep-Oct;64(5):914-20.
46. **Rao GS**, Muthuchellappan R Cerebral vasospasm: current understanding. *Curr Opin Anaesthesiol*. 2016 Oct;29(5):544-51
47. Hurmath FK, Mittal M, Ramaswamy P, Umamaheswara Rao GS, Dalavaikodihalli Nanjaiah N. Sevoflurane and thiopental preconditioning attenuates the migration and activity of MMP-2 in U87MG glioma cells. *Neurochem Int*. 2016 Mar;94:32-8.
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49. Redhu S, Radhakrishnan M, **Rao GS**. An audit of the current practices of airway management in patients undergoing surgery for atlanto-axial dislocation in a single institution. *Middle East J Anaesthesiol*. 2015 Jun;23(2):163-70.
50. Bharath S, Chakrabarti D, **Umamaheswara Rao GS**. Does anaesthetic dose really not contribute to mortality? *Br J Anaesth*. 2015 Oct;115(4):638.

51. Kamath Sriganesh, **Umamaheswara Rao GS**. Functional imaging in neuroscience. *J Neuroanaesthesiol Crit Care* 2015; 2(3):240-245
52. Mundlamuri RC, Sinha S, Subbakrishna DK, Prathyusha PV, Nagappa M, Bindu PS, Taly AB, **Umamaheswara Rao GS**, Satishchandra P. Management of generalised convulsive status epilepticus (SE): A prospective randomised controlled study of combined treatment with intravenous lorazepam with either phenytoin, sodium valproate or levetiracetam--Pilot study. *Epilepsy Res.* 2015 Aug;114:52-8.
53. Mittal M, Radhakrishnan M, **Umamaheswara Rao GS**. Management of catecholamine-induced stunned myocardium-a case report. *J Clin Anesth.* 2015 Jul 6. pii: S0952-8180(15)00185-3.
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55. Sriganesh K, Vinay B, **Umamaheswara Rao GS**. Acute kidney injury in survivors of surgery for severe traumatic brain injury: Incidence, risk factors, and outcome from a tertiary neuroscience center in India. *Br J Neurosurg.* 2015 Mar 23:1-5.
56. Surve R, Bansal S, Sriganesh K, Subbakrishna DK, Thirthalli J, **Umamaheswara Rao GS**. Incidence and risk factors for oxygen desaturation during recovery from modified electroconvulsive therapy: A prospective observational study. *J Anaesthesiol Clin Pharmacol.* 2015 Jan-Mar;31(1):99-103.
57. Sriganesh K, Reddy M, Jena S, Mittal M, **Umamaheswara Rao GS**. A comparative study of dexmedetomidine and propofol as sole sedative agents for patients with aneurysmal subarachnoid hemorrhage undergoing diagnostic cerebral angiography. *J Anesth.* 2015 Jun;29(3):409-15.
58. Sriganesh K, Reddy M, **Umamaheswara Rao GS**. In reply: is dexmedetomidine really superior to propofol? *J Anesth.* 2015 May 16.
59. Vinay B, Gopalakrishna KN, **Umamaheswara Rao GS**. Fall in inspired oxygen and anaesthetic agent concentrations during change of soda lime absorber. *J Clin Monit Comput.* 2015 Jun;29(3):373-6.
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62. Sriganesh K, Radhakrishnan M, **Umamaheswara Rao GS**. Systemic care in the acute management of patients with stroke. *J Neuroanaesth Crit Care*. May-August 2014, 1(2):101-107
63. Bansal S, Ramesh VJ, **Rao GS**, Surve RM. Anaesthesia and orphan disease: failed airway management in a case of Smith-McCort Dysplasia. *Eur J Anaesthesiol*. 2013 Dec;30(12):775-6.
64. Sriganesh K, Netto A, Kulkarni GB, Taly AB, **Umamaheswara Rao GS**. Seasonal variation in the clinical recovery of patients with Guillain Barré syndrome requiring mechanical ventilation. *Neurol India*. 2013 Jul-Aug;61(4):349-54.
65. Reddy AK, Sriganesh K, **Rao GS**. Hypoxia and chest radiography changes after low-dose, short-duration carbamazepine therapy. *J Neurosurg Anesthesiol*. 2013 Apr;25(2):210-2.
66. Venkataramaiah S, **Umamaheswara Rao GS**, Vinay B. Unexpected intraoperative airway obstruction in a patient with mild head injury. *J Neurosurg Anesthesiol*. 2013 Apr;25(2):219-20.
67. Bansal S, Surve S, Sriganesh S, Tirthalli J, Subbakrishna DK, **Umamaheswara Rao GS**. Influence of acute haemodynamic changes on the oxygen saturation during electro-convulsive therapy *J Neuroanesth Crit Care*; 2014; 1(1): 13-19
68. **Umamaheswara Rao G.S**. "Made in India": How's that for an indigenous medical device. *Ind J Neurosurg*. 2013, 2(2): 151-153
69. Vinay B, Aravinda HR, Gopala Krishna KN, Gopala Krishna KN, **Umamaheswara Rao GS**. An unexpected cause of difficult intubation in a patient with poliomyelitis undergoing craniotomy. *J Neurosurg Anesthesiol*. 2013 Jan;25(1):91-2.
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- 22) Pai RV, Umamaheswara Rao GS. Pulmonary compliance changes in various positions during neurosurgical operations. *Annual Conference of the Neurological Society of India, 2000, Madras*
- 23) Ramesh VJ, Umamaheswara Rao GS. Predictors of outcome in a neurosurgical intensive care unit. *Annual Conference of the Neurological Society of India, Dec 2001, Bombay*
- 24) Lalla RK, Umamaheswara Rao GS. Pharmacoeconomics of intravenous Vs inhalational anaesthesia for neurosurgery. *Annual Conference of the Neurological Society of India, Dec 2001, Bombay*
- 25) Gudi TSD, Lalla RK, Umamaheswara Rao GS. Monitoring adequacy of reversal of neuromuscular blockade in neurosurgical patients. *Conference of the Neurological Society of India, Dec 2001, Bombay*
- 26) Reddy KRM, Ramana Prasad J, Umamaheswara Rao GS. Comparison of intravenous and nebulised lignocaine on cardiovascular response to tracheobronchial suction. *Annual Conference of Indian Society of Critical Care Med Jan 2002, New Delhi*
- 27) Venkatesh HK, Umamaheswara Rao GS. Comparison of two techniques of anaesthesia for fibroptic intubation in high cervical lesions. *Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care, Jan 2002, Bombay*
- 28) Devaragudi TS, Umamaheswara Rao GS. Effect of PEEP on CVP and intraoperative brain condition in neurosurgical patients. *Annual Conference of the Neurological Society of India, Dec 2002, Cochin*
- 29) Reddy KRM, Umamaheswara Rao GS. Comparative evaluation of intraoperative acute hyperventilation using two different anaesthetic techniques in



- supratentorial tumours. *Annual Conference of the Neurological Society of India, Dec 2002, Cochin*
- 30) Ramesh VJ, Umamaheswara Rao GS. Role of nitrous oxide in the hypnotic component of general anaesthesia monitored by Bispectral index. *Annual Conference of the Indian Society of Anaesthesiology, Dec 2002, Coimbatore*
- 31) Ramesh VJ, Umamaheswara Rao GS. Burst suppression with different doses of thiopentone sodium under isoflurane anaesthesia. *Annual Conference of the Indian Society of Anaesthesiology, Dec 2002, Coimbatore*
- 32) Ramesh VJ, Umamaheswara Rao GS, Sastry KVR, Subbukrishna DK. Predictive factors of survival in a neurosurgical intensive care unit. Annual Conference of the Indian Society of Anaesthesiology, Dec 2002, Coimbatore (Awarded best paper in neuroanaesthesia at national level)**
- 33) Basavaraj KG, Venkatesh HK, Umamaheswara Rao GS. Demography and outcome of operated head injuries. *Annual Conference of the Indian Society of Anaesthesiology, Dec 2002, Coimbatore*
- 34) Basavaraj KG, Venkatesh HK, Umamaheswara Rao GS. Outcome of operated head injuries. *Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC), Jan 2003, Kolkata (Awarded best paper at national level)*
- 35) Devaragudi TS, Umamaheswara Rao GS. A comparison of CVP and peripheral venous pressure. *Annual Conference of the Indian Society of Critical Care Medicine, Feb 2003, Jaipur*
- 36) Pillai SV, Vivek U, Umamaheswara Rao GS. Cerebral blood flow velocity response to hypocapnia under intravenous and inhalational anaesthesia in patients with cerebral tumours. *Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care, Jan 2003, Calcutta*
- 37) Venkatesh HK, Umamaheswara Rao GS. Bronchoscopic findings in patients with failed tracheostomy decannulation/extubation. *Annual Conference of the Indian Society of Trauma Anaesthesia and Critical Care, Sept 2003, New Delhi*

- 38) Paul DB, Gudi TSD, Umamaheswara Rao GS. Correlation of bispectral index with Glasgow Coma Score in head injury. *Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care, Feb 2004, Bangalore*
- 39) Gelb AW, Craen RA, Mathew C, Dash HH, Reddy KRM, Umamaheswara Rao GS. Intraoperative hyperventilation does not improve the operating conditions during supratentorial tumour surgery. *Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care, Feb 2004, Bangalore*
- 40) Santhanam R, Kolluri S, Praharaj S.S, Pillai SV, Umamaheswara Rao. G.S. Subbukrishna D.K. Intensive Care Management Of Head Injury- Factors Influencing The Mortality – Presented at the *Annual Conference of the Neurological Society of India, Dec 2004,*
- 41) Reddy KRM, Selvi T, Shafia K, Umamaheswara Rao GS. A retrospective analysis of patients undergoing intracranial aneurysm surgery. *6<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care. Chandigarh 25-27<sup>th</sup> Feb 2005*
- 42) Umamaheswara Rao GS, Madhusudan R, Patil JP, Ali Z. EquiMac Concentrations of halothane and isoflurane do not produce similar BIS values during general anaesthesia. *6<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care. Chandigarh 25-27<sup>th</sup> Feb 2005*
- 43) Madhsudan Reddy KR, Umamaheswara Rao GS. Cardiovascular response to tracheal intubation with different combinations of lignocaine spray. *Annual Conference of the Indian Society of Anaesthesiology, Kolkata 27-30<sup>th</sup> Dec 2005*
- 44) Jaganath L. Umamaheswara Rao GS. Perioperative Management of Patients for Pituitary Surgery – A Retrospective Analysis - *7<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care. Mumbai, Feb 2005*
- 45) Kurian S, Umamaheswara Rao GS. Cerebral Blood Flow Velocity Changes after a Single Bolus Dose of Mannitol in Patients with Severe Traumatic Brain Injury” at the *22<sup>nd</sup> Annual Conference of Indian Society of Anaesthesiology, Karnataka State Branch, 3-4<sup>th</sup> Nov 2007*

- 46) Geetha, Ramesh VJ, Umamaheswara Rao GS, Thennarasu K. Evaluation of possum and p-possum scoring systems for predicting the mortality in elective neurosurgical patients. *22<sup>nd</sup> Annual Conference of Indian Society of Anaesthesiology, Karnataka State Branch, 3-4<sup>th</sup> Nov 2007*
- 47) Umamaheswara Rao, Cerebral Blood Flow Changes with Isoflurane and Sevoflurane at Equal Bispectral Index Values at "Net- ISNACC" *The first web-based meeting of the Indian Society of Neuroanaesthesiology and Critical Care, 15<sup>th</sup> Dec 2007*
- 48) Ramesh VJ, Jaganath A, Umamaheswara Rao GS. Differential Bispectral Index Values at Equi-MAC Concentrations of Halothane, Isoflurane and Sevoflurane. *9<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care. Hyderabad, Feb 8-10<sup>th</sup> 2008*
- 49) Jaganath A, Umamaheswara Rao GS, Radhakrishnan M. Profound EEG Suppression at Low Anaesthetic Concentration in a Patient with Brain Tumor and Concurrent Medical Therapy for Parkinsonism. *9<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care. Hyderabad, Feb 8-10<sup>th</sup> 2008*
- 50) Ramesh VJ, Umamaheswara Rao GS. Evaluation of possum and p-possum scoring systems for predicting the mortality in elective neurosurgical patients. *9<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care. Hyderabad, Feb 8-10<sup>th</sup> 2008*
- 51) Ramesh VJ, Umamaheswara Rao GS, Ali Z, Madhusudan R, Patil JP. Differential Bispectral Index Values at Equi-MAC Concentrations of Halothane, Isoflurane and Sevoflurane at the *9<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC) – Hyderabad, 8-10<sup>th</sup> Feb 2008*
- 52) Jaganath A, Umamaheswara Rao GS, Radhakrishnan M. Profound EEG Suppression at Low Anesthetic Concentration in a Patient on Medical Therapy for Parkinsonism Undergoing a Craniotomy at the *9<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC) – Hyderabad, 8-10<sup>th</sup> Feb 2008 (Won III prize in poster competition)*

- 53) Veena S, Madhusudan Reddy KR, Radhakrishnan M, Umamaheswara Rao GS. The effect of increasing inspired oxygen concentrations on middle cerebral artery blood flow velocity in traumatic brain injury . At the 9th Annual Conference of the Indian Society Neuroanaesthesiology and Critical Care (ISNACC) – Thiruvananthapuram, 29th Jan – 1st Feb 2009 (**Won II prize in poster competition**)
- 54) Radhakrishnan M, Umamaheswara Rao GS. Variations in blood pressure and plethysmographic waveforms during mannitol administration in patients undergoing craniotomy. Annual conference of the Indian Society of Neuroanaesthesiology and Critical Care. 29-31 Jan 2010 at Kolkata.
- 55) Sriganesh K, Madhusudan Reddy KR, Umamaheswara Rao GS. A Comparative study of dexmedetomidine and propofol as sole sedative agents for cerebral angiography in aneurysmal subarachnoid hemorrhage. *Annual Confrence of the Research Society of Anaesthesiology and Critical care, Bangalore, Oct 2010*
- 56) Anirudh TJ, Indira B, Chandramouli BA, Sampath S, Veena S, Umamaheswara Rao GS. A randomized controlled trial of equi-osmolar 3% saline and 20% mannitol in the treatment of post-traumatic brain oedema. *9<sup>th</sup> Congress of Asian Society of Neuroanaesthesiology and Critical Care. Feb 25-27, 2011, New Delhi (Received best paper award)*
- 57) Christina G, Vivek U, Sen S, Shruti R, Venkatesh HK, Sriganesh K, Umamaheshwara Rao GS. Comparison of intravenous and inhalation anaesthetic techniques on the outcome in patients operated for traumatic brain injury. *9<sup>th</sup> Asian Congress of Neuroanaesthesiology and Critical Care. Feb 2011, New Delhi*
- 58) Raghavendra BS, Ramesh VJ, Radhakrishnan M, Umamaheswara Rao G.S. Bispectral Index in patients with psychiatric diseases. *NIMHANS – Royal College of Psychiatry Joint Conference. March 2010. Held at NIMHANS. (Awarded second prize)*
- 59) Bansal S, Ramesh Vj, Umamaheswara Rao GS. Requirement of propofol for induction of anaesthesia in patientst with intracranial tumors – a randomized controlled study. *9<sup>th</sup> Congress of Asian Society of Neuroanaesthesiology and Critical Care. Feb 25-27, 2011, New Delhi (Received best paper award)*
- 60) Smitha V, **Umamaheswra Rao GS**, Sriganesh K. Perioperative complications in patients with congenital cyanotic heart disease undergoing surgery for brain abscess - at the 9th SAARC – AA Conference 25-27th Aug Bangalore

- 61) Rohini G, Sriganesh K, Ramesh VJ, **Umamaheswara Rao GS**. Evaluation of the incidence and factors for oxygen desaturation in patients with psychiatric disorders during modified electroconvulsive therapy - at the 9th SAARC – AA Conference 25-27th Aug Bangalore 2011
- 62) Perioperative management of patients with acromegaly - A retrospective analysis - at the 9th SAARC – AA Conference 25-27th Aug Bangalore 2011
- 63) Sriganesh K, Archana Netto, Kulkarni GB, Taly AB, **Umamaheswara Rao GS**. Seasonal variation in the clinical recovery of mechanically ventilated patients with Guillain Barre Syndrome – Annual Conference of the Research Society of Anaesthesiology Clinical Pharmacology at Bangalore June 2011
- 64) Veena Kumari HB, Nagarathna S, Ravi Kumar R, Dwarakanath S, **Uma Maheshwara Rao**. Post-Neurosurgical Methicillin Resistant Staphylococcus aureus (MRSA) meningitis, from a tertiary NeuroCare Centre. International Symposium on Antimicrobial Agents and Resistance (ISAAR), Kuala Lumpur, Malaysia, 13-15, March 20
- 65) Bansal S, Ramesh, VJ, **Umamaheswara Rao GS**. Propofol requirement for induction in patients with supratentorial tumors. A TCI-based study. Bangalore city Indian Society of Anaesthesiologists Meeting. 25<sup>th</sup> Aug 2012
- 66) Sriganesh K, Rohini G, Bansal S, **Umamaheswara Rao GS**. Incidence and risk factors for oxygen desaturation during electroconvulsive therapy. Bangalore city Indian Society of Anaesthesiologists Meeting. 25<sup>th</sup> Aug 2012
- 67) **Umamaheswara Rao GS**, Bharath S, Radhakrishnan M. “Incidence and impact of cardiac dysfunction in isolated traumatic brain injury patients requiring surgical intervention” - Presented at the **International Anesthesia Research Society held at Washington USA** on May 6-9<sup>th</sup> 2017
- 68) Bansal S, Das BP, Sharma M, **Umamaheswara Rao G S**. Prognostic value of tissue oxygen saturation monitoring and its correlation with regional cerebral oxygen saturation in Neurological patients with Sepsis: A single-centric, prospective, observational, cohort study. Presented at the **Annual Conference of the Indian Society of Anaesthesiology**; 26-29<sup>th</sup> Nov 2017 at Kolkata

**This paper won the best paper Award in the Neuroanaesthesia Category in the Conference**

- 69) Manjunatha L, Radhakrishnan M, **Umamaheswara Rao GS**. Does manipulating blood pressure and cardiac output cause associated parallel changes in cerebral blood flow in patients with traumatic brain injury. Presented at the 19th Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care 2018, Mumbai. 18-21st Jan 2018

## INVITED LECTURES DELIVERED AT INTERNATIONAL / NATIONAL CONFERENCES / SYMPOSIA

### A. Presentations/Posters

#### i) International Conferences

1. **Effect of Anaesthetics on Glioma Cells in Vitro and in Vivo . Symposium at Maastricht University on 28<sup>th</sup> Nov 2023**
2. **Critical Care and Outcome in Mechanically-ventilated patients of Guillain-Barré syndrome.** Scientific meeting at Brunei June 21 2022
3. Critical care and outcome in mechanically ventilated patients of Guillain Barre Syndrome – NIMHANS data – presented at the **Second Workshop NIMHANS-MHeNs-CAPHRI held at Maastricht The Netherlands on 26-27th February 2018**
4. Osmotherapy in Neurological Diseases : Mannitol or Hypertonic Saline. Annual Conference of British Association of Indian Anaesthetists. Milton-Keynes (England); Sept 22-23<sup>rd</sup> 2017
5. Critical Care and Outcome in mechanically-ventilated patients of Guillain Barre Syndrome. Annual Scientific Meeting of the WTCGHR, **Liverpool**, UK. On 17<sup>th</sup> Sept 2014
6. The need to look beyond ICP and CPP as markers of outcome of Traumatic brain injury. Indo-US Translational Neuroscience symposium. Biomarker discovery and validation. **Baltimore** USA 25-26th Feb 2015.
7. Cardia Dysfunction in Subarachnoid Haemorrhage and its Management. 3<sup>rd</sup> Asian Society for Neuroanaesthesia & Critical Care (ASNACC) Con. Bali, Indonesia. 22<sup>nd</sup> & 23<sup>rd</sup> February 2013
8. Esmeron Asian Experts Meet 10-12 May 2007, **Hanoi**, Vietnam – Participated in a group discussion on neuromuscular blocking agents.
9. World Congress of Anaesthesiology, **Paris**, France, 17-23 April 2004 - Presented a guest lecture on “Pharmacological treatment of hypoxia resulting from Acute Respiratory Distress Syndrome.”
10. 2<sup>nd</sup> Omani International Conference of Anaesthesia and Intensive Care, **Muscat**, Oman 27-30<sup>th</sup> Oct 2002 – Presented a guest lecture on “Controversies in the intensive care management of neurosurgical patients”.
11. World Congress of Anaesthesiologists, **Montreal**, Canada, June 2000  
Participated as a guest faculty in the case discussion in neurotrauma session

Presented a paper on “Changes in cerebral blood flow velocity under halothane anaesthesia – A comparison of the normal and abnormal cerebral hemispheres.”

12. European Congress of Anaesthesiology, **London**, June 1996 – Presented two papers.

Inhibition of platelet aggregation by inhaled nitric oxide in ARDS Patients

Factors influencing cardiorespiratory effects of almitrine and inhaled nitric oxide in 39 patients with ARDS.

13. Journées des Enseignements Post-Universitaires (JEPU) – **Paris**, Jan 1996

14. Asian and Australasian Congress of Anaesthesiology, **Bangkok**, Nov 1994 - Presented a paper on “Outcome in Critically-ill Guillan Barre Syndrome Requiring Mechanical Ventilation

## ii) National Conferences

1. Do anaesthetics affect the progression of cerebral malignancies? Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care at Hyderabad on 20-22 Jan 2023
2. Challenges of Weaning in Patients with Neuromuscular Disorders. 2nd NCSI Conference. 14-15 Aug 2021 (Online Conference)
3. Neural Inertia and Anaesthesia - Annual Conference of the Indian Society of Neuroanaesthesia and Critical Care (Virtual conference) 24-26 Jan 2021
4. Translational research in Neurocritical care - 3rd Annual Conference of Society of Neurocritical Care (SNCC) – Virtual on 27th - 29th November, 2020
5. Panel Discussion on Ethical and legal issues in Neuro ICU – 1<sup>st</sup> Neurocritical Care Society of India Conference (Virtual) 2-4<sup>th</sup> October 2020
6. The Patients Who Taught Me Some Lessons - A few stories from my Neuroanaesthesia and Neurocritical Care journey – Virtual Lecture from NIMAHNS on Teachers Day 5th Sept 2020
7. Research & scientific paper writing: How to encourage good clinical research. Annual Conference of the Indian Society of Neuroanaesthesia and Critical Care Feb 2019

8. What is fascinating about Neurosciences? A few stories from my journey. Oration at AIIMS Neuroanaesthesia Update Sept 2019.
9. Neuroanaesthesiologist as a Neurointensivist – Is it advantageous? .Annual Conference of the Indian Society of Neuroanaesthesia and Critical Care 30th Jan -2nd Feb 2020
10. Prognostication in Acute brain injury: How precise are we? Panel discussion .Annual Conference of the Indian Society of Neuroanaesthesia and Critical Care 30th Jan -2nd Feb 2020
11. “Intensive care management of Traumatic Brain Injury.” Presented at the Annual Meeting of Karnataka Neuroscience Academy held at Hubli on 26-27th January 2018
12. Newer modes of treatment of raised ICP. AP State Conference of Indian Society of Anaesthetists. Kurnool, 22<sup>nd</sup> Sept 2016
13. Challenges for anaesthesiologists in the management of Traumatic Brain Injury. South Zone Conference of the Indian Society of Anaesthetists. Belgaum 20<sup>th</sup> August 2016.
14. Challenges in paediatric neurocritical care. ISNACC Annual Conference 2016. 5<sup>th</sup> – 7<sup>th</sup> Feb 2016
15. Neuromuscular diseases and anaesthesia. Annual conference of the Indian College of Anaesthetists. 12<sup>th</sup> Nov 2015, Chennai
16. Anaesthetic management of a patient with epilepsy. Annual conference of the Indian College of Anaesthetists. 12<sup>th</sup> Nov 2015, Chennai
17. “Respiratory care for neuroclinicians.” Neurological Society of India. Coimbatore, 11th Dec 2014.
18. Moderator, Panel Discussion on “Management of Cerebral Ischemia.” Neurovascon, Bangalore, 5th Sept 2015.
19. “Neurological Monitoring.” CME in Fortis Medical Centre. Bangalore 29<sup>th</sup> Aug 2015
20. “Strategies for Preconditioning and their feasibility.” Annual Conference of the Indian Society of Neuroanaesthesia and Critical Care 30th Jan 2015
21. “Organisation of the Neurocritical Care Workshop.” 5th March 2015 as a part of the Indian Society of Critical Care Medicine Annual Conference. Bangalore 4-9th 2015
22. “Anaesthetics and autonomic function.” The TS. Srinivasan Knowledge Conclave 2015 on Autonomic Dysfunction. 12-13<sup>th</sup> Feb 2015
23. “Translational Research in Anaesthesia.” Benares Hindu University. Varanasi, 15th June 2015
24. “Hypothermia in the ICU – How to cool and when to cool.” CME Programme organised by Medanta Medicity, New Delhi, 26<sup>th</sup> April 2014
25. “A practical approach to mechanical ventilation in Neurosurgical patients. “At the Symposium on Neuroanaesthesiology and Neurocritical Care, held at Fortis Hospital, Gurgaon, New Delhi on 28<sup>th</sup> Jan 2015
26. “Research in Anaesthesia” at Abbott Asia Anaesthesia Summit 2014 at Mumbai on 19-20<sup>th</sup> April 2014
27. “The lung and the injured Brain” SCTIMST Guest Lecture. Thiruvananthapuram. 06/07/2013
28. “Osmotic therapy – How rational are we?” 29<sup>th</sup>Annual South Zone Conference of Anaesthesia -PONSZAC-2013. Pondicherry. 23/08/2013 to 25/08/2013
29. Head injury update: CPP target in Head injury. Karnataka State Indian Society of Anaesthesia (KISACON – 2013). Bangalore. 13/09/2013



30. Critical care in subarachnoid haemorrhage. Indian Society of Neuroradiology Conference. Bangalore (NIMHANS) 27/09/2013
31. How close are we to the ideal neuroanaesthetic agent? AIIMS Neuroanaesthesia Symposium. New Delhi. 20/10/2013
32. Futuristic trends in neuroanaesthesia. Kerala State Indian Society of Anaesthesia Conference (KISACON – 2013). Perinthalmanna, Kerala. 25/10/2013 to 27/10/2013
33. Role of anaesthesiologist in management of head injury. Tamil Nadu Indian Society of Anaesthesia Conference. Tiruchirapalli. 16/11/2013
34. Translational research and evidence based practice in Neuroanaesthesia. Indian Society of Neuroanaesthesia and Critical Care (ISNACC-2014). Jaipur, 31/01/2014 to 02/02/2014
35. Optimizing cerebral oxygenation in traumatic brain injury. CME Program in Critical Care. Kerala Inst of Medical Sciences (KIMS), Trivandrum. May 17<sup>th</sup> 2012
36. Monitoring in the Neuro ICU. CME Program (NEUROCRITICON 2012). Ernakulam, Kerala. 3<sup>rd</sup> and 4<sup>th</sup> November 2012
37. Newer concepts in the management of Raised Intracranial Pressure. Balaji Anesthesia Postgraduate Update (BAPU). Sri Venkateswara Inst of Medical Sciences, Tirupati. 1-2, Sept 2012
38. Phaneendranath Thota Memorial Oration: Indian Society of Anaesthesiology (ISAAPCON 2012) Warangal, Andhra Pradesh, 13<sup>th</sup> October 2012. Emergency & Intensive Care Management Following Traumatic Brain Injury. 41<sup>st</sup> Annual National Conference of Indian Association of Physical Medicine & Rehabilitation (IAPMRCON 2013) NIMHANS, Bangalore. 31<sup>st</sup> January to 3<sup>rd</sup> February 2013
39. Monitoring Depth of Anaesthesia – Bispectral Index. CME programme in Anaesthesia. Sri Sathya Sai Institute of Higher Medical Sciences, Bangalore. 30<sup>th</sup> March 2013
40. “Respiratory dysfunction in traumatic brain injury and its management” SK Shah Memorial Oration at the Annual State Conference of the Indian Society of Anaesthesiology in Oct 2011
  
41. Management of trauma: role of anaesthesiologist – at the CME programme of the Kerala State Conference of the Indian Society of Anaesthesiology on 8th Oct 2011at Kollam
  
42. Monitors of Depth of Anaesthesia – How much to rely on them? Dr Francis Memorial Oration at the Kerala State Conference of the Indian Society of Anaesthesiology on 9th Oct 2011at Kollam
  
43. Myths and Realities of Monitoring the Depth of Anaesthesia. On 4<sup>th</sup> Sept 2011 at the BAPU – CME programme of the Sri Venkateswara Institute of Medical Sciences, Tirupati AP

44. Osmotherapy in Brain Injury – Mannitol or Hypertonic saline? At the Annual conference of the Neurotrauma Society of India. 20<sup>th</sup> Aug 2011, at Ranchi
45. Respiratory dysfunction in traumatic brain injury. At the Annual conference of the Neurotrauma Society of India. 20<sup>th</sup> Aug 2011, at Ranchi
46. A update on the perioperative management of Traumatic Brain injury at the Annual Conference of the Indian Society of Anaesthesiology – 25-29<sup>th</sup> Dec 2011 at Mumbai.
47. Anaesthetics for Intraoperative Brain Protection – Is there a dilemma? At the Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care, Bhopal 10-12<sup>th</sup> Feb 2012 .
48. Prof. Hariwir Singh Memorial Oration: Outcome of Neurological Patients –A Neuroanaesthesiology Perspective. 9<sup>th</sup> Congress of the Asian Society of Neuroanaesthesiology and Critical Care. New Delhi, 25-27<sup>th</sup> Feb 2011
49. Neurosurgical Patient with Difficult Airway. National Difficult Airway Conference. Mangalore , 19-21<sup>st</sup> Nov 2010
50. Salt– Water – Starch and the Brain. CME lecture at the Annual Conference of the India Society of Anaesthesiology, 25-29<sup>th</sup> Dec 2010
51. Workshop on Transcranial Doppler. At the Annual Conference of the India Society of Anaesthesiology, 25-29<sup>th</sup> Dec 2010
52. Monitoring in a patient with TBI. At the Pondicherry City Branch of Indian Society of Anaesthesiology meeting. 26<sup>th</sup> Nov 2010
53. Concepts of osmotherapy in brain injury. Lecture as a Visiting Professor, Department of Anaesthesiology, JIPMER, Pondicherry. 26<sup>th</sup> Nov 2010
54. End-of-of-the life issues in critical care units. JIPMER Scientific Society, JIPMER, Pondicherry 26<sup>th</sup> Nov 2010

55. Anaesthetic and critical care in aneurysmal subarachnoid haemorrhage. Lecture by Visiting Professor to the Department of Anaesthesiology, JIPMER, Pondicherry 27<sup>th</sup> Nov 2010
56. Anaesthesia for interventional neuroradiology. Lecture as a Visiting Professor, Department of Anaesthesiology, JIPMER, Pondicherry. 27<sup>th</sup> Nov 2010
57. Basic physiology of mechanical ventilation. Critical Care Workshop at Narayana Hrudayalaya. Aug 2010
58. Newer Ventilatory Modes. Karnataka State Branch of Indian Society of Anaesthesiology. Kolar, Aug 27, 2010
59. What is new in the management of traumatic brain injury? SK Shah Memorial Oration. Western India Indian Society of Anaesthesiology Conference (WISACON) – Navsari (Gujarath) 2-3<sup>rd</sup> Oct 2010
60. Prevention of ventilator-Associated Pneumonia. India Indian Society of Anaesthesiology Conference (WISACON) – Navsari (Gujarath) 2-3<sup>rd</sup> Oct 2010
61. Recent advances in the monitoring of the Neurosurgical patients, CME Program, AP State Conference of Indian Society of Anaesthesiology, Nellore, 17<sup>th</sup> September 2010.
62. Depth of Anaesthesia – myths and reality, Conference of Indian Society of Anaesthesiologists, Puducherry State Branch, 12<sup>th</sup> September 2010
63. Brain death certification and organ donation, CME Programme (BAPU-2010), Sri Venkateswara Institute of Medical Sciences, Tirupati, 4<sup>th</sup> & 5<sup>th</sup> September 2010.
64. Preventing ventilator associated pneumonia, UP NEUROCON-2010, Fortis Hospital, Nodia, 17<sup>th</sup> April 2010.
65. Osmotherapy in patients with brain injury. Indian Society of Critical care Medicine (ISCCM)– City branch meeting. Bangalore. 31<sup>st</sup> March 2010.

66. ICP Monitoring does not Improve the Outcome of Traumatic Brain Injury. Pro-con Session at the Annual Conference of the Indian Society of Critical care Medicine (ISCCM) Hyderabad, Feb 2010
67. Transcranial Doppler in critical care. Lecture and demonstration in the Neurocritical care Workshop. Annual Conference of the Indian Society of Critical care Medicine (ISCCM) Hyderabad, Feb 2010
68. Intracranial pressure monitoring. Lecture and demonstration in the Neurocritical care Workshop. Annual Conference of the Indian Society of Critical care Medicine (ISCCM) Hyderabad, Feb 2010
69. Anaesthetic Management of Non-neurological Surgery in a Patient with Traumatic Brain Injury. Sri Ramachandra Medical College and Research Centre (RACE 2010). Jan 2010
70. TIVA in Neuroanaesthesia - With an Emphasis on Target-controlled Infusion ISNACC 2010, Kolkata, Jan 2010
71. Systemic Care in the Acute Management of a Patient with Stroke Sahyadri Neurocon Conference at Shimoga, on 16th Jan 2009
72. "Basic principles of Mechanical Ventilation", CME programme ISA Mysore City Branch, Mysore, 16<sup>th</sup> January 2010
73. "Anesthetic management of patients with raised intracranial pressure", National Conference of Indian Society of Anaesthesiology (ISACON 2009), Govt. General Hospital, Chennai, 26<sup>th</sup> to 29<sup>th</sup> December 2009
74. "Anaesthetic Considerations for Interventional Radiology", Karnataka Branch of Indian Society of Anaesthesiology (KISACON-2009) at Tumkur, 23<sup>rd</sup> October 2009
75. "Osmotherapy in patients with brain injury", CME Programme at Research Society of Anaesthesiology Annual Conference, Armed Forces Medical College, Delhi, 9<sup>th</sup> to 11<sup>th</sup> October 2009
76. "Anaesthesia Management of Cerebral Aneurysms", CME Programme (BAPU-2009) at SVIMS Tirupati, 5<sup>th</sup> September 2009
77. Management of ARDS caused by H1N1 infection, Lecture organized for the medical specialists by Govt of Karnataka in the context of H1N1 epidemic, 3<sup>rd</sup> September 2009
78. "Inhalational anaesthetics in Neuroanaesthesia", CME programme on inhalational anaesthesia at Chennai, 22<sup>nd</sup> Aug 2009
79. "Role of mechanical ventilation in Neuro-ICU", AP-NEURO CON 2009 at Rajahmundry, A.P, 25<sup>th</sup> and 26<sup>th</sup> July 2009
80. "Sevoflurane in Neuroanaesthesia". VIMA, CME programme on inhalational anaesthesia at Bangalore, 13<sup>th</sup> June 2009

81. Critical Care Issues in Neurosurgical Patients, CME Programme, Central India Institute of Neurology, Nagpur, 5<sup>th</sup> April 2009
82. Neuroprotection standard and newer methods, CME Programme, Central India Institute of Neurology, Nagpur, 5<sup>th</sup> April 2009
83. Monitoring the depth of anaesthesia. CME Programme of Sri Ramachandra Medical College and Research Centre (RACE 2009). Chennai, Jan 17, 2009
84. Concepts of osmotherapy in brain injury. At the 9<sup>th</sup> Annual Conference of the Indian Society Neuroanaesthesiology and Critical Care (ISNACC) – Thiruvananthapuram, 29<sup>th</sup> Jan – 1<sup>st</sup> Feb 2009
85. Anaesthesia for awake craniotomy. At the Annual Conference of the Indian Society of Anaesthesiology, Jodhpur, 26-29<sup>th</sup> Dec 2008
86. End of life issues in critical care. CME programme at the Armed Forces Medical College (AFMC), Pune Oct 18-19
87. Anaesthetic and Intensive care management of traumatic brain injury. Balaji Anaesthesia Postgraduate Update (BAPU) at Sri Venkateswara Institute of Medical Sciences, Tirupati. 6<sup>th</sup> Sept 2008
88. Intensive care management of traumatic brain injury. CME Program at the AIMS, Bellur July 2008-12-05
89. Physiology of Respiration Relevant to Mechanical Ventilation. CME Program at Sri Devaraj Urs Medical College. Aug 2008
90. Moderator for Panel discussion on “Traumatic Brain Injury” at the 9<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC) – Hyderabad, 8-10<sup>th</sup> Feb 2008
91. Cerebral Blood Flow – Relevance in Neuroanaesthesia. Guest lecture presented at the 9<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC) – Hyderabad, 8-10<sup>th</sup> Feb 2008
92. Cerebral Blood Flow and Anesthesia - CME Programme of Sri Ramachandra Medical College and Research Centre (RACE 2007). Chennai, Jan 26, 2008
93. Anaesthetic management in a patient with Traumatic Brain Injury. CME guest lecture at the Annual Conference of the Indian Society of Anaesthesiology, Visakhapatnam, 26-29<sup>th</sup> Dec 2007
94. Problem Oriented Case Discussion - at the Scientific Programme in connection with the World Anaesthesia Day celebrations of the Mumbai branch of Indian Society of Anaesthesiologists. 13-14<sup>th</sup> Oct 2007.
95. “Ask the Experts” session at the Scientific Programme in connection with the World Anaesthesia Day celebrations of the Mumbai branch of Indian Society of Anaesthesiologists. 13-14<sup>th</sup> Oct 2007.

96. Plenary lecture on “Recent Advances in Neuroanaesthesia and Neurocritical Care” at the Scientific Programme in connection with the World Anaesthesia Day celebrations of the Mumbai branch of Indian Society of Anaesthesiologists. 13-14<sup>th</sup> Oct 2007.
97. CME Lecture on “Monitoring the depth of anaesthesia” at the Scientific Programme in connection with the World Anaesthesia Day celebrations of the Mumbai branch of Indian Society of Anaesthesiologists. 13-14<sup>th</sup> Oct 2007.
98. Panel Discussion on “Noncardiac Surgery in a Patients with Ischemic Heart Disease. 40<sup>th</sup> Annual Conference of the Gujarat State Conference of the Indian Society of Anaesthesiologists. Rajkot, 6-7<sup>th</sup> October 2007
99. Anaesthetic and Intensive Care Management of Neurovascular Surgery. 40<sup>th</sup> Annual Conference of the Gujarat State Conference of the Indian Society of Anaesthesiologists. Rajkot, 6-7<sup>th</sup> October 2007
100. Intracranial pressure monitoring – ITACCS (India) conference at Coimbatore, Sept 8-10, 2007
101. Anaesthetic management of quadriplegic patients – 14<sup>th</sup> South Zone Conference of Indian Society of Anaesthesiology – Aug 2007 at Kodaikanal, Tamil Nadu.
102. Dr. B. Muralidhar Memorial Oration on “Recent advances in neurological critical care”, at the Annual conference of the Andhra Pradesh Neuroscientists Association, 20-21 July 2007 at Kurnool (A.P.)
103. Airway management in critical care – Ventcon 2007, Workshop of mechanical ventilation, Bangalore –10-12<sup>th</sup> July 2007
104. Anaesthesia for posterior fossa surgery - CME Programme of Sri Ramachandra Medical College and Research Centre (RACE 2007). Chennai, March 2-4, 2007
105. Medical futility to medical utility – the need of the hour ! Panel Discussion in the 8<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC), Delhi 9-11<sup>th</sup> Feb 2007
106. ICP Monitoring - 8<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC), Delhi 9-11<sup>th</sup> Feb 2007
- 107.** “Relax – NMB Agents are here!” Expert in the Panel discussion on Muscle Relaxants - Annual Conference of the Indian Society of Anaesthesiology, Mysore, 26-29<sup>th</sup> Dec 2006
108. Changing practices and future challenges in neuroanaesthesia – Annual Conference of the Indian Society of Anaesthesiology, Mysore, 26-29<sup>th</sup> Dec 2006
109. Cerebral perfusion pressure based management in traumatic brain injury. Annual Conference of Neurological Society of India. Madurai 20-22 Dec 2006

110. Monitoring the depth of anaesthesia – Kerala State Branch of Indian Society of Anaesthesiologists – Thiruvalla – 14-15<sup>th</sup> Oct 2006
111. Panel Discussion on “Infections in Intensive Care Units” – CME Programme of the Bangalore City Branch of Indian Society of Anaesthesiologists
112. Benefits and pitfalls of monitoring in traumatic brain injury. South Zone Conference of India Society of Anaesthesiology – Pondicherry – 27-29<sup>th</sup> August 2006
113. Workshop on Mechanical Ventilation – Vencon 2006 – 30<sup>th</sup> July 2006; Coimbatore
114. Moderator for Panel Discussion on Mechanical Ventilation. Common problems and solutions. ACME 2006 (Anaesthesia CME programme of the Bangalore Medical College), Bangalore 27-28 May 2006.
115. Transcranial Doppler in Intensive Care Unit. KMCH Neurocritical Care Conference. Coimbatore, 14<sup>th</sup> May 2006
116. Raised Intracranial Pressure. What not to do. KMCH Neurocritical Care Conference. Coimbatore, 14<sup>th</sup> May 2006
117. Intensive Care Management of a Patient with Head Injury. KLE Society Scientific Committee Meeting. JN Medical College Belgaum 14-15<sup>th</sup> May 2006
118. Raised Intracranial Pressure in an Emergency Patient. RACE 2006. CME Programme of Sri Ramachandra Medical College and Research Centre. Chennai, March 21-22, 2006
119. Transcranial Doppler in Intensive Care Unit. Criticon 2006. 12<sup>th</sup> Annual conference of the Indian Society of Critical Care Medicine. Chennai 7-10<sup>th</sup> Feb 2003
120. Anaesthetic Management in Pituitary Disease. 7<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC), Mumbai 29<sup>th</sup> Feb 2006
121. Panel Discussion on “Near-misses in Neuroanaesthesia”. 7<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC), Mumbai 28<sup>th</sup> Feb 2006
122. Muscle Relaxants and the central Nervous System. 7<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC), Mumbai 27<sup>th</sup> Feb 2006
123. Mechanical Ventilation in Neurological Patients. Guest lecture delivered at the Bangur Institute of Neurology, Kolkata, 28<sup>th</sup> Dec 2005
124. Muscle Relaxants in Neuroanaesthesia. Annual Conference of the Indian Society of Anaesthesiology, Kolkata 27-30<sup>th</sup> Dec 2005

125. Anaesthetic Management of a Paraplegic Patient. Annual Conference of the Indian Society of Anaesthesiology, Kolkata, 27-30<sup>th</sup> Dec 2005
126. Pathophysiology and Intensive Care Management in Head Injury. Annual conference of the Karnataka State Branch of Indian Society of Anaesthesiology, 22<sup>nd</sup> Oct 2005
127. Clinical Neuroprotection. APGAP (Anaesthesia Postgraduate Academic Programme) CME Programme organised by the Kasturba Medical College, Manipal, Sept 30<sup>th</sup> 2005
128. Intraoperative and postoperative issues in cerebral protection. In: Symposium on cerebral protection. Neurovas (Annual Conference of the Neurovascular Society of India. Bangalore 3-4 Sept 2005
129. Interaction of anaesthetics with injured brain. 14<sup>th</sup> Annual Conference of Neurotrauma Society of India; Kolkata 19-21 Aug 2005
130. Bispectral Index Monitoring. CME Programme conducted by the JN Medical College, Belgaum on 14-15 May 2005
131. Anaesthesia for Neuroendoscopy. 6<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care. Chandigarh 25-27<sup>th</sup> Feb 2005
132. Neuroprotection in Clinical Practice. Annual Conference of the Research Society of Anaesthesiology and Clinical Pharmacology. Mumbai Oct 15-17<sup>th</sup> 2004
133. Recent Trends in the Management of Raised Intracranial Pressure. Kerala State Branch of Indian Society of Anaesthesiology meeting. Cochin Oct 2004
134. Respiratory physiology relevant to mechanical ventilation. Workshop on mechanical ventilation – basics and beyond – Organised by KR Hospital, Bangalore 17-18 July 2004
135. Pharmacological treatment of hypoxia resulting from Acute Respiratory Distress Syndrome. 13<sup>th</sup> World Congress of Anaesthesiology (WCA 2004) Paris; 17-23 April 2004
136. Recent advances in mechanical ventilation. CME Programme at the Command Hospital, Air Force, Bangalore March 2004
137. Anaesthesia for Neurosurgical Operations in the Neonate. Annual Conference of Indian Society of Anaesthesiology. Bhubaneswar 25-30<sup>th</sup> Dec 2003
138. Bispectral Index and Auditory Evoked Potentials for Monitoring the Depth of Anaesthesia. Annual Conference of Indian Society of Anaesthesiology. Bhubaneswar 25-30<sup>th</sup> Dec 2003
139. Anaesthetic management of intracranial tumors. CME Programme at the Bowring and Lady Curzon Hospital, Bangalore, Nov 2003
140. Intensive care in head injuries. Guest Lecture at Armed Forces Medical College, Pune, 23, Sept 2003



141. Anaesthetic management of supratentorial tumors. Karnataka State Conference of Indian Society of Anaesthesiology. Bellary Aug 2003
142. Intracranial pressure monitoring – Indications, Technique and Interpretation. South Zone conference of Indian Society of Anaesthesiology. Kurnool Oct 2003
143. Anaesthetic management of patients with hemiplegia and paraplegia. Annual Conference of the Indian Society of Anaesthesiology Salem City Branch. July 2003
144. Anaesthetic management of posterior fossa surgery. JIPMER-National Board of Examination CME in Anaesthesiology. JIPMER, Pondicherry 8<sup>th</sup> March 2003
145. Cerebral protection through hypothermia. Indo-French symposium on cerebral protection in early life. February 2003, NIMHANS, Bangalore
146. Management of fluid and electrolyte balance and nutrition in critically-ill neurological patients. 4<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and critical care 10-12 Jan 2003. Calcutta
147. Moderated a panel discussion on “Hypoxic brain damage under anaesthesia” - Annual Conference of the Indian Society of Anaesthesiology. Coimbatore 26-30 Dec 2002
148. Intraoperative Complications in Neurosurgery. Annual Conference of the Indian Society of Anaesthesiology. Coimbatore 26-30 Dec 2002
149. Anaesthetic management of a head injured patient for extracranial surgery. CME Programme of the Mangalore City Branch of Indian Society of Anaesthesiology. 24<sup>th</sup> Nov 2002
150. Controversies in the intensive care management of neurosurgical patients. II Oman International Conference of Anaesthesiology and Critical Care. Muscat, Oman 29-31 Oct 2002
151. Cerebral Protection: Reality or Myth? – Dr. Surendran Memorial oration. Kerala State Conference of Indian Society of Anaesthesiology –October 2002
152. Intensive care management of head injuries – An evidence based approach. Karnataka State Conference of Indian Society of Anaesthesiology – September 2002
153. Pharmacological cerebral protection in Head Injuries – National Conference of Neurotrauma, Agra – August 2002
154. Newer Modes of Mechanical Ventilation – CME Programme at JSS Medical College, Mysore – July 2002
155. What is New in Neuroanaesthesia? – CME Programme at JN Medical College, Belgaum – May 2002

156. Principles of Neuroanaesthesia – CME Programme at JN Medical College, Belgaum – May 2002
157. Neurological Monitoring in Anaesthesia – RACE 2002 – CME Programme at Chennai – February 2002
158. Pathophysiology of Head Injuries – 3<sup>rd</sup> Annual Conference of The Indian Society of Neuroanaesthesiology and Critical Care – Mumbai – January 2002
159. Intensive Care management in Head Injuries – Annual Conference of Andhra Pradesh Chapter of Indian Society of Anaesthesiologists – Warangal 2001
160. Hypoxic brain damage during anaesthesia – South Zone Conference of Anesthesiology, Mysore October 2001
161. Cerebral Protection. III Annual Conference of Paediatric Critical Care, Madras, Sept 2001.
162. Workshop on ICP monitoring at the III Annual Conference of Paediatric Critical Care, Madras, Sept 2001.
163. Recent trends in Neurological Intensive Care. Dr. Dayananda Rao Memorial oration at the Annual Meeting of the Andhra Pradesh Neurosciences Society. Aug 2001
164. Anaesthetic management and intensive care in head injuries. Anaesthesia Continuing Medical Education (ACME) 2001. Bangalore Medical College; July 13-15; 2001.
165. Controversies in neuroanaesthesia, Annual Conference of Indian Society of Anaesthesiologists, Nagpur, Dec 2000.
166. Management of cervical cord injuries and postoperative care. South Zone Conference of Anaesthesiology (MADISCON), Aug 2000.
167. Inhaled nitric oxide therapy in acute respiratory distress syndrome. June 2000, Maimonedes Medical Centre, New York
168. Case Discussion Session of the World Congress of Anaesthesiologists, June 2000, Montreal, Canada.
169. Cerebral protection in head injuries. Emergency Conference – EMCON 2000, May 2000, Bangalore
170. Intensive Care in Head Injuries. RACE 2000 - CME Programme of Sri Ramachandra Medical College and Research Institute, March 2000, Chennai.
171. Use and abuse of nitric oxide. Annual Conference of the Indian Society of Critical Care, Jan 2000, Hyderabad
172. Inhaled nitric oxide in ARDS. ICMR and DGAFMS sponsored Workshop on uses of nitric oxide in high altitude pulmonary oedema and acute respiratory distress syndrome. Dec 1999, AFMC, Pune

173. Anaesthesia and Emergency care for Interventional Neuroradiological procedures. Joint Conference of vascular and interventional radiology (JOCNVIR), Oct 1999, Bangalore
174. Intensive care in head injuries. Conference of the Indian Society of Neurosurgical Anaesthesia and Critical Care, Aug 1999, New Delhi.
175. Recent advances relevant to the neuroanaesthetic care of a patient with trauma. ITACCS conference, Tirupati, Aug 1999.
176. Modes of mechanical ventilation. CME programme of the Bangalore city branch of Indian Society of Anaesthetists. Bangalore. July 1999.
177. Management of an unconscious patient. Emergency Conference Hyderabad. May 1999
178. Complications of Mechanical Ventilation, Jan 1999, 5th National Congress of Critical Care, Calcutta
179. Some Recent Concepts in the Management of Acute Respiratory Distress Syndrome. Nov 1998, Karnataka State Conference of the Indian Society of Anaesthetists
180. Crisis management during neurosurgical procedures in sitting position. AP State Conference of Indian Society of Anaesthetists. Oct 1998
181. Intensive Care management of Severe Head Injuries. South Zone Conference of Anaesthesiology, JIPMER, Pondicherry August 1998.
182. Role of Nitric Oxide in Anaesthesia and Critical Care. South Zone Conference of Anaesthesiology, JIPMER, Pondicherry August 1998
183. Alternatives to conventional modes of therapy in patients with ARDS. CME programme at MS Ramaiah Medical College Bangalore July 1998
184. Intensive Care management of Head Injuries. Meeting of the Hyderabad Branch of Indian Society of Anaesthetists, April 1998
185. Modes of Mechanical Ventilation. Dr. Leela Memorial Lecture, Mysore Medical College, April 1998
186. Complications during Neuroanaesthesia and Their Management - 45th Annual Conference of Indian Society of Anaesthetists - New Delhi, Dec 1997.
187. Pulmonary Barotrauma during Mechanical Ventilation - Annual Conference of the Karnataka State Branch of Indian Society of Anaesthetists - Nov 1997.
188. Inhaled Nitric Oxide in ARDS - International Trauma Anaesthesia and Critical Care Society Conference, Bangalore, Oct 1997.

189. Endothelium-derived relaxing factor - Physiology, Pharmacology and Clinical Applications. CME Programme at Kasturba Medical College, Manipal, Oct 1997.
190. Management of Raised Intracranial Pressure in a patient with Head Injury. CME programme at MS Ramaiah Medical College Bangalore July 1995
191. Interactive Session in Neuroanaesthesia - 12th South Zone Conference of Indian Society of Anaesthetists, Guntur 9-12 February 1995.
192. Neurological Dysfunction in the Perioperative Period - 42nd Annual Conference of Indian Society of Anaesthetists, Jaipur Dec 1994
193. Complications of Subarachnoid Haemorrhage - 2nd International Congress of Anaesthesiology & Intensive Care - Trivandrum October 1994
194. Respiratory Dysfunction in Neurological Disease - Neurological Society of India Quarterly Meet at Trichur October 1994
195. Spinal Cord Injuries & Anaesthetic Implications - Trivandrum City ISA Meeting, March 1994
196. Principles of Management of Fluid & Electrolyte Balance in a Neurosurgical Patient - Trivandrum City ISA Meeting, March 1994
197. Changing Concepts and Recent Advances in Neuroanaesthesia - 9th Annual Conference of Kerala State Branch of Indian Society of Anaesthetists, October 1993.
198. Management of Fluid and Electrolyte Balance in Neurosurgical Patients - CME Programme of the 40th Annual Conference of the Indian Society of Anaesthetists, Darbhanga, 1991.
199. Mechanisms of Inhalational Anaesthetic Action - CME Programme of the 39th Annual Conference of the Indian Society of Anaesthetists, Madras, 1990.
200. Brain Death - in Symposium on Neuroanaesthesia, 38th Annual Conference of the Indian Society of Anaesthetists, Manipal, December, 1989.
201. Monitoring in Neuroanaesthesia - CME Programme of the 38th Annual Conference of the Indian Society of Anaesthetists, Manipal, December, 1989.
202. Recent Advances in Cardiopulmonary cerebral Resuscitation - in Symposium on Current Trends in Anaesthesiology, 9th South Zone conference of the Indian Society of Anaesthetists, April, 1989.
203. Cerebral protection in Neuroanaesthesia. - CME Programme of the South Zone Conference of the Indian Society of Anaesthetists, Pondicherry, May, 1988.
204. Management of head Injuries. - CME Programme of the 7th South Zone Conference of the Indian Society of Anaesthetists, BANGALORE, June, 1987.

**Examinership:**

Examiner for Postgraduate Degree and Diploma in Anaesthesiology

Examiner for Postdoctoral Certificate Course in Neuroanaesthesia at SGPGI, Lucknow

Examiner for D.M. (Neuroanaesthesia) at All India Institute of Medical Sciences, New Delhi

Examiner for D.M. (Neuroanaesthesia) at Sri Chitra Tirunal Institute for Medical Sciences Technology, Thiruvananthapuram

**Conferences Organised**

- Co-ordinator: Scientific Committee of the Annual Conference of Indian Society of Anaesthesiology, Bangalore 1993
- Chairman: Scientific Committee of the Indian Chapter of the International Trauma Anaesthesia and Critical Care Society (ITACCS), Bangalore September 1997
- Chairman: Scientific Committee of the Scientific Programme of the Annual Conference of Research Society of Anaesthesiology – Clinical Pharmacology (RSACP), Bangalore 2000
- Organising Secretary and Chairman Scientific Committee: 5<sup>th</sup> Annual Conference of Indian Society of Neuro-anaesthesiology and Critical Care (ISNACC), Feb 2004
- Chairman: Annual State Conference of the Indian Society of Anaesthesiology, Bangalore
- DST-Royal Society India-UK Scientific Seminar 2015. Translational neuroscience in altered states of consciousness: linking neuroimaging of brain injury and

- anaesthesia for improved diagnosis and prognosis. March 7-9, 2015 NIMHANS, Bangalore, India
- Seminar on medical imaging and neuroscience diagnostic; analysis and treatment. NIMHANS Date: 4 December 2014
  - Indo-Japan Scientific Programme in Clinical Neurosciences. 7th Jan 2015, Venue: Neurocentre Faculty Block Seminar Hall
  - NIMHANS-MAASTRICHT Joint Workshop on Neuropsychiatry. Convention Centre NIMHANS. 12-14th March 2015
  - NIMHANS-MAASTRICHT Joint Workshop on Neuropsychiatry. Maastricht. Feb 2017

### **Other Scientific Activities**

1. Member of the Organising Committee of the First National Conference on Neuroanaesthesia May 1983
2. Member of the Organising Committee of the South Zone Conference of Indian Society of Anaesthetists. June 1987
3. Co-ordinator of the Scientific Committee & the Editor of the Refresher Course Lectures of the 42 Annual Conference of Indian Society of Anaesthetists, Bangalore, Dec 1993
4. Member of the Organising Committee of the Annual Conference of the Neurological Society of India, Bangalore Dec 1994.
5. Co-ordinator of the Scientific Committee & the Editor of the Proceedings of the International Trauma Anaesthesia and Critical Care Society, Bangalore, Oct 1997
6. Member, Editorial Board of Indian Journal of Anaesthesia.
7. Member, Editorial Board, Journal of Anaesthesiology – Clinical Pharmacology

8. Associated Editor: Neurology India (Official journal of Neurological Society of India)
9. Member, Scientific Committee, and Convenor, Workshop on Neuro-Critical Care, Annual Conference of the Indian Society of Critical Care Medicine held in Bangalore in Jan 2001
10. Chairman of the Scientific Committee & the Editor of the Proceedings of the Annual Conference of the Research Society of Anaesthesiology and Clinical Pharmacology, Bangalore, Sept 2000. Published as a supplement of J Anaesthesiology Clinical Pharmacology
11. Convenor, Workshop on Neurocritical Care, NIMHANS, Bangalore, Jan 7<sup>th</sup> 2001.
12. Advisor, Scientific programme and Editor of the Proceedings, Anaesthesia Continuing Medical Education (ACME) 2001. Bangalore Medical College; July 13-15; 2001.
13. Organising Secretary – 5<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care – 6-8<sup>th</sup> Feb 2004, NIMHANS, Bangalore.
14. Editor: Guest lectures of the 5<sup>th</sup> Annual Conference of Indian Society of Neuroanaesthesiology and Critical Care – 6-8<sup>th</sup> Feb 2004, NIMHANS, Bangalore
15. Member, Executive Committee, Editorial Board, Journal of Anaesthesiology – Clinical Pharmacology
16. Member, Course Committee, M. Phil. (Neurosciences), National Institute of Mental Health and Neurosciences, Bangalore India
17. Examiner, M. Phil. (Neurosciences), National Institute of Mental Health and Neurosciences, Bangalore India
18. Advisor, Executive Committee, National Neurosciences Conference, Sept 2004

19. Member, Scientific Committee, Annual Conference of the Indian Academy of Neurology, Bangalore, 2006

20. Advisor, Scientific programme, Anaesthesia Continuing Medical Education (ACME) 2006. Bangalore Medical College; May 27-28; 2006.

**21. Peer Reviewer for –**

**Peer Reviewer for –**

**1. International Journals:**

- a. Anesthesia and Analgesia
- b. European Journal of Anaesthesiology
- c. Respiratory Care
- d. Journal of Neurosurgical Anesthesia
- e. BMC (Anaesthesiology)
- f. Brit Med J
- g. Critical Care
- h. Journal of Neurosciences in Rural Practice

**2. Indian Journals:**

- a. Indian Journal of Anaesthesia
- b. Neurology India
- c. Journal of Anaesthesiology Clinical Pharmacology,
- d. Journal of Neuroanaesthesiology and Critical Care

22. Chairperson: Workshop on Neurotrauma at the National conference of Indian Society of Paediatric Critical Care 10<sup>th</sup> Nov 2006, Bangalore

23. Chairman. Annual Conference of Indian Society of Anaesthesiology, Karnataka State Branch. Nov 7-8, 2007, Bangalore



24. President, Indian Society of Neuroanaesthesiology and Critical care 2007
25. Member, Advisory council, Society for Biomedical Technology (SBMT), an organisation of Ministry of Defence for promotion of development of medical equipment.
26. Member, Programme Management Council, Society for Biomedical Technology (SBMT), an organisation of Ministry of Defence for promotion of development of medical equipment.
27. Advisor. Annual Conference of the Neurological Society of India at NIMHANS Bangalore Dec 2011
- 28. Member, Expert Advisory Group – Biomedical Technology – Department of Science and Technology**

#### **Some Important Funded Projects**

- 1. Development of an indigenous Critical Care Ventilator in collaboration with the Defense Ministry, which is already commercialized and is being used in many hospitals in the country. The equipment has majority of the features comparable to those of imported equipment at a lower cost.**
2. Principal co-Investigator in the project: Development and validation of a prototype of Intracranial Pressure (ICP) sensor and monitor: Funded by Society for Biomedical Technology, Ministry of Defense
3. Principal Co-Investigator in the Project: Role of circulating cortisol levels on hemodynamic instability and outcome after acute traumatic brain injury: NIMHANS funded project
4. ***Effect of Indian classical music on depth of anesthesia, cortisol levels & perceived anxiety in patients undergoing spinal surgery: A double blind randomized controlled study*** - Rs. 2,13,000 Funded by NIMHANS

5. Blood pressure – Plethysmographic time lag as a model to quantify systemic vascular resistance: Design and validation - Rs. 24,70,000 Funded by Life Sciences Research Board (Ministry of Defence, Govt of India)
6. **Evaluation of the effects of 1% propofol on the cortical and sub-cortical areas of the brain using functional magnetic resonance imaging technique” – Rs. 2,00,000 - Funded by NIMHANS**
7. **Confirmation and molecular characterization of hospital- and community-acquired Staphylococcus aureus (HA and CA - MRSA) by Polymerase Chain Reaction - Rs. 22,52,400 – Funded by ICMR**

### Conferences Organised

1. Workshop on Neuro-Critical Care, Annual Conference of the Indian Society of Critical Care Medicine held in Bangalore in Jan 2001
2. **5<sup>th</sup> Annual Conference of the Indian Society of Neuroanaesthesiology and Critical care 6-8<sup>th</sup> Feb 2004**
3. *Workshop on Neurotrauma at the National conference of Indian Society of Paediatric Critical Care on 10<sup>th</sup> Nov 2006, Bangalore*
4. *One day CME programme in Anesthesia and Critical Care as a part of the Indian Society of Anaesthesiology, Bangalore City Branch activity in Sept 2006*
5. *Annual Conference of the Karnataka State Branch of Indian Society of Anaesthesiology (KISACON 2007) on 3-4<sup>th</sup> Nov 2007*
6. “Net- ISNACC” The first web-based meeting of the Indian Society of Neuroanaesthesiology and Critical Care, 15<sup>th</sup> Dec 2007

### Administrative Responsibilities Held

1. Head of the Department of Neuroanaesthesia at NIMHANS, Bangalore
2. Chairman, Library Committee
3. Member of the Academic Council of NIMHANS, Bangalore
4. Member of the Board of Studies of NIMHANS, Bangalore
5. Member of the Ph.D. Committee of Clinical Neurosciences, NIMHANS, Bangalore
6. Chairman, Ph.D. Committee (Clinical Neurosciences), NIMHANS Bangalore

7. Course Director – World Health Organisation (WHO) in-country fellowship program in Neuroanaesthesia 2003, 2005 and 2007
8. Expert Committee Member for selection of faculty at NIMHANS and other National Institutes in the country
- 9. Dean (Clinical Neurosciences), NIMHANS, Bangalore**
10. Expert Reviewer for Rajiv Gandhi University of Health Sciences for starting new fellowships in Emergency Medicine and Critical Care
11. Expert Committee member of Committee for starting Ph.D. (Biomedical Engineering) under Visweswaraiah Technological University and Rajiv Gandhi University of Health Sciences
- 12. Chairman for developing Antibiotic Policy for the hospital**
- 13. Member, Hospital Management Committee**
- 14. Member, Hospital Infection Surveillance System**
15. Chairman of various selection committees – Faculty, Nurses, Technicians
16. Acted as Officer-in-Charge of construction of the RM Varma Subspeciality block in Neurosciences
17. In charge of Centre for Advanced Research (CAR) of Indian Council of Medical Research (ICMR)
18. Chairman – Departmental Ethics Committee

**Activities carried out as the Head of the Department of Neuroanaesthesia since October 1996:**

1. Commissioning of 4 state-of-the-art operation theatres in Neurocentre
2. Commissioning of Neuromedical and Neurosurgical ICU's in Neurocentre
3. Planning and commissioning of operation theatres in Emergency block of NIMHANS
4. Commissioning of Emergency ICU in the Emergency block of NIMHANS
5. Starting Postdoctoral Fellowship in Neuroanaesthesia 1999
6. Starting B.Sc. (Anaesthesia Technology) Course 2010
7. Starting WHO in-country fellowship in Neuroanaesthesia
8. Starting WHO in-country fellowship in Neuro-critical Care
9. Training ESI medical officers in Intensive Care

10. Submission of proposal for starting Intensive Care Units Nationwide in Government Hospitals – to the Ministry of Health and Family Welfare, Govt of India
11. Member, Purchase committees
12. Chairman of Ph.D. Committee, Chairman Board of Studies (Clinical Neurosciences) and Member-Secretary (Human Ethics Committee)

#### **Other miscellaneous responsibilities carried out**

- a. As a co-ordinator for international collaborations of NIMHANS worked in close of liaison with **University of Liverpool, Johns Hopkins, Maastricht University, Deakin University. Started dual Ph.D. programmes between NIMHANS and foreign universities**
- b. As Dean (Clinical Neurosciences) participated in several student-related activities such as conduct of the entrance examination, designing and implementation of Ph.D., Course Curriculum, selection committees for selection of students for various courses and faculty for various departments, and other day-to-day administration of the Dean's Office
- c. As member-Secretary of the NIMHANS Ethic Committee, coordinated the Ethics Committees meeting, which involved going through the research proposals, preparation of the agenda and organization of the Ethics Committee meetings, drafting the minutes and communication of comments to the investigators and final approvals. The activity also involved organization of the subcommittee meetings for approval of the Student Theses in the division of Neurosciences
- d. As Chairman of the Board of Studies, organized and conducted the proceedings of meetings of the BoS (Clinical Neurosciences)
- e. As Chairman of the Ph.D. Committee (Clinical Neurosciences), organized and conducted the proceedings of the meetings of the Ph.D. Committee (Clinical Neurosciences)
- f. Involved in drafting the proposals for the Subspecialty block for Neurosciences along with Prof Taly
- g. As the chairman of the NIMHANS North Campus Development Committee, initiated action to collect the information for planning the activities in the proposed Northern campus**
- h. Collected the information for GOI Centres of Excellence in Mental Health meeting held at NIMHANS and participated in the meeting
- i. As a member of the Purchase Committee, assisted in the purchase of several equipment and services for the institute
- j. Participated as the Chief Guest in several seminars and workshops both within and outside the institute
- k. Liaising with Society for Biomedical Technology (SBMT) to help indigenization of medical devices
- l. Represented the Director NIMAHNS in the Management Council Meeting of the Society for Biomedical Technology at DRDO New Delhi
- m. Coordinated the ICMR workshop on Biomedical Communication in March 2013

- n. **As an in-charge HOD of Neuroimaging and Interventional Radiology**, I took on the additional responsibility of managing Neuroradiology services up to Dec 2011
  - a. Got the SPECT Scan commissioned
  - b. Supervised and got the new DSA installed
  - c. Participated in the process of procuring a new 1.5 T MRI and new PACS system
  - d. Looked after the smooth day-to-day working of the department
- o. Assisting the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC) as Chairman, Scientific committee
- p. Assisting the Indian Society of Neuroanaesthesiology and Critical Care (ISNACC) as Member, Education Committee
- q. Nominated as the Section Editor (Original Articles), Journal of Neuroanaesthesiology and Critical Care