



Indian Institute of Technology Madras
Office of Alumni and Corporate Relations



Celebrating Your Generosity

Dr. Virupaksha Reddy

JULY 2023





Prof. Kamakoti Veezhinathan

Director, IITM

Greetings!

IIT Madras continues to retain her top position for the eighth consecutive year, in the National Institute Ranking Framework, thanks to the world-class research of its faculty and students. The contribution and support of Alumni and well-wishers like you has crucially helped this standing and stature. Our achievements in research, education, innovation and entrepreneurship have also earned us the recognition of an 'Institute of Eminence' as well as the top position in the Atal Innovation Ranking from the Government of India.

The institute is making an indelible mark with her 'research with impact' in several areas including quantum computing, drinking water technology, industrially relevant mathematical models for governance, rendering cancer-cure more effective. Our centres of excellence, the Center for Innovation, *Nirmaan* – the pre-incubator, the Incubation Cells, technology centres such as 'IITM-Pravartak' and others, work in unison for not just *our* nation's building, but societies world-wide. We aspire to be locally impactful and globally relevant through all these efforts.

Towards exploring new research frontiers, a Department of Medical Sciences and Technology was launched in May 2023 to conjoin medicine and engineering. Similarly, a School of Sustainability is on the horizon to research sustainable practices in the Global South. The campus is moving towards 'carbon-net-zero' goal through water conservation by 100% recycling, efficient garbage disposal, and electrification of vehicles. The traditional education system is undergoing a paradigm shift, with our online Bachelor of Science programme in Data Sciences and the National Program of Technology Enhanced Learning, that have won Gold in the 'Lifelong Learning' category and Silver in the 'Best Online Program' category of the Wharton-QS Reimagine Education Awards 2022 respectively. Your alma mater is leading this revolution from the front.

Such achievements are not possible without the deep-rooted faith and support of alumni and well-wishers such as yourself. We are indebted to you for your generous, bountiful, and impactful contributions. On behalf of IIT Madras, I offer you our deepest gratitude for continuing to strengthen the Institute. Together with your support, we are confident of building an IIT Madras that is more inclusive, diverse, and enabled by an ecosystem to be nationally relevant and globally recognised. Thank you!



IIT Madras has consistently performed in an excellent manner over the years. World class systems have been created and maintained to uphold and strengthen key performance indicators of the Institute.

A few such prestigious achievements are :

- 1 Ranked first among engineering institutes in the NIRF rankings
- 2 Ranked first in the Atal Innovation rankings, and
- 3 Declared as an Institute of Eminence during its Diamond Jubilee celebrations.



Prof. Mahesh Panchagnula

Dean, Alumni & Corporate Relations, IITM



Dear Dr. Virupaksha Reddy,

I express my heartfelt gratitude to you for your generous support to IIT Madras. We appreciate your passion in supporting the causes you do, and I assure you that your contributions will be optimally utilised. This report has been compiled by your 'Donor Relationship Manager', to convey how your largesse has touched lives and made a difference at IIT Madras. In keeping with the rapid, contemporary strides in science, technology we have set ambitious goals for ourselves - your continued enthusiasm and support will help us greatly in these endeavours.

IIT Madras that you left behind as a graduating student is very different from the IIT Madras of today. It is far more diverse in its set of pursuits, greener and more research-focused. And yet, it remains unchanged from your time that, it is still the best Institute in the country, and attracts the best students that India has to offer to come and make a mark. I also cordially invite you to visit your campus to see for yourself, the impact of your contribution, and the growth and transformation the Institute has undergone over the years.

We can never express our gratitude enough for all that you have done - Thank You !

**"GIVING IS NOT JUST ABOUT
MAKING A DONATION -
IT'S ABOUT
MAKING A DIFFERENCE"**





Dr. Virupaksha Reddy

[1972/M.Sc/CY]

Dr. K Virupaksha Reddy, a distinguished chemist and visionary entrepreneur, has made an indelible mark on chemistry and telecommunications. After graduating from IIT Madras in 1972 with a Master's degree in Chemistry, following his Bachelor's degree from the Government Arts College in Anantapur, Dr Reddy embarked on a remarkable scientific exploration and innovation journey.

During his PhD tenure in the Physical Chemistry Department at the University of Wisconsin-Madison, Dr. Reddy's groundbreaking research in developing pulsed and continuous wave lasers revolutionised the study of chemical reactions. His pioneering work, employing intra-cavity laser excitation schemes, garnered immense recognition and appreciation from esteemed figures across the scientific community, establishing him as a distinguished researcher in the field.

With a rich portfolio of experience gained from three different corporate research labs in the United States, Dr. Reddy's entrepreneurial drive and quest for technological advancement led him to establish PriTel, Inc. in 1994. As the President and Founder of PriTel, he spearheaded the manufacturing of state-of-the-art test and measurement equipment for the fibre-optics telecommunications industry. Today, PriTel's cutting-edge products can be found in every pre-eminent telecom research laboratory worldwide, a testament to Dr. Reddy's unwavering commitment to excellence and innovation.

Beyond his groundbreaking scientific achievements, Dr. Reddy has demonstrated his dedication to his alma mater, IIT Madras, by serving as the **President** of the **IIT Madras Alumni Association of North America** from 2013 to 2015. Dr. Virupaksha Reddy was honoured with the **Distinguished Alumnus Award in 2017** for his exceptional contributions and profound impact. This prestigious accolade underscores his remarkable accomplishments and highlights his influential role as the **President and Founder** of **PriTel Inc.**



Dr. Virupaksha Reddy, addressing the audience at IIT Madras, Feb 2014

Dr. Virupaksha Reddy's Invaluable Contributions to IIT Madras

**Dr. Virupaksha
Reddy Visiting
Chair**

**Virupaksha
Reddy IIT Madras
Chemistry
Research
Endowment**

**Covid -19
Relief for
India**

**K.K.
Balasubramanian
Institute Chair**

Dr. Virupaksha Reddy Visiting Chair



Dr. Ram Vishwakarma

Dr. Reddy has generously donated a large sum of money to IIT Madras for establishing a **Visiting Chair in the department of Chemistry**.

Dr. Ram Vishwakarma has been chosen as the **first occupant of this Chair**.

Dr. Ram Vishwakarma has been the Director of the Indian Institute of Integrative Medicine (Council of Industrial Research) Jammu, India. He has also been the Vice-President and the Head (Medicinal Chemistry) of Piramal Life Sciences (Nicholas Piramal Research Centre), Mumbai in 2005-2009 and was responsible for new drug discovery projects in the areas of inflammation, cancer, diabetes, and drug-resistant infections.

Dr. Vishwakarma received a Bachelor of Science degree from Bundelkhand University in 1978. Two years later, he earned his Master of Science from the same university. In 1985, he obtained his PhD degree from Central Drug Research Institute. Dr. Vishwakarma began his career as a Research Fellow at the Central Drug Research Institute in 1981 and held the position for fourteen years. In 1986, he became a Scientist at the Central Institute of Medicinal and Aromatic Plants. He also served as a Research Associate of the Department of Chemistry at Cambridge University from 1991 to 1993. He was appointed as **'Staff Scientist IV'** in 1994 at the **National Institute of Immunology** and held the position for **six years**. In 2001, and he was promoted to **'Staff Scientist-V'** at that institute and in 2005, **'Staff Scientist-VI'** at the **National Institute of Immunology**.

Dr. Vishwakarma took the position of **Vice President and the Head of Piramal Life Sciences** at **Piramal Life Sciences Limited** in 2005. Since 2009 he has been a **Director** of the **Indian Institute of Integrative Medicine**.

Dr. Vishwakarma is known for his publications, including ***“Metal-free oxidative cyclisation of acetophenones with diamines: facile access to phenyl pyridines”***, ***“Metal-Free Approach for the Synthesis of N-Aryl Sulfoximines via Aryne Intermediate”*** and others.

Dr. Vishwakarma is a **member** of the **Royal Society of Chemistry**, the **National Academy of Sciences of India**, and the **Research Council of the Institute of Genomics and Integrative Biology**.

Dr. Ram Vishwakarma's plans to visit the Department of Chemistry, IIT Madras could not materialize earlier due to COVID-19 and the long-awaited visit finally fructified in June 2023.

Maiden Visit of Dr. Ram Vishwakarma, Dr. Virupaksha Reddy Visiting Chair to IIT Madras



Dr. Ram Vishwakarma visited the Chemistry Department for a day on 23 June 2023 and had a preliminary interaction and discussion with the faculty. During the discussion, a wide range of topics related to medicinal chemistry, and biophysical chemistry were discussed.

He also visited the Dr. Hema Chandra Kotamarthi's laboratory and interacted with research scholars and students. Dr. Hema Chandra's group carries out research in molecular biophysics & biophysical chemistry focusing on mechano-biochemistry – ATP-dependent biomolecular motors, application of single-molecule force spectroscopy tools, optical tweezers and single-molecule AFM to understand protein and enzyme kinetics & mechanics, single-molecule enzymology, protein folding/unfolding and protein remodelling (degradation and disaggregation).





Since this initial visit was during the summer vacation time,

Dr. Vishwakarma plans to visit the Chemistry department again in September for a week (tentatively between 11-16 September 2023) so that he can also interact with the Research Scholars and M.Sc. students. Apart from another round of interaction and exploration for intense collaboration, he plans to give a general seminar in the department and lectures specially designed for the students to give them a thorough overview of medicinal chemistry and to further enthruse them in pursuing studies in this field.

Virupaksha Reddy IIT Madras Chemistry Research Endowment

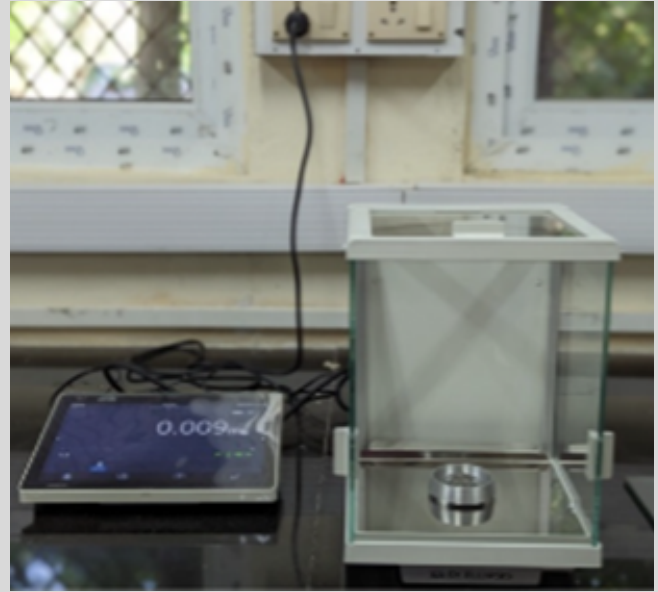
Restoration of the CHN Elemental Analyser for renewed research in the Chemistry Department

In scientific research and analytical chemistry, the ability to determine the elemental composition of organic compounds is of utmost importance. Understanding the distribution of carbon, hydrogen, and nitrogen (CHN) within a given sample provides valuable insights into its purity, structure, properties, and potential applications. The CHN instrument is a highly sophisticated analytical tool designed to accurately and rapidly measure a sample's percentage of carbon, hydrogen, and nitrogen. It combines techniques, such as combustion and gas chromatography, to separate and quantify the elemental components. To get accurate data, pre-weighing two to three milligrams of a sample is essential, where microbalance plays a vital role.

The CHN instrument finds widespread applications across various scientific disciplines, including organic chemistry, environmental science, pharmaceuticals, agriculture, and materials science, for analysing multiple compounds.

In the Chemistry department of IIT Madras, nearly 60-70% of faculty members depend on the CHN analysis for their day-to-day research. Unfortunately, such a high-potential instrument could not be used for the past three years due to the sudden failure of the microbalance. Owing to the pandemic and lack of funding, restoring the CHN Analyser to its working state was not possible.

The generous contribution of Dr Virupaksha Reddy towards research came as a boon and to the rescue of the Department. Utilizing the funds so donated, the costly repairs and restoration of the CHN analyser could be completed and the machine was successfully back in action, delighting the faculty who could now pursue their research with renewed vigour. Thank you Dr Reddy !



Researchers utilizing the CHN Analyser for their Work

Covid -19 Relief for India

The COVID-19 pandemic became an emerging global health crisis and required the best of our efforts to overcome it. The sudden outbreak of pandemic had already created an enormous medical and financial burden shattering many lives.

The second wave of COVID-19 immensely affected the public's mental health and well-being in a variety of ways, including isolation and loneliness, job loss and financial instability, and illness and grief. Many organizations, institutions, and individuals came forward to support the nation both financially and socially.

IIT Madras launched a campaign to raise funds for supporting various causes. The Institute exceeded its goal of raising \$1 million in 48 hours. Overall IIT Madras Alumni and other well-wishers have come together and raised more than \$2 million.

Below are the causes for which the funds were used:

1. Purchase of Oxygen cylinders, BiPAP machines, Injections, and Medicines
2. Healthy meals for students who were stranded in the institute during covid.
3. Financial help to more than 150 Ph.D. scholars to pursue their research without any constraints.

Glimpses of the contributions:

- IIT Madras handed over **200 oxygen concentrators** to the **Government of Tamil Nadu**.



The handover was carried out in the presence of M A Siddique IAS, Principal Secretary, Government of Tamil Nadu and Meghanatha Reddy IAS, Deputy Commissioner (Works), Government of Tamil Nadu, Prof. Bhaskar Ramamurthi, Director, IIT Madras, Prof. Mahesh Panchagnula, Dean (ACR), N Alamelu, Secretary, IIT-M

- Donated BiPAP units, Injections and medicines.



Dr. Jane Prasad, Registrar, IIT Madras, and other officials handing over BiPAP units to Chennai Corporation Officials

- Contributed **200 oxygen concentrators** (10 litres each) to the **Government of Karnataka**.



Contribution of oxygen concentrators to the Government of Karnataka

- **Provided healthy meals to students** who were stranded during Covid pandemic with the help of a nutritionist. Arrangements were made to serve paneer, banana, and eggs as optional extras.



- Contributed **1000 units** of covid medicines to **Sri Venkateswara Institute of Medical Science (SVIMS), Chittoor**



Contribution of covid medicines to SVIMS, Chittoor



Meals provided to hostel students

- **Financial support was provided to Ph.D. scholars** as stipend. This helped them to carry out their research without hindrance.

Prof. K.K. Balasubramanian Institute Chair



Prof. Balasubramanian

Prof. Kalpattu Kuppusamy Balasubramanian, affectionately known to everyone as Prof. KKB, is currently an Adjunct Faculty member in the Chemistry Department of IIT Madras. He joined IIT Madras as a Lecturer and became a professor in 1991. His major areas of research include synthetic organic chemistry, heterocyclic chemistry, carbohydrate chemistry, medicinal chemistry, electro-organic chemistry, organic photochemistry, molecular rearrangements and process development for pharmaceutical industry APIs and intermediates.

He is a Fellow of the Indian National Science Academy and Indian Academy of Science. He received several honours and awards, namely, **Lifetime Achievement Award of the Chemical Research Society of India**, **T. R. Govindachary Award for research in organic chemistry**, **Humboldt fellowship** for several years, to mention a few. He has published extensively in all the fields with more than **180 publications** in peer reviewed national and international journals.

After retirement he continues to be active providing his guidance to serve Pharma industries viz. Shasun Chemicals and Drugs Ltd., Alpha Amins, Kawman Pharma, Anjan Drugs, Amrutanjan Ltd, etc for nearly 21 years and still continuing. He is one of the sought-after speakers by colleges and universities for motivating students to pursue research. He supports the student community by delivering chemistry talks and motivating lectures to students preparing for CSIR scholarship qualifying examinations.

The occupant of Prof. K.K. Balasubramanian Institute Chair

Prof. S. Sankararaman

Chair Occupant during September 2017 - June 2023

Professor S. Sankararaman, was an Institute Chair Professor in the Department of Chemistry between September 2017 and June 2023. Professor Sankararaman is among the most distinguished organic chemists in India and abroad and has guided 19 PhD students for the award of their degrees and has four students currently as a joint guide. In addition, more than 30 M. Sc Students have done their project under his supervision. His research publications cover all forms of peer reviewed publications, namely, books, chapters in monographs, review articles and journal publications.



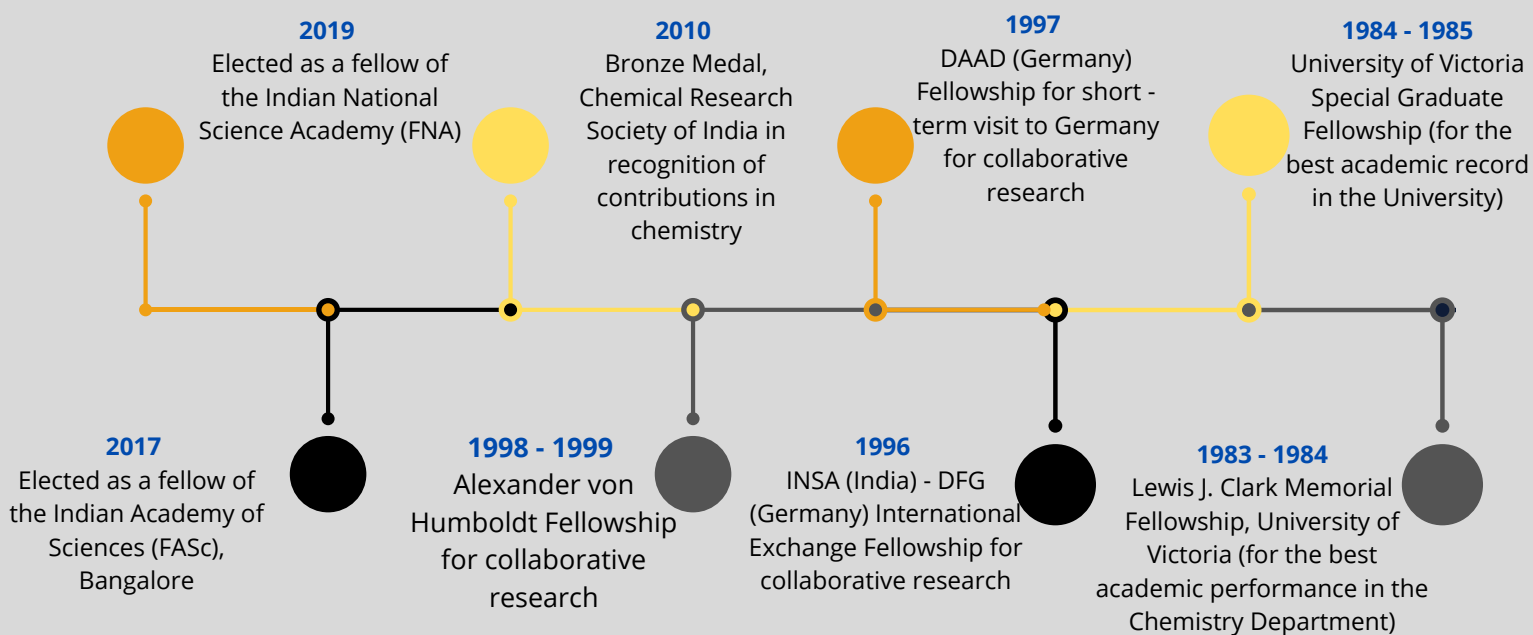
The book entitled **“Pericyclic Reactions: A Text Book”** by him as the sole author was also reviewed and with a very appreciative Foreword by the Nobel Laureate Professor Roald Hoffmann of Cornell University, a pioneer in the same area. It is a five-star rated text book in the Amazon site. He is a Bronze Medallist from the Chemical Research Society of India and is an Elected Fellow of the Indian Academy of Sciences Bengaluru and the Indian National Science Academy. He has also coordinated numerous nationally and internationally funded research projects and is among the most sought-after speakers and reviewers in Organic chemistry in India today.

His contributions to institute administrative activities are valuable as well. He was the Head of the Department of Chemistry for two years, Head of the Sophisticated Analytical Instrument Facility in IIT Madras, and Chairman of the Central Glass Blowing Section. He was also the Chairman of the Joint Entrance Examination in the year 2008.

Research Interests:



Honors and Recognitions:



Prof. S. Sankararaman with his students

The identification for the new occupant of the Prof. K.K. Balasubramanian Institute Chair is currently under progress

To read the previous report

[CLICK HERE](#)



We are grateful to you & your family

Dr. Virupaksha Reddy



Thank you for your sustained generosity to IIT Madras over the years. Contributors such as yourself enable our students and Professors to dream big and work towards a better and brighter future. We hope you are proud of your relations with IIT Madras and how it has remained steadfastly committed to academic and research excellence. You and your family have been instrumental in facilitating this significant growth.

Our efforts to nurture the culture of academic excellence that is the hallmark of IIT Madras - quality education, cutting-edge research, and unfettered creativity shall continue. We are privileged and humbled to have you and your family walking with us along this trail. We wish you and your family the best always in all walks of life!



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