

1. Name : Yennapu Madhavi
2. Date of Birth : 04-05-1964 (Fourth May nineteen sixty four)
3. Present Grade : Senior Principal Scientist
4. Address : National Institute of Science  
Technology and Development Studies (NISTADS), CSIR, Dr.  
K S Krishnan Marg, Pusa Complex, New Delhi-110012.

#### 5. Educational Qualifications

Degree	Year of passing	University/Instt.	Subject	Div./Class/Grade
B.Sc.	1984	Andhra University	Zoology (main) Botany & Chemistry (ancillary)	First
M.Sc.	1986	Jawaharlal Nehru University (JNU), New Delhi	Life Sciences (Cytogenetics, Mol.Biol, Biochem, Biophys, Biostats, Microbiol, Physiol, Dev.Biol etc.)	Second
M.Phil/Ph.D. Course work	1987	JNU, New Delhi	Mol.Biol, Immunol, Cancer & Radiation Biol, Neurobiol.	A Grade
Ph.D.	1992	JNU, New Delhi	Life Sciences (Radiation Biology)	
Diploma in development policy and planning	1993	Institute of Economic Growth, New Delhi	Basic economics, quantitative economics, Development economics, Agriculture & Rural Development, Planning & Policy and Industrial development & Policy	A Grade

#### 6. Fellowship/Membership of Professional Societies:

- Indian Academy of Social Sciences (IASS) (Life member)
- Society for Social Studies of Science (4S, USA) (member)

#### 7. Employment details

Grade/Post	From	To	Estt. /Lab./Instt.
Scientist B	27-7-1992	27-7-1997	NISTADS
Scientist C	27-7-1997	27-7-2001	
Scientist E1	27-7-2001	27-7-2006	
Scientist E 2	27-7-2006	27-7-2011	
Scientist F	27-7-2011	Till date	

#### 7. Details of Project activities

Title of the Project	Your role (project coord/PL/Member etc.)	Date of commencement of the project	Date of completion (anticipated) of the project	Project category
Linkages and Innovation Strategies in Vaccine R&D and Production in India	Principal investigator	Oct 1994	Oct 1999 (Generated knowledge base on vaccine S & T status in India and published papers in national and international journals.	In-house
Modern biology research in India: An analysis	Member	Nov 2002	April 2003. The completed work was cited in ( <a href="http://www.iornet.org/newiornet/sectoral/biotechnology/index.htm">http://www.iornet.org/newiornet/sectoral/biotechnology/index.htm</a> )	In-house
Vaccine STS for Research and Policy	Principal investigator	Nov 2005	March 2012	In-house
Vaccinology and global dynamic	Member	Submitted to Norwegian research council in Aug 2008	a multi-country collaborative project with Prof. Stuart Blume, University of Amsterdam.	Submitted for a sponsored project
Global Strategy and Plan of Action on Public Health, Innovation & Intellectual Property (GSPOA) in India	Member	Sponsored by WHO regional office India	Completed in March 2012	Sponsored project

### A Brief Profile:

Y. Madhavi is biologist by training with Ph.d (1991) in life sciences from Jawaharlal Nehru University (JNU), New Delhi, joined NISTADS in 1992. She has been working in NISTADS for the last 26 years on the vaccine S&T developments in India and its impact on society and implications for policy. She explored areas such as drug policy, drug price control, industry-institute interactions in Vaccine R&D and production, before identifying and developing “Vaccine STS and Policy” as a niche area of research for the first time in NISTADS and the country at large.

Her research on vaccine STS started with full scale field-survey-based empirical study through an in-house project “Linkages and Innovation Strategies in Vaccine R&D and Production in India” was the first in the country to specifically address why India has not been able to develop institutional mechanisms to reduce the demand-supply gap in vaccines (Madhavi 1997). This is in spite of the fact that Indian vaccine R&D institutions are the oldest models of modern medical research in India and therefore, the “catch up” syndrome typical to late entrants does not apply to India in this case. Her empirical study revealed that the factors that limited innovative R&D in the pre-independence period continued even after independence. These include: excessive emphasis on production of crude vaccines rather than continuous improvement through research, poor linkages between research institutions and production centres, rigidity in recruitment and promotional policies, lack of interdisciplinary

approach, obsolescence of infrastructure and talent, diversion to other routine functions, lack of managerial commitment to innovation and consequent lack of incentives for it, inadequate or inconsistent supply of resources, excessive dependence on foreign sources for technology and /or production etc. Some of these aspects have been brought out in her publications.

### **Significant Research output:**

Published 27 research papers so far in national and international peer reviewed journals. Published 6 book chapters, 9 technical reports/working papers/bulletins and 5 articles in popular media. Organised 2 workshops, participated and presented papers in 51 national & international seminars/conferences/workshops. Organization of national consultation on sustainable national vaccine policy in June 2009 and subsequent publication of the same in Indian journal of Medical Research with 36 authors has been the major milestone. My work is cited by popular print media and my research work is the single source of information on vaccine STS in the country and abroad.

Significant contributions such as a scientific correspondence in journal 'Nature' on Indian science publication output & a book chapter on the same, and technical reports such as i) A case study on National Institute of Immunology and Vaccine R&D, ii) a study of hepatitis B introduction in India, and iii) A policy bulletin on affordable healthcare: The Indian Perspective, are few examples to cite. One more report is being prepared on situation analysis of current vaccine scenario in India.

Participated in Salzburg seminar, Austria, a workshop in Amsterdam and the famous Paul Ehrlich II (2008) at Germany on invitation.

### **Research Highlights**

1. Established Vaccine STS & set the agenda for science-based policy in public health
2. Publications became the source of all information related to vaccine STS and policy issues.
3. Generated critical knowledgebase for informed decisions, especially regarding:
  - *Vaccine utility, demand and supply;*
  - *Vaccine development, production or procurement*
  - *Universal vs. selective vaccination*
  - *Individual vs. combination vaccines*
4. Illumination of the sectoral impact of the changing economic environment
  - *Public sector decline, its impact on R&D, Production & affordable access to vaccines*
  - *private sector growth, its impact on the availability and cost of vaccines*
5. Timely intervention in Hepatitis B policy debate through scientific dissemination.
6. Peer recognition among national and international experts in the vaccine area.
7. Peer reviewed articles on vaccines in reputed journals.
8. Examined Ph.d thesis of students (national & international) as an expert reviewer on 'vaccine STS and policy'.
9. Provided knowledge on vaccine technology and production related information as informal consultation to parents, consultancy organisations, academia, companies and media.

### **Organised Two Workshops**

1. One day workshop was organized on 'Health economics' on 18<sup>th</sup> Dec 2007.
2. Two day brainstorming workshop on 'Sustainable national Vaccine Policy' in 4-5<sup>th</sup> June 2009. (Workshop output was a policy draft published in IJMR May 2010 for a wider national/international discussion)

Both these workshops were interdisciplinary in nature with wide participants such as academia, technologists, bench workers, medical doctors, public health researchers, civil society, government officials, lawyers, Economists, etc.

## List of Publications:

### Journal Publications

1. Raghuram, N., **Madhavi, Y.**, 1996. India's Declining Ranking: A scientometric study of Indian scientific output vis-a-vis world trends. *Nature*, 383, Oct 17, 572. doi:10.1038/383572a0, Impact Factor (IF): 28.417 in 1996 and 41.456 in 2015.
2. **Madhavi Y.**, 1997. Vaccine research: A case for National innovation Strategy. *Current Science* **73**, 25-30. Impact Factor (IF): 0.376 in 1997 and 0.833 in 2015.
3. **Madhavi Y.**, 2003. The Manufacture of consent? Hepatitis B vaccination, A special article. *Economic and Political Weekly (EPW)* **38 (24)**, 2417-2424.
4. **Madhavi Y.**, 2005. Vaccine Policy in India. *PLOS Medicine Weekly*, May 2005, **2(5)**, e127, 0387-0391. Impact Factor (IF): 8.389 in 2005 and 15.25 in 2015.
5. **Madhavi Y.**, 2006. New combination vaccines: Backdoor entry into India's Universal Immunization Programme? *Current Science*, 10 June, **90 (11)**, 1465-1469. Impact Factor (IF): 0.737 in 2006 and 0.833 in 2015.
6. **Madhavi Y.**, 2007. Transnational factors and national linkages: Indian experience in Human Vaccines. *Asian Biotechnology and Development Review (ABDR)*, **9(2)**, 1-43.
7. Puliye J and **Madhavi Y.**, 2008. Vaccines: Policy for Public good or private profit? *Indian Journal of Medical Research, IJMR*, 127, 1-3. PMID:18316845, Impact Factor (IF): 1.883 in 2008 and 1.666 in 2015.
8. K.C. Garg, Suresh Kumar, **Y. Madhavi**, Mala Bahl, 2009. Bibliometrics of global malaria vaccine research, *Health Information and Libraries Journal*, Published online 18<sup>th</sup> Feb 2009, vol. 26 (1), 22-31. Impact Factor (IF): 1.521 in 2009 and 0.89 in 2015.
9. **Madhavi, Y.** 2009. Home-grown vaccines are crucial for Public Health. Opinion article, 23<sup>rd</sup> Sept 2009. <http://www.scidev.net/en/health/opinions/home-grown-vaccines-are-crucial-for-public-health.html>

10. **Madhavi Y.** 2009. A Book Review on ‘The Vital Drop: Communication for Polio Eradication in India. Gitanjali Chaturvedi. Sage Publications India Pvt Ltd, new Delhi. Current Science, 10 July, 97 (1): 108. Impact Factor (IF): 0.782 in 2009 and 0.833 in 2015.
11. **Madhavi Y.** 2009. Meeting local needs in global times: The Case of Universal vaccines in India, Journal of Health studies, Nov, vol 2, 81-105.
12. Dabade G., JSA., CSSM, SAMA, **Madhavi Y** et al., 2010. Concerns around Human Papilloma virus (HPV) Vaccine, Debate, Indian Journal of Medical Ethics (IJME), Jan - Mar 2010, Vol 7 (1): 38-41.
13. **Madhavi Y.**, Puliye J.M., Mathew J.L, Raghuram, N., Phadke, A., Shiva, M., Srinivasan, S., Paul, Y., Srivastava, R.N., Parthasarathy, A., Gupta, S., Ranga, U., Vijayalakshmi V., Joshi, N., Nath, I., Gulhati, C.M., Chatterjee, P., Jain, A., Priya, R., Dasgupta, R., Sridhar, S., Dabade, D., Gopakumar, K.M., Abrol, D., Santhosh, M.R., Srivastava, S., Visalakshi, S., Bhargava A., Sarojini, N.B., Sehgal, D., Selvaraj, S., Banerji, D. (2010) Evidence-based national vaccine policy. Indian J Med Res 131, May 2010, pp 617-628. **PMID:**20516532, Impact Factor (IF): 1.826 in 2010 and 1.666 in 2015.
14. **Madhavi Y.**, and Raghuram. N, 2010. Crisis of speculation: Donors should fund only proven vaccine needs and local capacity-building, Rapid responses, British Medical Journal, May 17 2010. ([www.bmj.com/cgi/eletters/340/may12\\_3/c2576](http://www.bmj.com/cgi/eletters/340/may12_3/c2576)).  
doi: <http://dx.doi.org/10.1136/bmj.c2576> , Impact Factor (IF): 16.3 in 2010 and 17.445 in 2015.
15. **Madhavi Y.**, and Raghuram. N, 2010. Pentavalent & other new combination vaccines: Solutions in search of problems, Indian J Med Res, October 2010, 132: 456-457. **PMID:**20966526, Impact Factor (IF): 1.826 in 2010 and 1.666 in 2015.
16. Sarojini N B., Sandhya S., **Madhavi Y.**, Srinivasan S., and Anjali S, 2010. The HPV Vaccine: Science, Ethics and Regulation, Economic & Political Weekly (EPW) Nov 27, 48: 27-34.
17. Amit Sengupta, Anjali Shenoy, Sarojini N B and **Madhavi.Y.**, Human Papilloma vaccine trials in India, The Lancet, [Volume 377, Issue 9767](#), Page 719, 26 February 2011. ([http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(11\)60270-5/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)60270-5/fulltext))  
[http://dx.doi.org/10.1016/S0140-6736\(11\)60270-5](http://dx.doi.org/10.1016/S0140-6736(11)60270-5), Impact Factor (IF): 38.278 in 2011 and 39.06 in 2015

18. Dabade G., JSA., CSSM, SAMA, **Madhavi Y** et al., 2010. Concerns around Human Papilloma virus (HPV) Vaccine, Debate, Indian Journal of Medical Ethics (IJME), Jan - Mar 2010, Vol 7 (1): 38-41.
  
19. **Madhavi Y.**, and Raghuram N. National vaccine policy in the era of vaccines seeking diseases and governments seeking public private partnerships, Current Science, Vol.102, NO. 4, 25 Feb 2012.p 57-58. Impact Factor (IF): 0.905 in 2006 and 0.833 in 2015.
  
20. **Madhavi Y.** vaccines and vaccine policy for universal healthcare. Social Change **June 2013** vol. 43 no. 2, **263-291**.
  
21. **Madhavi Y.**, (2014), An invited discussant Rapid response to an article titled '*Assessment of causality of individual adverse events following immunization (AEFI): a WHO tool for global use*', by Tozzi AE. Vaccine. 2013, in pubmed commons. Published online In: [http://www.ncbi.nlm.nih.gov/pubmed/24021304#cm24021304\\_2779](http://www.ncbi.nlm.nih.gov/pubmed/24021304#cm24021304_2779)  
Impact Factor (IF): 3.485
  
22. **Madhavi Y.** (2014), An invited discussant in the first journal club discussion forum[<https://brightoncollaboration.org/public/resources/forum/thread-list.html?forumId=daa4c392-fe61-49f6-b1e9-b4fba4ffc35f>]. in response to an article on ' May 2014: Intussusception risk associated with rotavirus vaccines' published online on 10<sup>th</sup> June 2014 titled 'Risk assessment of intussusceptions with rotavirus vaccine in developing countries'. [file:///G:/all%20in%20one%20folder/madhvi/madhaviarticles/Thread%20view-intusseseption%20rota%20vaccine.htm]
  
23. **Y. Madhavi** (2015), In response to an invited discussant in journal club discussion forum from Brighton Collaboration on "Quadrivalent vaccination and risk of multiple sclerosis & other demyelinating diseases of the central nervous system" By Scheller et al., July 2015, JAMA, 313(1):54-61. My response published online [<https://brightoncollaboration.org/public/resources/forum/thread-view.html?threadId=6b907512-bc3d-40e3-b999-f12d00261d45&page=1>]
  
24. **Y. Madhavi** (2015), A response to an article on "Active surveillance for intussusception in a phase III efficacy trial of an oral monovalent rotavirus vaccine in India", John et al., Vaccine, 32 Suppl 1 (2014), Pubpeers, an online discussion forum, Nov 2015, USA. [https://pubpeer.com/publications/481C3202AB9864F8BE9DD4457921D2?utm\\_source=Chrome&utm\\_medium=ChromeExtension&utm\\_campaign=Extensions](https://pubpeer.com/publications/481C3202AB9864F8BE9DD4457921D2?utm_source=Chrome&utm_medium=ChromeExtension&utm_campaign=Extensions)
  
25. **Madhavi Y**, 'Editorial: How many vaccines does a child need?', MFC Bulletin, July-Nov 2016, Vol.371-372, 1-3.
  
26. N. Raghuram and **Y. Madhavi**, 'National Consultation and Vaccine Policy: What we wanted and what we got', MFC Bulletin, July-Nov 2016, Vol.371-372, 19-23.

27. Sarojini N, **Madhavi Y**, Veena Johari, ‘HPV vaccination for the greater good – but is it?’, MFC Bulletin, July-Nov 2016, Vol.371-372, 54-57.

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### **Book Chapter Publications**

1. Raghuram, N., **Madhavi, Y.**, 1999. Are Indian Scientists losing in the World Publishing Race? In: Emerging Trends in Scientometrics and Informetrics, edited by P. S. Nagpaul, *Allied publishers*, New Delhi.
2. **Madhavi Y.**, 2008. Indian Biopharmaceutical system and policies. In: Advances Biopharmaceutical Technology in India, *Bioplan Associates Inc.* Rockville, USA.
3. **Madhavi Y.**, 2010. Liberalization: Its impact on Indian Vaccine S & T and Implications for National Vaccine Policy In : ‘Liberalizing Research in Science and Technology: Studies in Science Policy ‘// Edited by Nadia Asheulova, Binay Kumar Pattnaik, Eduard Kolchinsky, Gregory Sandstrom. Russian Academy of Sciences & IIT kanpur, Saint-Petersburg: Politechnika, 2010.
4. **Madhavi Y.**, “Globalization and its Impact on National Vaccine Innovation System in India”, Conference proceedings (in Press) on ‘Globalisation and India’s Innovation Systems: A ‘Creative Destruction’?’, 4-6<sup>th</sup> Feb 2017, Editor: Girish Kumar, ISBN- 978-93-80419-35-0. Published as a book by Mahatma Gandhi University, Kottayam, Kerala.
5. **Madhavi Y.** “Public Health in Small Nations: The Capacity Building”, Conference proceedings on “Science and the Small Nations. Bridging the Gaps: A science Diplomacy Initiative”, Co-organised by Zaheer Science Foundation & UNESCO, on 14-16 Nov 2017 at ICC Auditorium, India Islamic Cultural Centre, Lodi Road, New Delhi.
6. **Madhavi Y.** “Vaccines and vaccine policy for universal healthcare”. In: “Universalising Health Service in India: A Journey through Time from Care to Coverage”, Qadeer I., Saxena K. B., and Arathi PM (Editors.), Daanish Publishers, forthcoming.

### **Technical Reports & Working Papers**

1. Madhavi Y., 1993. ‘New Drug policy 1992 and the growth of the drug industry.’ **REP-134B/93**, NISTADS. This is a part of project done during 4 months training on ‘Development policy and Planning’ in the Institute of Economic Growth, Delhi.
2. Madhavi Y., 1995. ‘Linkages in vaccine biotechnology in India: Towards techno-economic networks in vaccine production’. **WP-104/95**, NISTADS, New Delhi.

3. Madhavi Y., 2001. Liberalization and the cost-benefit aspects of vaccines: the case of hepatitis B. Working paper series 1, **CHS/WP/01/01**. Mumbai: Centre for Health Studies, Tata Institute of Social Sciences, Mumbai, November, 1–44 (under *Ford Foundation Fellowship*).
4. **Madhavi. Y.** 2008. Vaccine PSUs: Chronicle of an attenuation willfully caused. *Medico Friends Circle Bulletin (MFC)*, 329, 1-7.
5. **Madhavi, Y.**, 2009. Human Vaccine science and technology status in India. In: India science and technology: 2008 Report, Editor, P Banerjee, National Institute of Science Technology and Development Studies, New Delhi (<http://www.nistads.res.in/indiasnt2008/>).
6. **Madhavi Y.** Regulation of vaccine clinical trials in India, T3-133-136. In: India, science and technology: 2010-11 Report, Editor, P Banerjee, National Institute of Science Technology and Development Studies, New Delhi ([http://www.nistads.res.in/indiasnt2010-11/index\\_India\\_S&T\\_2010-11.php](http://www.nistads.res.in/indiasnt2010-11/index_India_S&T_2010-11.php))
7. **Madhavi Y.** (2014), Healthcare Services and Capacity Development for Rural India under Globalization and Privatization, a chapter, In: **India: Science and Technology**, Vol.3, edited by National Institute of Science, Technology and Development Studies (CSIR-NISTADS), Cambridge University Press, New Delhi, under Section 4 titled Rural India: S&T for Skills and Employment, Dec 2014. Pages 69-74.
8. **Madhavi Y.** and Anubha Mahajan (2015), Affordable Healthcare: The Indian Perspective. A policy bulletin No.8, March 2015, published by NISTADS.
9. **Madhavi Y** (2016), ‘Economic Evaluation: A tool for introducing new vaccines in Universal Immunization Programme’ in a national workshop on “Consultation on Economic Evaluation of Vaccines”, A report on consultation held on 29<sup>th</sup> April 2016, at Centre for Technology and Policy (CTaP), IIT Chennai.

#### **List of publications in newspapers/Magazines/ News letters**

1. **Madhavi Y** and Raghuram N., 1995. N. Drug Policy - 1994, I: Adding to the Citizens' Woes. *The Hindu Businessline*, Chennai, June 08.
2. **Madhavi Y** and Raghuram N., 1995. Drug Policy - 1994, II: Mortgaging Peoples' Health. *The Hindu Businessline*, chennai, June 09.
3. **Madhavi Y** and Raghuram N., 1995. GATting drugs; Not getting them. *Down To Earth*, April 30, 1995.

4. **Madhavi Y.**, 2000. Research & production in the Haffkine Institute: a century and beyond. *Association for Consumers Action on Safety and Health (ACASH) News*, Mumbai, July–Sept; **14 (3)**, 13–15.
5. **Madhavi Y**, 2000. The issue of equity in primary vaccine technology development and its implications on the implementation of vaccine policy in India. *Social Sciences and Health News Letter*, **2 (1 & 2)**, Oct 2001, 5-17.

### **Presentations in Conferences/Workshops/Seminars**

1. Raghuram, N., **Madhavi, Y.** And Mohanty, P (1994). “Draft paper for a new technology policy (1993) – a critique”. Oral presentation at the *symposium on ‘Science in India – pre and post-independent era’*, Sept 1994, Bose institute, Calcutta
2. **Madhavi, Y** and Raghuram, N (1994). “Scientific Research and Social Realities in India – The case of radiation biology and the low dose radiation controversy”. Oral presentation at *symposium on ‘Science in India – pre and post-independent era’*, Sept 1994, Bose institute, Calcutta.
3. Raghuram, N., **Madhavi, Y** (1997). Are Indian Scientists losing in the World Publishing Race? Oral presentation at the seminar, **Emerging Trends in Scientometrics and Informetrics**, Feb 6-7, 1997, NISTADS, New Delhi. (General interest in S&T studies)
4. **Madhavi, Y** (1997). “Transnational S&T Vs. Self Reliance: the Indian Experience in Vaccines” accepted for oral presentation in the *International conference of the Society for Social Studies of Science on ‘Transnational meets Ethnoscience’*, 23-26 Oct 1997, at Tucson, Arizona, USA.
5. **Madhavi, Y** (1997). “Vaccine research and technology development in India”. Oral presentation at the workshop on **Social Science and Immunization**, Dec 5-6, 1997, Delhi School of Economics, New Delhi. (Part of ongoing project on vaccines, 1995-98)
6. **Madhavi Y** (1999). ‘Science and public policy in developing country context: The case of vaccine research in India’, at the *Salzburg Seminar on Scientific Development and the Democratic process*, June 16-23, 1999 at Leopoldskron, Salzburg, Austria. (Participating as a Fellow of the Session 368).
7. **Madhavi Y** (2000). ‘The Controversy around Hepatitis-B vaccine in Universal Immunization Programme. July 14<sup>th</sup> 2000, *Centre for Health Studies, Tata Institute of Social Science*, Mumbai.

8. **Madhavi Y** (2001). 'Globalization and Vaccines'. Oral presentation at the *TISS & FOCUS on the Global South* (India Programme) *National Seminar 'Structural Adjustment Policies and Social Sector'*, 29–31 Jan, **2001**, Mumbai.
9. **Madhavi Y** (2002). "Hepatitis B vaccination: international experience and Indian options", *seminar presentation*, 25<sup>th</sup> June **2002**, NISTADS, New Delhi.
10. **Madhavi Y** (2002). "Changing pharmaceutical R&D paradigm and the Emerging IPR regime: Implications for healthcare technologies", participated as an *invited discussant in an international conference on 'Health care and food: The challenges of intellectual property, Biosafety and Bioethics,'* 1-5<sup>th</sup> Dec **2002**, NISTADS New Delhi.
11. **Madhavi Y** (2006). "Vaccines for India: Meeting local needs in global times", *International workshop on 'The Global Vaccine System: Its Historical emergence and current vaccine dynamic'* 18<sup>th</sup> to 20<sup>th</sup> Oct **2006** at University of Amsterdam, Amsterdam. Participated as an invited team member from Prof. Stuart Bloom, university of Amsterdam for future *international collaborative project* along with UK, Europe and other developing countries.
12. **Madhavi Y.** and Dinesh Abrol (2006). "The Place of R&D in Indian Pasteur Institutes: Understanding the Colonial Roots of Under-Development". *Third conference of the Asian Society for History of Medicine (ASHM)* on "Health and Medicine in History: East-West Exchange," 2-4 Nov **2006**, School of Social Sciences-I, Jawaharlal Nehru University, New Delhi.
13. **Madhavi Y** (2007). Human vaccines in India: Emerging International influences, 12<sup>th</sup> Oct **2007**, Weekly *seminar*, School of International Studies, JNU, New Delhi.
14. **Madhavi Y** (2007). "Human vaccines: Economic and Policy Issues" in a workshop on "*Public Health Economics and Third World concerns in Health Security*", Dec 18<sup>th</sup> 2007 at Nistads, New Delhi.
15. **Madhavi Y** (2008). "Health & Economic Impacts of YSR's Drug molecules", in a Workshop on '**Archives of the life and works of Dr Yellapragada SubbaRow**', 10<sup>th</sup> March 2008, National Institute of Nutrition, Hyderabad.
16. **Madhavi Y**(2008). "Vaccine choice & disease burden in economics of preventive health", in a Workshop on '**Health Economics**', 11<sup>th</sup> March 2008, National Institute of Nutrition, Hyderabad. **Madhavi Y.** "vaccines: The Magic Wand of Indian Public Health" World conference on Magic Bullets (Ehrlich II) 3<sup>rd</sup> -5<sup>th</sup> October 2008, Nürnberg, Germany.
17. **Madhavi Y** (2008). "Indian Vaccine STS: Meeting local needs in Global Times", 'The Indian Republic at Crossroad', 2<sup>nd</sup> Session of Indian Social Science Congress, 18<sup>th</sup>-21<sup>st</sup> December 2008, Department of Biotechnology, Jamia Milia Islamia, New Delhi.

19. **Madhavi Y** (2009). “Liberalization: Its impact on Indian Vaccine S & T and Implications for National Vaccine Policy” International Conference on ‘LIBERALIZING RESEARCH IN SCIENCE & TECHNOLOGY- STUDIES IN SCIENCE POLICY’, 4<sup>th</sup>-6<sup>th</sup> February 2009, Centre for sociological and science-studies Research, Indian Institute of Technology Kanpur (IITK), Kanpur.
20. **Madhavi Y**(2009). “Indian Vaccine STS and Public Health”, Interaction with Science Students, 20<sup>th</sup> February 2009 Biochemistry Department, Daulat Ram College, Delhi University, Delhi.
21. **Madhavi Y** (2009). “ Access to vaccines: Governance, Regulation and policy” a workshop on ‘Universal Access and Rational Therapy’, India International Centre Annexe, New Delhi, 8-9<sup>th</sup> April 2009.
22. **Madhavi Y** (2009). “Demand-supply gaps in vaccines, status of indigenous production and policy” in a two day long brainstorming workshop on ‘ Sustainable National Vaccine policy’ 4-5<sup>th</sup> June 2009, NISTADS, New Delhi
23. **Madhavi. Y** (2009). “vaccine economics and National Vaccine policy”, 23<sup>rd</sup> July 2009, Institute of Public Health, Public Health Foundation of India, Gurgaon.
24. **Madhavi Y** and N Raghuram (2009). “Vaccines and Patient Safety in India”, In National Patient Safety conference, 12<sup>th</sup> October 2009, All Indian Institute of Medical Sciences, New Delhi.
25. **Madhavi. Y** (2009). ‘New vaccines in National Immunization Programme: Dilemmas & debates’ 8<sup>th</sup> Dec 2009, Tuesday Seminar, NISTADS, New Delhi.
26. **Madhavi.Y** (2010). Issues for evidence-based policy on combination vaccines in the context of pentavalent vaccine for Indian UIP , presented in expert committee meeting on pentavalent vaccine. 24<sup>th</sup> April, 2010. Indian Council of medical Research, New Delhi.
27. **Madhavi Y.** and N. Raghuram (2010). ‘Emerging issues in Vaccine Policy’, Guha Research Conference, 21<sup>st</sup> Dec, 2010, Aurangabad.
29. **Madhavi. Y** (2011) ‘New vaccine introduction in UIP: emerging issues in vaccine policy’, 18<sup>th</sup> Jan, 2011, Dellhi University, Delhi.
30. **Madhavi. Y** (2011). “National/Global interfaces: ‘Fast, Slow or No’: Deciding to introduce the Pentavalent vaccine in India”, Invited Discussant on two day Indo-Norweign “SUM Medic Annual Workshop 2011: Explaining Differential Immunization Coverage” India International Centre, New Delhi, 17-18<sup>th</sup> Feb, 2011.
31. **Madhavi. Y** (2011). ‘Evidence based national vaccine Policy: Agenda for Action. International Seminar on Innovation, Sustainability and Development, co-organised by CDS, Trivendrum, SPRU, UK and NISTADS, New Delhi, New Delhi, 28-30 June 2011.
32. **Madhavi Y** (2011). National vs. Global approaches to vaccine policy: The new face of an old conflict International Seminar Socio-economic and technological innovations in the

globalizing world (STIGE-2011): Mechanism and Institutions NISTADS-Russian Academy of Sciences, 2-5 Nov 2011, NASC Complex, New Delhi.

33. **Madhavi Y. and N. Raghuram** (2011). Vaccine PSUs & Rational Vaccine Policy: PIL in Supreme Court, SP Shukla & Ors Vs. Union of India, National Dialogue Using the Law for Public Health, Co-organised by Human Rights Law Network, LOCOST, PRAYAS & IHES, 17<sup>th</sup> –18<sup>th</sup> Dec 2011, Vishwa Yuvak Kendra, Chanakyapuri, New Delhi.
34. **Madhavi. Y** (2012). ‘National Vaccine Policy: Evidence as the Key’. Seminar on Strengthening of Public Sector Health System for Universal access to Healthcare, 16-17 July 2012, India International Centre, New Delhi.
35. **Madhavi. Y** (2013). “Health sector: Economics of vaccination policy.” An interactive lecture with graduate students in Economics Department in Miranda house, Delhi University on 19<sup>th</sup> Feb 2013 on its 3 day annual function named “The Last Verdict”.
36. **Madhavi Y** (2014). Invited discussant in a Round Table conference on ‘*Governance of Regenerative Medicine and Patients’ Needs in India*’ 2nd July, 2014, IIC Annexe, organized by University of Sussex, RIS and Delhi University.
37. **Madhavi Y** (2014). Invited discussant in a multi-stakeholder discussion on ‘*Facing Our Future: Countering Non-Communicable Diseases in India through Investments in Innovation*’, 4<sup>th</sup> Aug 2014, Strategic Partners Group (SPAG Asia) New Delhi.
38. **Madhavi Y.& Anubha Mahajan** (2014). ‘*Access to affordable Healthcare in Post Liberalization in India*’, 25<sup>th</sup> Nov 2014, CSIR-NISTADS, New Delhi.
39. **Madhavi Y**(2014). Invited consultant on ‘*Consultations on potential biologics in enhancing healthcare outcomes and Barriers to access*’, 13<sup>th</sup> Dec 2014, New Delhi.
40. **Madhavi Y**(2015). Invited participant in ‘*Bridging the Gap: 4th Healthcare Leaders Forum (HLF)*’ on March 12, 2015 at Hotel Royal Plaza, New Delhi.
41. **Madhavi Y.** (2015). Invited discussant on ‘Workshop on Clinical Trial Regulations of India,’ 2<sup>nd</sup> Dec, 2015, RIS, India Habitat Centre, New Delhi.
42. **Madhavi Y**(2015). “*Preventive Medicine and Vaccination Policy*”, National Workshop on “Law and Medicine” Organized by University School of Law & Legal Studies GGSIP University, New Delhi on 20<sup>th</sup> March, 2015.
43. **Madhavi Y** (2016). An invited participant on A national seminar on ‘Access to Medicines and Compensation for Clinical Trial Injuries’ was held in on 14 April 2016, India International Centre, New Delhi.
44. **Madhavi Y** (2016). Invited oral presentation on ‘Economic Evaluation: A tool for introducing new vaccines in Universal Immunization Programme’ in a national workshop on “Consultation on Economic Evaluation of Vaccines” on 29<sup>th</sup> April 2016, at Centre for

Technology and Policy (CTaP), IC&SR Building – Hall 1, IIT Chennai. (This consultation was published as a report).

45. **Madhavi Y** (2016). An invited discussant in a Roundtable Discussion on ‘IPR, Access to Technology and Policy Interventions’ at 10.30 a.m. on Saturday, 4 June 2016 at G. Parthasarathi Conference Hall in RIS.
46. **Madhavi Y** (2016). Invited presentation on ‘Balancing priorities in policy making’ at National Seminar on ‘New Vaccines for All: Why, Which, When?’, October 20-21, 2016, NDC Conference Hall, NIHF, New Delhi.
47. **Madhavi Y** (2016). Participated in an invited panel discussion of NMML& Brookings India study on “Health and Morbidity in India: Evidence and Policy Implications”, on Friday 2<sup>nd</sup> of December 2016 at 3:00 pm, at the auditorium of the Library Building, Teen Murti House, New Delhi.
48. **Madhavi Y** (2017). Invited participant in group discussion on “Chronic diseases in relation to Poverty”, Jan Swasthya Sahyog, Ganiyari (near Bilaspur), Chhattisgarh, Medico friends circle annual meet on 28-29 January 2017.
49. **Madhavi Y** (2017). “Globalization and its Impact on National Vaccine Innovation System in India”, International Seminar on “Globalisation and India’s Innovation Systems: A ‘Creative Destruction’?”, 4-6 February 2017 at K. N. Raj Study Centre for Planning and Centre-State Financial Relations and Business Innovation and Incubation Centre Mahatma Gandhi University, Kottayam, Kerala.
50. **Madhavi Y** (2017). Invited resource person on “Evidence based vaccine STI policies for Public Health”, for a Training Program on Science Technology and Innovation Policy for SAARC countries co-organized by Zaheer Science Foundation & UNESCO 13-17 Feb 2017, INSA, New Delhi.
51. **Madhavi Y**. Invited participant of an interactive talk on “Right Care Movement in the US”, 28 February 2017 (2.30 pm to 4.00pm) at YMCA Tourist Hostel, Jai Singh Road, Parliament Street, New Delhi.
52. **Madhavi Y** (2017) ‘Public Health in Small Nations: The Capacity Building’ International Conference on “Science and the Small Nations. Bridging the Gaps: A science Diplomacy Initiative”, Zaheer Science Foundation & UNESCO, 14-16 Nov 2017, IICC Auditorium, India Islamic Cultural Centre, Lodi Road, New Delhi.
53. **Madhavi Y** (2018). Invited participant in the Expert Consultation 7th April 2018 “New Drugs and Clinical Trial Rules 2018 “SAMA for women’s health, RIS, India Habitat Centre, New Delhi
54. **Madhavi Y** Invited for panel discussion on a book release on a book ‘Health beyond medicine: Reflections on politics and sociology of Health in India’ Aakar books publications, Delhi authored by Vikas Bajpai and anoop Saraya, 17<sup>th</sup> May 2018, centre for social development, Lodi estate, New Delhi.
55. **Madhavi Y** Invited discussant ‘Ethics in Science’ 16-17 June 2018 INSA, New Delhi

- 56. Madhavi Y (2018).** Invited discussant on ‘Patently Unaffordable: Medicines, Patents and Access’ 11th October 2018 by SAMA for Women’s health, IIC, New Delhi.
- 57. Madhavi Y (2018).** ‘chaired a session on patents on biologicals and regulations’ Pharma Patents – Grants, Errors & Rejections in India & related developments, 2-3 December 2018, Lemon Tree premier, Bengaluru, India. Organised by Access-IBSA.
- 58. Madhavi Y (2018)** Invited for expert suggestions and comments on a project “FDI in R&D and Development of National Innovation Capabilities: A Case Study of India”, 20 December 2018, Institute for Studies in Industrial Development, Vasant Kunj, New Delhi.