

CV of KVR Chary

1. Full Name: Kandala Venkata Ramana Chary

2. Date and Place of Birth: February 10, 1954; Bhongir, Telangana

3. Address: Director & Professor, Indian Institute of Science Education and Research Berhampur, Transit Campus, Government ITI Building, Berhampur, Engineer School Junction, National Highway 59, Berhampur, 760010, Ganjam District, Odisha

4a. Academic credentials (beginning with Bachelor's Degree):

Year	Degree	University	Division
1974	B.Sc.	Osmania University, Hyderabad	I
1976	M.Sc.	Osmania University, Hyderabad	I
1983	Ph.D.	Osmania University, Hyderabad	

4b. Professional Qualifications and positions held:

2017- till date	Indian Institute of Science Education and Research Berhampur	Director & Professor
2012 - 2019	Department of Chemical Sciences (DCS), Tata Institute of Fundamental Research (TIFR) & TIFR Center for Interdisciplinary Sciences, Hyderabad	Senior Professor (I)
2011 – 2017	DCS, TIFR	Senior Professor (I)
2008 – 2011	DCS, TIFR	Professor (H); Chairman, DCS; <i>Acting Dean, Natural Science Faculty (March 2009)</i>
2002 - 2008	DCS, TIFR	Professor (H)
2001 - 2002	DCS, TIFR	Associate Professor (G)
1997 - 2001	DCS, TIFR	Associate Professor (F)
1992 - 1997	Chemical Physics Group, TIFR	Reader (F)
1990 - 1992	Chemical Physics Group, TIFR	Fellow (E)
1988 - 1990	Institute of Molecular Biology and Biophysics, Eidg. Technische Hochschule, Zurich, Switzerland.	Visiting Scientist
1985 - 1988	Chemical Physics Group	Research Associate
1983 - 1985	TIFR	Scientific Officer (C)

1977 - 1983	New Science College, Hyderabad	Lecturer
1976 - 1983	Physics Department, University Science College, Osmania University, Hyderabad,	Research Scholar

4c. Professional recognitions, awards, fellowships received.

i. Fellowships:

- Elected Fellow, The World Academy of Sciences (FTWAS) 2014
- Elected Fellow, Telangana State Academy of Sciences (FTSASc) 2014
- Elected Fellow, Indian National Science Academy, New Delhi (FNA) 2012
- Elected Fellow, Andhra Pradesh Academi of Sciences (FAPASc) 2011
- Elected Fellow, National Academy of Sciences, (FNASc) 2000

ii. Awards:

- The G. N. Ramachandran Gold Medal of the Council of Scientific and Industrial Research (CSIR) for Excellence in Biological Sciences and Technology in 2017.
- J.C. Bose National Fellow, Department of Science and Technology, GoI, New Delhi, 2012-2017.
- Professor J.C.Ghosh Memorial Award of the Indian Chemical Society, 2009-2010.
- The "Dharamsi Morarji Chemical Co. Visiting Fellowship in Chemistry" of the Institute of Chemical Technology, Mumbai, for the year 2010-11.
- Professor Rango Krishna Asundi Memorial Lecture Award of Indian National Science Academy, New Delhi 2006.
- Anil Kumar Bose Memorial Award, Indian National Science Academy, New Delhi 1989.
- Young Scientist Medal, Indian National Science Academy, New Delhi 1986.
- Young Scientist Award, BRUKER, 1986.

iii. Distinctions:

- Chairperson, IUPAB National Committee of INSA (2020-present).
- Visitor's nominee to serve on the selction committee to interview the candidates for the faculty position in the Department of Biotechnology, IIT Madras (2015-Present).
- Appointed as a Syndicate Member of the Berhampur University by the Higher Education Department, Government of Odisha (2018-19).
- Appointed as a member of the Board of Governors of the Parala Maharaja College of Engineering, Berhampur by Skilled Development and Technical Education Department, Government of Odisha (2018-present).
- Member, Sectional Committee and Fellowship Scrutinizing Member of Indian National Science Academy, New Delhi, India (2017-19).
- Chairperson, Senate, IISER Berhampur (2017-22).

- Member, Finance Committee and Board of Governors, IISER Berhampur (2017-22).
- Chairperson, Building and Works Committee, IISER Berhampur (2017-22).
- Entrusted with the responsibility of developing, nurturing and navigating the new Indian Institute of Science Education and Research (IISER) Berhampur, as its Founding Director (2017-22) by the Ministry of Human Resource Development, Government of India.
- Secretary, National Magnetic Resonance Society, India (2017-present).
- Member, Expert Committee for review of the Department of Biotechnology, IIT Roorkee (2014).
- Executive Council Member, NASI, Allahabad (2016-2018).
- Fellowship Scrutinizing Member, NASI, Allahabad (2016-2018).
- Member, National Assessment and Accreditation Committee (NAAC) Review Committee, which reviewed Jawarlal Nehru Centre for Advanced Scientific Research, Bangalore (2016)
- Evaluator of the applications for the award of Dr. D.S. Kothari Postdoctoral Fellowship Scheme of the University Grants Commission (2014-till date).
- Elected Chairperson, International Council on Magnetic Resonance in Biological Systems (ICMRBS), (2012-2014).
- Elected as the President of “Indian Biophysical Society” (2011-2013).
- Elected Fellow of Royal Society of Chemistry (FRSC), Royal Society of Chemistry, UK, 2004-till date.
- Elected Executive Secretary, International Council on Magnetic Resonance in Biological Systems (ICMRBS) (2010-2012).
- Elected Chairman, Royal Society of Chemistry, West India Section, (2010-2012).
- Member Management Board, Homi Bhabha Centre for Science Education, TIFR (2008-2010).
- Elected as Sectional President of the “NEW BIOLOGY” section of 96th Session of Indian Science Congress, 2008-2009.
- Elected Vice-Chairman, Royal Society of Chemistry, West India Section, (2005-2009).
- Executive Council Member and Secretary, Indian Biophysical Society (2008-2011).
- Member of the International Union for Pure and Applied Biophysics (IUPAB) “Task Force on NMR of Biological Systems” (2002-2014).
- Executive Council Member, ICMRBS, (2005-2014).
- International Advisory Board Member, ICMRBS, (2005-2016).
- Member and Scientific Secretary, Organizing Committee of the XXI ICMRBS, held at Hyderabad, India (Jan 16-21, 2005).
- Member, Project Management Committee of the 600 MHz NMR Facility, Indian Institute of Chemical Biology, Kolkata (2006-2010)
- Executive Council Member, Indian Biophysical society (2000-04).
- Executive Council Member, National Magnetic Resonance Society (2000-2004).

- Member, Editorial Board, of “The Open Magnetic Resonance Journal”, “The Open Applied Informatics Journal”, and “Current Bioinformatics”, launched by Bentham Science Publishers, The Netherlands and U.S.A. (2005-present).
- Invited to speak at various national and international conferences and work-shops. To name a few: At the 5th symposium of Asia-Pacific NMR, held in Brisbane, Australia (October 2013); At the 8th and 9th symposia of Asian Biophysics Association, held in Jeju, Korea (May 2013) and Hongzhou, China (May 2015); At the XX, XXI, XXII, XXIII, XXIV, XXV and XXVII International Conference on Magnetic Resonance in Biological Systems (ICMRBS) held biannually, in Toronto (Canada; 2002), Hyderabad (India; 2005), Gottingen (Germany; 2006), San Diego (USA; 2008) and Cairns (Australia; 2010), Lyon (France; 2012) and Kyoto (Japan; 2016); At the 16th and 17th Triennial Conference for the International Society of Magnetic Resonance (ISMAR) held in Taiwan (October 14-19, 2007) and in Florence (July 3-9, 2010).
- One of the faculty at the International Workshop on "High throughput NMR structure determination of proteins and peptides in the post-genomic era", held in Academia Sinica, Taipei, Taiwan (Nov 1-2, 2003), the IUPAB and JASS sponsored (JASS-2004) Winter School on NMR Spectroscopy at the Frontier of Progress in the Life Sciences at the Institute for Protein Research, Osaka University, Suita, Osaka, Japan (January 19 to 31, 2004). Invited Speaker at the International Union for Pure and Applied Biophysics (IUPAB) sponsored workshop on “Education and Capacity Building in Biophysics” held at IIT Roorkee, as an invited speaker, (February 24-25, 2002). Invited speaker at the Workshop on “Structural Biology”, organized jointly by “Indian National Science Academy” and “Chinese Science Academy”, held at IISc, Bangalore, (December 21-22, 2007). Invited speaker at the International (WWNMR) Workshop on "Recent Advances in NMR Methods", held in Beijing, China (October 30, 2011).
- Regular invited speaker at National Magnetic Resonance Society (NMRS) and Indian Biophysical Society (IBS) Symposia and the meetings of Indian Science Congress Association (ISCA).
- Invited to educate the post-graduate teachers and researchers on NMR spectroscopy during various National Work-Shops held under Continuing Education Programs/Faculty Refresher Courses

iv. International Conferences Organized:

- Member and Scientific Secretary, Organizing Committee of ICMRBS held at Hyderabad, India, during January 16-21, 2005
- Member, National Organizing Committee on International Workshop on Recent trends in Solid State NMR in Biological systems, Bangalore, January 24-26, 2005.
- Member, National Organizing Committee on International Workshop on Recent Trends in Biomedical NMR, New Delhi, January 12-14, 2005.

- Member and Treasurer, International Symposium on Magnetic Resonance and Biomolecular Structure and Function, at TIFR, Jan 17-20, 2000
- Member and Treasurer, International Symposium on Recent Trends in Biomedical Research, at TIFR, Mumbai during September 27-29, 1999.

v. Chaired Sessions at International and National Conferences:

- XXVII ICMRBS, Kyoto, Japan (Plenary Session, 2016)
- XXVI, ICMRBS, Dallas, USA (could not attend).
- XXV ICMRBS, Lyon, France.
- 9th Symposium of ABA held at Hongzhou, Korea, from May, 2015.
- 8th Symposium of ABA held at Jeju Islands, Korea, from May, 2013.
- Asia-Pacific NMR Conference, held from the 27-31 October 2013, Brisbane, Australia.
- XIX ICMRBS, Florence, Italy (2000).

vi. Reviewer for International Journals:

The International Journals include Structure (USA), Biochemistry (USA), Journal of Physical Chemistry (USA), Journal of Bioinorganic Chemistry (USA), Journal Biomolecular NMR (The Netherlands), Proteins, Current Bioinformatics and The Open Magnetic Resonance Journal (Bentham Science Publishers, The Netherlands and USA), and Protein Expression and Purification.

vii. Assistance rendered to the TIFR Committees:

2013-2015: Convenor, TIFR Hyderabad PMIC.
 2015-2017: Member, TIFR Hyderabad PMIC.
 2012-2013: Convenor, Master Plan Working Group, TIFR Hyderabad.
 2012-2013: Convenor, Transit Campus Committee, TIFR Hyderabad.
 2010-2012, 2013-Present: Faculty Member, TCIS (TIFR) Hyderabad.
 2008-2017: Member, looking at the development of TIFR campus in Hyderabad.
 Mar 2009: Acting Dean, Natural Science Faculty, TIFR.
 2008-2011: Chairperson, Department of Chemical Sciences.
 2008-2011: Member Management Board for HBCSE, TIFR, Mumbai.
 2007-2012: Member, Internal Working Group, TIFR.
 2007-2014: Member, Core Committee for induction of academic members.
 2007-2009: Member, Promotion Committee of Scientific Officers.
 2005-2011: Member, TIFR Academic Council.
 2005-2008: Convenor, "Chemistry Subject Board", TIFR.
 2005-2008: Member, Selection Committee for the TAA-Zita Lobo Memorial Award.
 2000-2008: Member, Search Committee of the DCS.
 2000-2002: Chairperson, Promotion Committee of Laboratory staff.
 2000-2019: Co-PI National Facility for High field NMR, TIFR, Mumbai, India.

2007-2009: Member, Promotion Committee of Scientific Officers from, B-C and C-D.

viii. Assistance rendered to “National Facility for High Field NMR”:

Assisted National Facility for High Field NMR in its day-to-day activities as its Co-PI.

ix. Examiner and Reviewer:

Examiner of Ph.D., theses and reviewer of BRNS, DST, CSIR and DBT project proposals.

x. Assistance to other Institutions:

- Assisted as a Member of the Technical and Purchase Committees for the procurement of High Resolution (400, 500 and 600 MHz) NMR spectrometers at Central Drug Research Institute, Lucknow; Indian Institute of Chemical Biology, Kolkata; Indian Institute of Technology, Roorkee, and more recently at National Chemical Laboratory, Pune.
- Member, Project Management Committee of the 600 MHz NMR Facility, Indian Institute of Chemical Biology, Kolkata (2006-2010).

5. A brief statement of major scientific achievements:

K.V.R. Chary excelled in Structural Biology, Molecular Biophysics and Biological Chemistry research for the last three decades. Chary's work unveiled structural insights on biologically rare DNA forms. He demonstrated the capability of solving complete 3D solution structures of proteins by NMR in India for the first time and continues to lead this pursuit. He decoded the implications of Ca²⁺-binding proteins from *Entamoeba* and archaea in pathogenicity. The archeal protein was shown to be an ancient, single-domain $\beta\gamma$ -crystallin, with its uncanny similarity to mammalian lens crystallins, a result of convergent evolution. He demonstrated myristoylation-dependent plasticity and signaling of a neuronal calcium sensor, and conformational heterogeneity and dynamics of an intrinsically disordered $\beta\gamma$ -crystallin domain from a halophile. He developed rapid NMR methodologies and proposed new NMR pulse sequences, which speed up both acquisition and analysis of multidimensional NMR data by several orders of magnitude and push the boundary of NMR capability. More recently, the two flexible flagella of *Chlamydomonas reinhardtii*, a unicellular green alga were shown to weakly align molecules in an external magnetic field, thereby enabling the measurement of various residual dipolar couplings in solution NMR spectroscopy. In an *in-cell* NMR study, metabolic changes (differential accumulation and mobilization of starch or/and lipids) in live *C. reinhardtii* were followed during mixotrophic and heterotrophic conditions by monitoring [1, 2-¹³C]-labelled acetate assimilation. An unusual calcium binding protein from *E. Histolytica* that binds and hydrolyzes guanosine triphosphate has been structurally characterized. Further, his recent study on the structural characterization of an UV inducible protein from *C. reinhardtii* revealed a catalytic serine-114 residue in a α -strand underlying its DNA endonuclease activity. To sum

up, Chary's research work elegantly combines high-resolution 3D structural and dynamics information with that of judicious mix of other supporting biophysical tools to achieve a wholesome understanding of the system on hand. Several of these approaches have yielded first time milestones.

Chary has co-authored a book entitled "NMR in Biological Systems: From Molecules to Humans" (Springer, 2008). In addition to his contributions to fundamental research, he continues to take very keen interest in science education and induction of young members into mainstream fundamental research. He has taught in India, Europe, China, Japan and Taiwan. He has guided several Ph.D students and Post-doctoral Fellows.

Chary has been regularly invited to speak at various national and international conferences and work-shops. Chary has been involved in many international activities, such as organizing International Conferences, workshops and training scientists. He played major roles in international bodies such as ICMRBS (International Council on Magnetic resonance in Biological Systems), IUPAB (International Union of Pure and Applied Biophysics), ABA (Asian Biophysics Association), Royal Society of Chemistry (West India Section) and Marie Curie International Research Staff Exchange Scheme of European Union.

6. Academic training imparted:

Ph.D. Students trained:

- Dr. Vinit K. Rastogi (Ph.D., 1996).
- Dr. Sukesh R. Bhaumik (Ph.D., 1997).
- Dr. Sarata C Sahu (Ph.D., 2000, **TAA-Zita Lobo Memorial Best Thesis Award Winner**).
- Dr. Mahua Ghosh (Ph.D., 2001).
- Dr. Rani V Parvathy (Ph.D., 2001).
- Dr. H. S. Atreya (Ph.D., 2002, **TAA-Zita Lobo Memorial Best Thesis Award Winner**).
- Dr. Sunita Ramanathan (Ph.D., in 2002).
- Dr. S. Mukherjee (Ph.D., 2006, **TAA-Zita Lobo Memorial Best Thesis Award Winner**).
- Dr. S. Mustafi, (Ph.D., 2007; **Honorary Mention for his Ph.D. thesis submitted in 2007**).
- Dr Ravi Pratap Barnwal (Ph.D., 2008).
- Dr. Kousik Chandra (Ph.D., June 2011).
- Dr. Atul Kumar Srivastava, (Ph.D., June 2011).
- Dr. Ashok Kumar Rout, (Ph.D., July 2011).
- Dr. Susmitha (2008...) (Ph.D., June 2015 from BHU, Varanasi).
- Dr. Himanshu Singh (Ph.D., July 2016).
- Dr. Deepshika Verma (Ph.D., 2017).
- Dr. Janeka Gartia (Ph.D., 2020).
- Dr. Khandekar Jishan Bari (Integrated MSc., 2019 & Ph.D., 2020, **Prestigious CBMR-NMRS Gold Medal Winner**).

Besides, he has been guiding summer students under the TIFR Visiting Student Research Program and students sponsored by Indian Academy of Sciences, Bangalore.

Post-doctoral Fellows:

- Dr. Ritu Bansal (2003-2005).
- Dr. Manjula Devi (2005-2007).
- Dr. Venkatesh Ramakrishnan (2007-2010).
- Dr. Sunita Patel (Feb 2010–2016)
- Dr. Manish Shukla (2013-2014)
- Dr. Gopikrishna G (2015-2018)
- Dr. Shrikant Sharma (2016-2018)
- Dr. Bala Krishnan (**NPDF**; 2017-till date)
- Dr. Ritika Srivastava (2019-present)
- Dr. Khandekar Jishan Bari (2020-present; **offer letter issued; to join soon**).