


## STANDARD TEMPLATE OF FACULTY PROFILE FOR UPLOADING OF UNIVERSITY WEBSITE

Title	Professor	First Name	NANDULA	Last Name	RAGHURAM	
Designation	Professor					
School /Dept. Name	University School of Biotechnology					
Address:	AFR-107/ARL112, Block-A, University School of Biotechnology , Guru Gobind Singh Indraprastha University, Sector -16-C, Dwarka, New Delhi -110078, India					
Phone No.	Office	011-25302308				
	Residence					
	Mobile					
Email	raghuram@ipu.ac.in			raghuram98@hotmail.com		
Web Page (if any)						
Subjects Taught	<b>BT-116 (Introduction to Biotechnology for B.Tech.)</b> <b>BT-164 (Techniques in Biotechnology for B.Tech.)</b> <b>BT-201 (Microbiology), BT-257 (Microbiology lab for B.Tech.)</b> <b>BT-204 (Molecular Biology for B.Tech.)</b> <b>BT 411 (Bioethics, Biosafety and IPR for B.Tech.)</b> <b>BT 517 (Research Methodology for M.Tech.)</b> <b>BT552 (Advanced Biotechnology lab for M.Tech.)</b> <b>BT 702 (Research Methodology for Ph.D.)</b> <b>BT 728 (Bioethics, Biosafety and IPR for Ph.D.)</b>					
Areas of Interest/ Specialization	<b>Molecular biology and functional genomics of plant G-protein signaling, nitrogen response and nitrogen use efficiency</b>					
Experience (in years)	Total	27				
	Industry	3				
	Teaching	P.G -25 Years , U.G -20 Years				
	Research	27				
Educational Qualifications	UG	B.Sc. Hons (Zoology), Andhra University				
	PG	M.Sc. (Life Sciences) Ed., RCE-NCERT, Utkal University M.Phil. Zoology (Mol. Biol./Gen. Engg.), Pune University				
	Doctorate	Life Sciences (Plant Molecular Biology), JNU, N.Delhi.				

<p>Research Publications in Journals (last 5 years)</p>	<ol style="list-style-type: none"> <li>1. <b>Raghuram, N.</b>, Aziz, T., Kant, S., Zhou, J., Schmidt, S. (2022). Editorial: Nitrogen Use Efficiency and Sustainable Nitrogen Management in Crop Plants. <b>Front. Plant Sci.</b> doi: 10.3389/fpls.2022.862091.</li> <li>2. Yang A.L, <b>Raghuram, N.</b>, Porter, S., Adhya, T.K., Bansal, S., Panda, A. Nissanka, S. Shazly, A., Hassan R., Watto, M.A., Anik, A.R., Joshi, R., Jayaweera, A., Pokhrel, A., Kaushik, H., Kanter, D., Chowdhury, S., Sharmin, S., Das, S., &amp; Jeffery R. (2022). Policies to combat nitrogen pollution in South Asia: Gaps and opportunities. <b>Environ. Res. Lett.</b> <b>17</b>: 025007</li> <li>3. Mandal, V.K., Jangam, A.P., Chakraborty, N., and <b>Raghuram, N.</b> (2022). Nitrate-responsive transcriptome analysis reveals additional genes/processes and associated traits viz. height, tillering, heading date, stomatal density and yield in japonica rice. <b>Planta</b> 255:42.</li> <li>4. Kumari, S., Sharma, N. and <b>Raghuram, N.</b> (2021). Meta-analysis of yield-related and N-responsive genes reveals chromosomal hotspots, key processes and candidate genes for nitrogen use efficiency (NUE) in rice. <b>Front. Plant Sci.</b> <b>11</b>, 627955. doi: 10.3389/fpls.2021.627955</li> <li>5. Udvardi, M., Below, F.E., Castellano, M., Eagle, A., Giller, K.E., 2 Ladha, J.K., Liu, X., Maaz, T.M., Nova-Franco, B., <b>Raghuram, N.</b>, Robertson, G.P., Saha, M., Roy, S., Schmidt, S., Tegeder, M., York, L.M., and Peters, J. (2021). A research road map for responsible use of agricultural nitrogen. <b>Front. Sustain. Food Syst.</b> <b>5</b>:660155. doi: 10.3389/fsufs.2021.660155.</li> <li>6. Moring, A., Hooda, S., <b>Raghuram, N.</b>, Adhya, T.K., Ahmad, A., Bandyopadhyay, S.K., Barsby, T., Beig, G. Bentley, A., Bhatia, A., Dragosits, U., Drewer, J., Foulkes, J., Ghude, S., Gupta, R., Jain, N., Kumar, D., Kumar, R.M., Ladha, J.K., Mandal, P.K., Neeraja, C.N., Pandey, R., Pathak, H, Pawar, P., Pellny, T.K., Poole, P., Price, A., Rao, D.L.N., Reay, D.S., Singh, N.K., Sinha, S.K., Srivastava, R., Shewry, P., Smith, J., Steadman, C.E., Subrahmanyam, D., Surekha, K., Karnam, V., Singh, V., Uwizeye, A., Vieno, M., Sutton, M.A. (2021). Nitrogen challenges and opportunities for agricultural and environmental science in India. <b>Front. Sustain. Food Syst.</b> <b>5</b>:505347. doi: 10.3389/fsufs.2021.505347.</li> <li>7. Pathak, R.R., Mandal, V., Jangam, A.P., Sharma, N., Madan, B., Jaiswal, D.K. and <b>Raghuram, N.</b> (2021). Heterotrimeric G-protein <math>\alpha</math> subunit (RGA1) regulates tiller development, yield, cell wall, nitrogen response and biotic stress in rice. <b>Sci. Reports</b> <b>11</b>, 2323 <a href="https://doi.org/10.1038/s41598-021-81824-1">https://doi.org/10.1038/s41598-021-81824-1</a>.</li> <li>8. Sutton, M.A., Howard, C.M., Kanter, D.R., Lassaletta, L., Moring, A., <b>Raghuram, N.</b>, Read, N., (2021). The nitrogen decade: mobilizing global action on nitrogen to 2030 and beyond. <b>One Earth</b> <b>4</b>(1): 10-14. <a href="https://doi.org/10.1016/j.oneear.2020.12.016">https://doi.org/10.1016/j.oneear.2020.12.016</a>.</li> <li>9. <b>Raghuram, N.</b> Sutton, M.A., Jeffery, R., Ramachandran, R., Adhya, T.K. (2021). From South Asia to the world: embracing the challenge of global sustainable nitrogen management. <b>One Earth</b>, <b>4</b>(1): 22-27. <a href="https://doi.org/10.1016/j.oneear.2020.12.017">https://doi.org/10.1016/j.oneear.2020.12.017</a>.</li> <li>10. Sharma, N., Sinha, V.B., Arun Prem Kumar, N., Subrahmanyam, D., Neeraja, C.N., Kuchi, S., Jha, A., Parsad R. Sitaramam, V., and <b>Raghuram, N.</b> (2021). Nitrogen use efficiency phenotype and associated genes: Role of germination, flowering, root/shoot length and biomass. <b>Front. Plant Sci.</b> <b>11</b>, 587464. doi: 10.3389/fpls.2020.587464.</li> <li>11. Pathak, R.R., Jangam, A.P., Malik, A., Sharma, N., Jaiswal, D.K. and <b>Raghuram, N.</b> (2020). Transcriptomic and network analyses reveal distinct nitrate responses in light and dark in rice leaves (<i>Oryza sativa</i> Indica var. Panvell). <b>Sci. Reports</b> <b>10</b>: 12228, doi: 10.1038/s41598-020-68917-z.</li> <li>12. Kanter, D., Winiwarter, W., Bodirsky, B., Bouwman, L., Boyer, E., Buckle, S., Compton, J., Dalgaard, T., de vries, W., Leclère, D., Leip, A., Muller, C., Popp, A., <b>Raghuram, N.</b>, Rao, S., Sutton, M., Tian, H., Westhoek, H., Zhang, X. and Zurek M. (2020). A framework for nitrogen futures in the shared socioeconomic pathways. <b>Global Environmental Change</b> <b>61</b>: 102029.</li> <li>13. <b>Raghuram, N.</b> (2020). Nurturing growth with excellence: PMBP goes monthly in its Silver Jubilee year! <b>Physiol. Mol. Biol. Plants</b> <b>26</b>(1): 1-2.</li> </ol>
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	<p>14. Sharma, N., Kuchi, S., Singh, V. and <b>Raghuram, N.</b> (2019). Method for Preparation of Nutrient-depleted Soil for Determination of Plant Nutrient Requirements. <b>Comm. Soil Sci. Plant Anal.</b> 50:15, 1878-1886.</p> <p>15. Chakraborty, N., Kanyuka, K., Jaiswal, D.K., Kumar, A., Arora, V., Malik, A., Gupta, N., Hooley, R. and <b>Raghuram, N.</b> (2019). GCR1 and GPA1 coupling regulates nitrate, cell wall, immunity and light responses in Arabidopsis. <b>Sci. Reports.</b> 9:5838</p> <p>16. Sharma, N., Sinha, V.B., Gupta, N., Rajpal, S., Kuchi, S., Sitaramam, V., Parsad R. and <b>Raghuram, N.</b> (2018). Phenotyping for nitrogen use efficiency (NUE): Rice genotypes differ in N-responsive germination, oxygen consumption, seed urease activities, root growth, crop duration and yield at low N. <b>Front. Plant Sci.</b> doi: 10.3389/fpls.2018.01452.</p> <p>17. <b>Raghuram, N.</b> (2017). The pleasure of excellence-led growth and the pain of enforcing publishing ethics: the experience of PMBP. <b>Physiol. Mol. Biol. Plants</b> 23(1): 1-3.</p>
<p>Papers Published in Conference Proceedings (last 5 years)</p>	<p>1. Sutton M.A., Mason, K., Bleeker, A., Hicks, K., Masso, C. <b>Raghuram, N.</b>, Reis, S., Bekunda, M. (2020). Just Enough Nitrogen. Summary and synthesis of outcomes. In: <b>Just Enough Nitrogen. Perspectives on how to get there for regions with too much and too little nitrogen</b>, Sutton M. Mason, K., Bleeker, A., Hicks, K., Masso, C. <b>Raghuram, N.</b>, Reis, S., Bekunda, M. (Eds), Springer, Cham. ISBN: 978-3-030-58064-3. Pp: 1-25. <a href="https://doi.org/10.1007/978-3-030-58065-0_1">https://doi.org/10.1007/978-3-030-58065-0_1</a>.</p> <p>2. Sinha, V.B., Jangam, A.P., and <b>Raghuram, N.</b> (2020). Biological determinants of crop N use efficiency and biotechnological avenues for improvement. In: <b>Just Enough Nitrogen. Perspectives on how to get there for regions with too much and too little nitrogen</b>, Sutton M. Mason, K., Bleeker, A., Hicks, K., Masso, C. <b>Raghuram, N.</b>, Reis, S., Bekunda, M. (Eds), Springer, Cham. ISBN: 978-3-030-58064-3. Pp: 157-171. <a href="https://doi.org/10.1007/978-3-030-58065-0_11">https://doi.org/10.1007/978-3-030-58065-0_11</a>.</p> <p>3. <b>Raghuram, N.</b> Abrol, Y.P., Pathak, H.K. Adhya, T.K. and Tiwari, M.K. (2020). South Asian Nitrogen Centre: Capacity Building for Regional N assessment and management. In: <b>Just Enough Nitrogen. Perspectives on how to get there for regions with too much and too little nitrogen</b>, Sutton M. Mason, K., Bleeker, A., Hicks, K., Masso, C. <b>Raghuram, N.</b>, Reis, S., Bekunda, M. (Eds), Springer, Cham. ISBN: 978-3-030-58064-3; 467-479. <a href="https://doi.org/10.1007/978-3-030-58065-0_32">https://doi.org/10.1007/978-3-030-58065-0_32</a>.</p> <p>4. Sutton, M.A; Howard, C.M; Brownlie, W.J; Kanter, D; de Vries, W; Adhya, T.K.; Ometto, J.P; Baron, J.S; Winiwarter, W; Ju, X; Masso, C; Oenema, O; Raghuram, N; van Grinsven, H.J.M; Van der Beck, I; Cox, C; Hansen, S.C.B; Ramachandran, R; Hicks, W.K. (2020). Global Challenges for Nitrogen Science-Policy Interactions: Towards the International Nitrogen Management System (INMS) and Improved Coordination Between Multi-lateral Environmental Agreements. In: <b>Just Enough Nitrogen. Perspectives on how to get there for regions with too much and too little nitrogen</b>, Sutton M. Mason, K., Bleeker, A., Hicks, K., Masso, C. <b>Raghuram, N.</b>, Reis, S., Bekunda, M. (Eds), Springer, Cham. ISBN: 978-3-030-58064-3. Pp: 517-560. <a href="https://doi.org/10.1007/978-3-030-58065-0_36">https://doi.org/10.1007/978-3-030-58065-0_36</a>.</p> <p>5. Sutton M.A., Ebanyat, P., Raghuram, N., Bekunda, M. Tenywa, J.S., Winiwarter, W., Bleeker, A., Davidson, E.A., Erisman, J.W., deVries, W. Galloway, J.N., Heffer, P., Hicks, K., Masso, C., Pal, C.A., Snyder, C.S., Vanlauwe, B., Zingore, S. and Delegates of the 6th International Nitrogen Conference, Kampala (2020). The Kampala Statement-for-Action on Reactive Nitrogen in Africa. In: <b>Just Enough Nitrogen. Perspectives on how to get there for regions with too much and too little nitrogen</b>, Sutton M. Mason, K., Bleeker, A., Hicks, K., Masso, C. <b>Raghuram, N.</b>, Reis, S., Bekunda, M. (Eds), Springer nature Switzerland, ISBN: 978-3-030-58064-3. Pp: 583-593. <a href="https://doi.org/10.1007/978-3-030-58065-0_38">https://doi.org/10.1007/978-3-030-58065-0_38</a>.</p> <p>6. Madhavi, Y., Prajapathi, P., Comar, N., <b>Raghuram, N.</b>, Das, A., and Mishra D (2017). Globalisation and its impact on national vaccine innovation system in India. In <b>Globalisation and India's Innovation Systems: A Creative Destruction?</b> Girish Kumar R. (Ed), Mahatma Gandhi University, Kottayam, Kerala, India (ISBN: 978-93-80419-35-0). Pp. 175-187.</p>

<p>Books          Authored/Book          Volume Chapters</p>	<ol style="list-style-type: none"> <li>1. Madan, B., Malik, A. and <b>Raghuram, N.</b> (2022). Crop nitrogen use efficiency for sustainable food security and climate change mitigation. In <b>Plant Nutrition and Food Security in the Era of Climate Change</b>, Kumar, V., Srivastava, A., Penna, S. (Eds), Elsevier, Academic Press. ISBN 978-0-12-822916-3. Pp. 47-72.</li> <li>2. Sutton M.A, Mason, K., Bleeker, A., Hicks, K., Masso, C. <b>Raghuram, N.</b>, Reis, S., Bekunda, M. (Eds) (2020). <b>Just Enough Nitrogen. Perspectives on how to get there for regions with too much and too little nitrogen.</b> Springer nature Switzerland, ISBN: 978-3-030-58064-3. 603p.</li> <li>3. Kumari, S and Raghuram, N. (2020). Protein phosphatases in N response and NUE in crops. In <b>Protein phosphatases and stress management in plants: Functional genomic perspective</b>, Pandey, GK (Ed), Springer nature, Switzerland. Pp. 233-244. <a href="https://doi.org/10.1007/978-3-030-48733-1_12">https://doi.org/10.1007/978-3-030-48733-1_12</a>.</li> <li>4. Jaiswal, D.K. and <b>Raghuram, N.</b> (2019). Nutrient perception and signaling in plants. In <b>Sensory Biology of plants</b>, Sopory, SK (Ed) Springer Nature, Singapore. ISBN: 978-981-13-8921-4 Pp. 59-77</li> <li>5. <b>Raghuram, N.</b> and Sharma, N. (2019). Improving Crop Nitrogen Use Efficiency. In <b>Comprehensive Biotechnology, Vol. 4</b>, Moo-Young, M., Ed., Elsevier:Pergamon; pp 211–220. <a href="https://dx.doi.org/10.1016/B978-0-444-64046-8.00222-6">https://dx.doi.org/10.1016/B978-0-444-64046-8.00222-6</a>.</li> <li>6. Sutton, M.A., <b>Raghuram, N.</b>, Adhya, T. et al. (2019). The Nitrogen Fix: From nitrogen cycle pollution to nitrogen circular economy. In: <b>Frontiers 2018/19: Emerging Issues of Environmental Concern.</b> United Nations Environment Programme, Nairobi. Pp: 52-65.</li> <li>7. Mukhi, S. and <b>Raghuram, N.</b> (2019). Ethical practices in science outreach. In: <b>Ethics in science education, research and governance</b>, Muralidhar K., Ghosh, A., and Singhvi, AK (Eds), Indian National Science Academy, New Delhi. Pp: 97-102</li> <li>8. Mandal, V., Sharma, N. and <b>Raghuram, N.</b> (2018). Molecular Targets for Improvement of Crop Nitrogen-Use Efficiency: Current and Emerging Options. In <b>Engineering nitrogen utilization in crop plants</b>, Shrawat, A, Zayed, A, Lightfoot, DA (Eds) Springer, ISBN: 978-3-319-92958-3 Pp. 77-93</li> <li>9. Abrol, Y. P., Adhya, T. K., Aneja, V. P., <b>Raghuram, N.</b>, Pathak, H., Kulshrestha, U., Sharma, C. and Singh, B. (Eds) (2017). <b>The Indian Nitrogen Assessment: Sources of Reactive Nitrogen, Environmental and Climate Effects, Management Options, and Policies</b>, Elsevier, UK. ISBN: 978-0-12-811836-8. 538p.</li> <li>10. Sutton, M. A., Drewer, J., Moring, A., Adhya, T., Ahmad A., Bhatia, A., Brownlie, W., Dragosits, U., Ghude, S. D., Hillier, J., Hooda, S., Howard, C. M., Jain, N., Kumar, D., Kumar, R. M., Nayak, D. R., Neeraja, C. N., Prasana, R., Price, A., Ramakrishnan, B., Reay, D., Singh, R., Skiba, U., Smith, J. U., Sohi, S., Subrahmanyam, D., Surekha, K., van Grinsven, H.J.M., Vieno, M., Voleti, S. R., Pathak, H. and <b>Raghuram, N.</b> (2017). The Indian nitrogen challenge in a global perspective. In: <b>The Indian Nitrogen Assessment: Sources of Reactive Nitrogen, Environmental and Climate Effects, Management Options, and Policies.</b>: Abrol, Y. P., Adhya, T. K., Aneja, V. P., <b>Raghuram, N.</b>, Pathak, H., Kulshrestha, U., Sharma, C. and Singh, B. (Eds) Elsevier, UK. ISBN: 978-0-12-811836-8. Pp. 9-28</li> <li>11. Bhattacharya, S., Adhya, T.K., Pathak, H., <b>Raghuram, N.</b> and Sharma C. (2017) Issues and Policies for Reactive Nitrogen Management. In: <b>The Indian Nitrogen Assessment: Sources of Reactive Nitrogen, Environmental and Climate Effects, Management Options, and Policies.</b>: Abrol, Y. P., Adhya, T. K., Aneja, V. P., <b>Raghuram, N.</b>, Pathak, H., Kulshrestha, U., Sharma, C. and Singh, B. (Eds) Elsevier, UK. ISBN: 978-0-12-811836-8. Pp. 491-512</li> </ol>								
<p>No. of Conferences</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td data-bbox="511 1726 904 1789" rowspan="2" style="text-align: center; vertical-align: middle;">National</td> <td data-bbox="911 1726 1203 1789" style="text-align: center;">Attended</td> <td data-bbox="1203 1726 1489 1789" style="text-align: center;">Organized</td> </tr> <tr> <td data-bbox="911 1789 1203 1858" style="text-align: center;">67</td> <td data-bbox="1203 1789 1489 1858" style="text-align: center;">18</td> </tr> <tr> <td data-bbox="511 1858 904 1927" style="text-align: center;">International</td> <td data-bbox="911 1858 1203 1927" style="text-align: center;">83</td> <td data-bbox="1203 1858 1489 1927" style="text-align: center;">8</td> </tr> </table>	National	Attended	Organized	67	18	International	83	8
National	Attended		Organized						
	67	18							
International	83	8							
<p>Research Guidance</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td data-bbox="511 1936 904 2001" style="text-align: center;">Awarded</td> <td data-bbox="911 1936 1078 2001" style="text-align: center;">PG</td> <td data-bbox="1078 1936 1235 2001" style="text-align: center;">M. Phil</td> <td data-bbox="1235 1936 1489 2001" style="text-align: center;">Doctorate</td> </tr> </table>	Awarded	PG	M. Phil	Doctorate				
Awarded	PG	M. Phil	Doctorate						

		18		8
	Undergoing	1		4
Research Projects	Completed	10		
	Undergoing	2		
Awards & Distinctions	<ol style="list-style-type: none"> <li>1. Member, National Steering Committee on Sustainable Nitrogen Management (2021-24)</li> <li>2. Elected <b>Chair</b>, International Nitrogen Initiative (2019-22) &amp; Co-Chair, N2021</li> <li>3. <b>Guest Editor</b>, <i>Frontiers in Plant Science, Environ. Res Letters and Env. Res. Commun</i></li> <li>4. <b>Springer-Nature Badge for Editorial Excellence</b> of PMBP for 2019 and 2020</li> <li>5. Editorial Board Member, <i>Frontiers of Agricultural Science and Engineering</i></li> <li>6. <b>INSA Teachers Award</b>, Indian National Science Academy, (2017)</li> <li>7. <b>Editor-in-Chief</b> of SpringerNature journal, <i>Physiology and Molecular Biology of Plants</i></li> <li>8. Profiled in 'Eureka' show on Rajya Sabha TV Channel of Indian parliament (2017)</li> <li>9. Member, Steering Committee &amp; Task Forces of <b>UNEP-GPNM</b> (2013 onwards).</li> <li>10. Profiled in the US journal, <i>Science</i> Special Section on Education (July 2007).</li> <li>11. <b>Best Teacher Award</b>, GGS Indraprastha University (India, 2004).</li> <li>12. <b>INSA-Royal Society</b> (UK) visiting fellowship awardee (2001).</li> <li>13. <b>Best Poster Award</b>, Society of Biological Chemists (India, 1997).</li> <li>14. CSIR post-doctoral Research Associateship awardee (1995).</li> <li>15. JRF and SRF awarded through UGC/CSIR-NET, 1988 and UGC-NET, 1984.</li> <li>16. NCERT Merit Scholarship &amp; Best Seminar Speaker Cup awardee in M.Sc. (1982-84).</li> <li>17. College First in Zoology, English and Telugu in B.Sc.</li> </ol>			
Administrative Assignments Handled	<ol style="list-style-type: none"> <li>1. Member, National Nitrogen Steering Committee (2021 onwards)</li> <li>2. Member, RAC, Indian Instt of Rice Research (ICAR, 2019 onwards)</li> <li>3. Member of DBT expert committees (2017 onwards)</li> <li>4. Chairman, Scientist selection committee, UNESCO-RCB, Faridabad (2021)</li> <li>5. Member, COVID task force, GGSIPU (2020 onwards)</li> <li>6. Chief Vigilance Officer of GGSIPU (2019 onwards)</li> <li>7. Member, DST-NSTMIS expert committee (2017 onwards)</li> <li>8. Chairman, Institutional Biosafety committee, GGSIPU (2017 onwards)</li> <li>9. Former Chairman of GGSIPU committees for projects, conferences, publications</li> <li>10. Former Member, Library, Colloquium &amp; Science Club Committees, GGSIPU</li> <li>11. Former member, Special Committee, SBT, JNU, New Delhi</li> <li>12. Former Dean, School of Biotechnology, GGSIPU</li> <li>13. Former member, Academic Council, GGSIPU</li> <li>14. Former Associate Director, Academic Affairs, GGSIPU</li> <li>15. Former Hon. Director, South Asian Nitrogen Centre, New Delhi, and Member, INI-SC</li> </ol>			
Association with Professional Bodies	<ol style="list-style-type: none"> <li>1. International Nitrogen Initiative (2008 onwards)</li> <li>2. President, Society for Conservation of Nature and co-founder, Indian Nitrogen Group</li> <li>3. President and Trustee, Sustainable India Trust, New Delhi.</li> <li>4. Vice President, Prof. H.S. Srivastava Foundation for Science and Society, Lucknow</li> <li>5. Former Vice President and Secretary, Society for Scientific Values, India</li> <li>6. Member (external), Ethics policy committee (2014-15), JNU, New Delhi</li> <li>7. President, Indraprastha University Teachers Association (2012-2013)</li> <li>8. Life Member, Society of Biological Chemists,</li> <li>9. Life Member, Indian Society for Photobiology</li> <li>10. Life Member, Indian Science Writers' Association</li> <li>11. Former Member, American Society for Plant Biology (ASPB), USA.</li> <li>12. Former Member, Society for Experimental Biology (SEB), UK.</li> <li>13. Former Member, Federation of European Societies for Plant Physiology (FESPP), EU.</li> <li>14. Former Member, ICMR Committee for National Digital Archives on Dr. YSR, NIN.</li> <li>15. Co-ordinator, UDLS-Sc-WRIC Training Workshop for College Teachers (1997).</li> <li>16. Consultant, Hindustan Lever Research Centre, &amp; BSV Ltd., Mumbai (1998-99).</li> <li>17. NUE workshop, Organizer, UN Food Systems PreSummit session on N</li> </ol>			