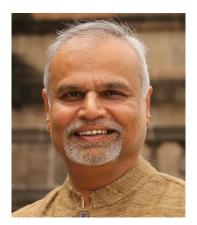
Curriculum Vitae*

Professor Bhushan Patwardhan, PhD, FNASc, FNAMS



Chairman National Assessment and Accreditation Council Executive Committee, Former Vice Chairman, University Grants Commission and Chairman Indian Council of Social Science Research. Member of several academic research and policy committees such as NITI Aayog, Planning Commission, Lancet Citizen's Commission, National Board of Examination, NCIM Health Research Institute Australia. Fellow, National Academy of Sciences and National Academy of Medical Sciences (India). Currently, he is Ayush India Lead for the Global Center for Traditional Medicine, World Health Organization Geneva, Chairman Interdisciplinary R&D Taskforce on Covid-19, and

member, and Founder Editor-in-Chief, Journal of Ayurveda and Integrative Medicine published by Elsevier. Recipient of several orations, awards, holds 8 Indian, 2 US Patents, 175+ scientific publications, with over 11,600+ citations is listed amongst the world's top 2% scientists.

Office National Research Professor-AYUSH and Distinguished **Address:**

Professor

Interdisciplinary School of Health Sciences

Savitribai Phule Pune University, Ganeshkhind, Pune 411 007

INDIA

Email: bhushan@unipune.ac.in and bpatwardhan@gmail.com

http://unipune.ac.in/snc/school of health sciences/default.htm Websites:

https://vidwan.inflibnet.ac.in/profile/94246

https://orcid.org/0000-0003-3918-2609

https://www.journals.elsevier.com/journal-of-ayurveda-and-integrative-

medicine/

Google Scholar: 175+ publications, 10,700+ citations, h-index

49, i10-index 115.

https://scholar.google.com/citations?user=egxm6oIAAAAJ&hl=en

Information in this CV is only indicative and not comprehensive. This document prepared in October 2022 is only for academic purpose and should not be used for statutory or any other purposes.

Summary

Professor Bhushan Patwardhan has over 40 year experience in higher education, scientific research and institutional governance. He is one of the top cited biomedical scientists who is Fellow of National Academy of Sciences and National Academy of Medical Sciences India. Until March 2021, he was Vice Chairman, University Grants Commission, and Chairman additional charge Indian Council of Social Science Research, Government of India. Currently, he is Chairman of the Interdisciplinary R&D Taskforce on Covid-19, and member, advisory committee constituted by the Ministry of AYUSH. He is Ayush India Lead WHO Global Center for Traditional Medicine Taskforce, member National Board of Examination and Lancet Citizen's Commission. Earlier, he was Professor and Director at the Interdisciplinary School of Health Sciences, and the Center for Complementary and Integrative Health, Savitribai Phule Pune University. He has worked as academic head of Manipal Education Group; Director, Institute of Ayurveda and Integrative Medicine, Bengaluru; Vice Chancellor, Deemed University in Pune, and visiting Professor at Indian Institute of Advanced Studies, Shimla. He has worked on Boards of several Universities and member of important national committees of Ministry of AYUSH, Ministry of Education, University Grants Commission, Council for Scientific & Industrial Research, Department of Science & Technology, Department of Biotechnology, Indian Council of Medical Research Central and Council for Research in Ayurvedic Sciences. He has worked on several policy making committees and Taskforces of National Knowledge Commission, Planning Commission, NITI Aayog, United Nations organizations, UNESCAP, World Bank and temporary consultant to the WHO Geneva. He has made original contributions in evidence-based Ayurveda especially in Ayurvedic biology, ethnopharmacology, natural product drug development and integrative approaches to improve public health system. His pioneering contributions on novel concepts such as Therapeutic Adjuvants, AyuSoftTM, AyuGenomicsTM, Reverse Pharmacology, Network Pharmacology are widely recognized. He is recipient of many orations and awards including Sardar Vallabh Bhai Patel Award 2021, Dr. R.P.Devadas Oration 2020, V K Joag Best Teacher Award 2017, Waldemar Haffkine Oration 2014, Harihar Mukherjee Award 2015, Gopaldas Parikh Award 2015, Sir Ram Nath Chopra Oration 2013, Dr P.K. Devi Oration 2011, Dr C. Dwarkanath Oration 2008 just to mention a few. He has extensively travelled worldwide and delivered invited lectures at many national and international platforms including the United Nations, World Health Organization, American Chemical Society, National Institutes of Health USA, University of California, Pennsylvania, Penn State, Illinois, South Florida, George Washington University, Purdue, Johns Hopkins, SUNY, MIT, Harvard, Indian National Science Academy, Indian Pharmacological Society, Indian Pharmaceutical Congress, among many others. He has authored many books and chapters with reputed publishers including Elsevier, Academic Press, Wiley, Pharma Press, InTech and Research Signpost. His recent scholarly books 'Integrative Approaches for Health' and 'Innovative Approaches to Drug Discovery' both published by Academic Press Elsevier have received excellent reviews. He is founder Editor-in-Chief of Journal of Ayurveda and Integrative Medicine published by Elsevier. He is on Editorial Boards of many other reputed Journals including Journal of Alternative and Complementary Medicine, Evidence based Complementary and Alternative Medicine. He remains the most cited author in the area of evidence-based Ayurveda and amongst 2% of the top scientists globally. He has contributed significantly to create awareness regarding predatory publishing and was Chairman of the Consortium for Academic Research Ethics known as UGC-CARE. His World View article on predatory journals published in NATURE has been widely appreciated. He has received several research grants, has guided 20 PhD students and holds 8 Indian Patents, 2 US Patents, 175+ scientific publications with over 11,600+ citations is listed amongst the world's top 2% scientists by Stanford University.

Education & Honors

Year	Degree	Field of Study	Institution
2016	F.N.A.Sc.	Elected Fellow	National Academy of Sciences (India)
2013	F.N.A.M.S.	Elected Fellow	National Academy of Medical Sciences (India)
2008	EGMP	Executive General Management Program	Indian Institute of Management, Bangalore
2000	F.M.A.S.	Fellowship in recognition of original scientific research	Maharashtra Academy of Sciences, Mumbai
1985	Ph.D.	Biochemistry Thesis: Chemical and Biological Studies on <i>Semecarpus</i> anacardium under supervision of Professor Samuel David	Department of Pharmacology, Haffkine Institute Mumbai and Department of Botany University of Pune
1981	M.Sc. with First Class	Biochemistry under supervision of Professor John Barnabas	Postgraduate School for Biological Studies University of Pune
1979	B.Sc. with First Class	Chemistry Major Botany and Geology Minor	Fergusson College, University of Pune
1975	S.S.C with First Class	Matriculation	Nutan Marathi Vidyalaya High School, Pune

Postdoctoral Training

Year	Title	Specialty	Institution
1992-1994	Research Scientist	Pharmaceutical R&D	BioVed Pharmaceuticals Inc. USA
1990-1992	LiTaka Research Scientist	Pharmaceutical R&D	LiTaka Pharmaceuticals Ltd, Pune
1986-1989	Manager Research & Development	Pharmaceutical R&D	Eisen Pharmaceuticals Pvt Ltd, Pune

Awards and Prizes (Indicative list)

Year	Name	Organization	Recognition For
2022	Pune Festival Award	Pune Vyaspeeth – A Citizen Forum	Innovative Contribution to Education and Research
2021	Sardar Vallabh Bhai Patel Award	National Board of Examination Ministry of Health & Family Welfare, New Delhi	Distinguished Service to Nation
2020	Dr. Rajammal P Devadas Oration	Avinashilingam University, Coimbatore	Excellence in Health Sciences Research
2017	Prin V K Joag Memorial Award for Best Teacher	Savitribai Phule Pune University	Excellence in Teaching
2015	Harihar Mukerjee Award	Society for Ethnopharmacology, Kolkata	In recognition of research in the field of ethnopharmacology
2015	IASTAM - Gopaldas Parikh Award	Indian Association for Asian Traditional Medicine	In recognition of contributions to herbal drug research and development
2014	Visiting Professorship	Indian Institute of Advance Studies, Shimla	For writing scholarly book on Health
2014	Dr. Waldemar Mordecai Haffkine Oration Award	Haffkine Institute, Parel, Mumbai	In recognition of significant contributions in biomedical research
2013	Conferred Fellowship	National Academy of Medical Sciences, New Delhi	In recognition of outstanding research in biomedical sciences
2013	Sir Ram Nath Chopra Oration	Indian Pharmacological Society	In recognition of outstanding research in medicinal plants
2013	Dr P.M. Mehta Oration	Gujarat Ayurved University, Jamnagar	In recognition of scientific contributions

2013	University Foundation Oration	KLE University Belgaum	In recognition of scientific and integrative medicine contributions
2012	Excellence in Ayurveda Research Award	St Laurent Institute, George Washington University	In recognition of scientific contributions
2011	Nutra India Award	CFTRI (CSIR), Nutraceutical Sumit Mumbai	for outstanding contributions in nutraceutical research
2011	Dr P K Devi Oration Award	Kasturba Health Society	In recognition of scientific contributions
2011	Dewang Mehta Award	Management Association	For Excellence in Education
2009	Conferred Fellowship	Institute Indian of Medicine	In recognition of research in Ayurveda
2008	Dr C. Dwarkanath Oration	Dwarkanath Trust Bangalore	In recognition of research on Ayurveda
2000	Conferred Fellowship	Maharashtra Academy of Sciences	In recognition of scientific research
1993	Conferred Fellowship	International Council of Ayurveda	In recognition of research in Ayurveda
1992	Li Taka Research Scientist Award	University of Poona	Pharmaceutical Research in Industry
1992	Parkhe Award	Maratha Chamber of Commerce and Industries	Industrial Merit Excellence,
1983	Best Research Award	University of Pune	University Annual Research Seminar competition
1980	Prof Arnikar Award	University of Pune	for Best Presentation among the graduate students

Academic Appointments

Year	Academic Title	Academic Department	Institution
2022/08 - Present	Chairman Taskforce on Traditional Medicine		National Academy of Medical Sciences (India)
2022/03 - Present	Chairman Taskforce on Integrative Healthcare	Department of Ayush	Government of Madhya Pradesh
2021/07 - Present	Ayush Lead – WHO Joint Taskforce	World Health Organization and Ministry of Ayush	Government of India
2022/03 - Present	Chairman Executive Committee	National Assessment and Accreditation Council	University Grants Commission
2021/03 - Present	National Research Professor	AYUSH	Ministry of AYUSH
2021/03 - Present	Distinguished Professor	Interdisciplinary School of Health Sciences	Savitribai Phule Pune University
2020/02 - 2021/03	Chairman	Indian Council of Social Science Research	ICSSR New Delhi
2018/08 - 2021/03	Vice Chairman	University Grants Commission	UGC New Delhi
06/2016 - 08/2018	Director	Center for Complementary & Integrative Health	Savitribai Phule Pune University
2014/ 01-31/07	Visiting Professor	Institute	Indian Institute of Advanced Studies, Shimla
2014 – 2016	Honorary Director	Research	International Longevity Center, Pune
2011/04 – 2016/01	Honorary Research Advisor	Research and Development	Institute of Ayurveda & Integrative Medicine
2011/03 - 2012/08	Vice Chancellor	Symbiosis International University	Bangalore Symbiosis Society Pune

2010/08 2011/02	Director	Institute of Ayurveda and Integrative Medicine	FRLHT Bangalore
2006 – 2009	Academic Advisor	Directorate of Distance Education	Sikkim Manipal University
2005 – 2006	Sabbatical Fellowship	Academics	Manipal Academy of Higher Education
2005 – 2006	Hon Director	Center	International Longevity Center, Pune
1996 /04 – 2019/03	Professor	Interdisciplinary School of Health Sciences	University of Pune
1994 /04 – 1996/03	Associate Professor	Interdisciplinary School of Health Sciences	University of Pune
1996 – 2019	Graduate and Doctoral Research Guide	Faculty of Sciences Health Sciences Faculty of Pharmaceutical Sciences Biomedical Sciences	University of Pune Bharati Vidyapeeth University, Pune
1992 – 1993	Hon. Joint Director	Pharmacognosy Research	Indian Drugs Research Laboratory, Pune
1989 – 1993	Chairman	Interdisciplinary School of Ayurvedic Medicine	University of Pune

Other Professional Positions (Indicative list)

Year	Position	Institution
2020/10-	The Lancet Citizens' Commission on	The Lancet
Present	Reimagining India's Health System	
2020/07 -	Co Chair Social Protection Group UN	United Nations
2020/12	Research Roadmap for the COVID-19	
	Recovery	
2019 –	Chairman, Consortium for Academic	University Grants Commission
2021/03	Research Ethics (CARE)	
2020 -	Chairman, Scheme for Trans-disciplinary	University Grants Commission
2021/03	Research for India's Developing Economy	
	(STRIDE)	

2013 / 11 –	Chairman, Academic Planning and	National Institute of Pharmaceutical
2016	Development Committee	Education and Research (NIPER), Mohali
2013	Project Advisor	Canara Bank School of Management
		Sciences, Bangalore University
2012	Honorary Research Advisor	Institute for Transdisciplinary Research in
		Health Science & Technology (Karnataka
		State Private University), Bangalore
2012 - 2016	Honorary Scientific Advisor	Centaur Pharmaceuticals Ltd
2008 - 2016	Member Board of Trustees	Center for Developmental Studies and
		Activities, Pune
2008 - 2010	Member Board of Management	DY Patil University Pune
2008 - 2010	Member Academic Council	Bharati Vidyapeeth University
2004 - 2005	Hon Director and Member Governing	International Longevity Center, Pune
	Board	
2003 - 2006	Member Board of Management of three	Nomination by the University Grants
	Deemed Universities as UGC Nominee	Commission
1998 -2004	Member Board of International Office	Pune and Pimpri Chinchawad Municipal
	Agenda 21	Corporations and City of Bremen
1989 - 2016	Member Board of Trustees	Science & Technology Park Society
		University of Pune
1996 - 2001	Scientific Advisor	Bio Ved Pharmaceuticals Inc, San Jose, US
1988 - 2016	Member Board of Trustees and Governing	Indian Drug Research Association, Pune
	Board	

Leadership Positions (Indicative list)

Year	Position	Institution
2020/12 - Present	Member, Joint Task Force for proposed WHO Global Center for Traditional Medicine	Ministry of Ayush and World Health Organization
2020/04 Present	Chairman, Interdisciplinary AYUSH R&D Task Force on COVID-19	Ministry of AYUSH, Government of India, New Delhi
2019 – 2021/03	Vice Chairman, Committee on Integrative Health	NITI Aayog, New Delhi
2019 – 2021/03	Chairman, Governing Board	Consortium for Educational Communication, New Delhi
2011/04 – 2012/09	Vice Chancellor	Deemed University in Pune

2007 2011	Convener	Vision Group, EDGE Forum (a consortium of progressive Indian Universities)
1996 – 2006/05	Director	Interdisciplinary School of Health Sciences, University of Pune
2006/06 - 2009/01	Chief of Academics	Manipal Universal Learning, Bangalore, India
2005	Advisor	Commission on Intellectual Property Innovation and Public Health, World Health Organization, Geneva
2006/03 – 06	Convener	Vision 2020 Committee to develop a long term perspective development plan for University of Pune
2002 – 2004	Convener	Promotion of Indian Higher Education Abroad Committee, University Grants Commission, Government of India
2000 – 2006	Member Management Council	University of Pune
1996 – 2003	Advisor and Faculty, Penn in India Program	University of Pennsylvania
1989 – 2006	Member Senate Academic Council (tenured terms)	University of Pune
1989 – 1994	Member Executive Council	University of Pune

Committee Service (Indicative list)

Year	Name of the Committee	Institution
2021	Member, Advisory Group, Ayurveda Academic Chair Program	National Institute of Complementary Medicine, Western Sydney University, Australia
2021	Member, Joint Task Force, Global Centre for Traditional Medicine	World Health Organization and Ministry of AYUSH
2020	Member, National Board of Examination - Medical	NBE (Medical), New Delhi
2019	Member, SWAYAM Advisory Board	Ministry of Human Resource Development
		$\mathbf{p}_{\mathbf{q},\mathbf{q}} = 0 \text{ of } 47$

2017	Member, UGC Standing Committee for Notification of Journals	University Grants Commission
2017	Chairman, Academic Journals Expert Committee,	Savitribai Phule Pune University
2016	Member, Research Review Committee, Central Council for Research in Ayurvedic Sciences (CCRAS),	Ministry of AYUSH, Government of India
2016	Member, Inter-Departmental Committee for identifying viable new systems of medicine	Ministry of Health and Family Welfare, Department of Health Research, Government of India
2016	Member, Committee for National Policy on AYUSH	Ministry of AYUSH, Government of India
2016	Member, Committee to Review Functioning of Research Councils	Ministry of AYUSH, Government of India
2016	Member, Board of Studies, Pharmaceutical Sciences	All India Council for Technical Education, Government of India
2016	Member, Research Policy Committee	Bharati Vidyapeeth Deemed University
2016	Chairman, Board of Studies in Basic Medical Sciences and Health Sciences	Savitribai Phule Pune University
2015	Member, Research Advisory Council	Manipal University, Manipal
2015	Member, Task Force	Ministry of AYUSH, Government of India
2015	Expert Member, ICMR-DRDO Committee	Indian Council of Medical Research, Government of India
2015	Chairman, Committee for 'Guidelines for Research Publications'	Savitribai Phule Pune University
2014	Vice Chairman, Expert Group on Translational Research for Products and Processes from Medicinal and Aromatic Plants	Department of Biotechnology, Government of India
2014	Chairman, <i>Ad-hoc</i> Board of Studies, Health Sciences,	University of Pune

2013	Chairman, <i>Ad-hoc</i> Board of Studies in Genetics, Immunology, Biochemistry and Nutrition Member Academic Council	Maharashtra University of Health Sciences, Nashik
2013	Expert Member, Working Group on Nutraceuticals,	Food Safety and Standards Authority of India, Government of India, New Delhi
2013	Member Institutional Review Committee	Tata Institute of Social Sciences, A deemed University, Mumbai
2013	Member, Ayurveda Advisory Committee	Government of Madhya Pradesh (M.P.) Bhopal, India
2013	Member Health Center Advisory Committee	University of Pune
2013	Member, Scientific Advisory Committee	Nirma University, Ahmedabad
2012	Member Advisory Board	Vanarai Trust Pune – an NGO dedicated to nature and environment conservation
2011	Member Research Council, National Botanical Research Institute, Lucknow	Council for Scientific and Industrial Research
2011	Chairman, Mission Group on Traditional Knowledge	Government of Karnataka, Bangalore
2010	Member Research Advisory Committee, Regional Medical research Center Belgaum	Indian Council of Medical Research
2010	Member Inter-sectoral Innovation Council	Department of AYUSH Government of India
2009	Chairman Research Monitoring Committee of Center of Relevance and Excellence in Pharmacogenomics, Manipal University	Technology Information Forecasting and Assessment Council, Government of India
2009	Member International Council Research Committee AYUSH	Government of India
2010/08	Leader and Member of Indian Delegation Indo-South Africa Bilateral Cooperation in Science & Technology	Medical Research Council of South Africa and University of Western Cape, University of Pretoria, Durban University, University of KwaZulu Natal, South Africa

2009	Chairman, Endogenous Development Program with cooperation of Universities from Africa, Latin America and India	Capacity and Theory Building for Universities and Research Centres for Endogenous Development (CAPTURED) Program, Dutch Ministry for Development Coopeartion, The Netherlands.
2006	Member Research Advisory Committee	Jana Prabodhini Research Institute Pune
2008	Member Subcommittee, Karnataka Knowledge Commission	Government of Karnataka
2002	Member, Academic Advisory Board, National Institute of Pharmaceutical Education and Research	Government of India
2006	Chairman, Working group on Traditional Knowledge	National Knowledge Commission, Government of India
2005	Member Task force 11 th Five Year Plan	Planning Commission, Government of India
2002	Co Chair, Biotechnology Committee,	Maratha Chamber of Commerce and Industries
2002	Chairman Steering Committee, New Millennium Indian Technology Leadership Initiative, Arthritis Herbal Drug Development Group	Council for Scientific and Industrial Research
2000	Member Task force for Maharashtra Biotechnology Policy	Government of Maharashtra
1999	Member Organizing Committee, Local Organizing Secretary and Chief coordinator	87 th Indian Science Congress, Pune

Convocation Addresses

Date	University	Theme
06 Feb 2020	56 th Convocation, Shivaji University Kolhapur	Reimagining Indian Higher
		Education
10 Jan 2020	1 st Convocation, Vishwakarma University Pune	Towards Future Ready
		Education
05 Dec 2019	37 th Convocation, Sampoornanand Sanskrit	Contemporary Relevance of
	University, Varanasi	Sanskrit in Higher Education
08 Nov 2019	6 th Convocation, Manipal University Jaipur	Disruptions in Higher
		Education for Industry 4.0

23 Oct 2019	4 th Convocation, M.S. Ramaiah University of	Integrative Health System for
	Applied Sciences, Bengaluru	India
14 Sep 2019	59 th Convocation, Dr Babasaheb Ambedkar	Quality, Innovation and
	Marathwada University Aurangabad	Inclusion in Education
06 Sep 2019	2 nd Convocation Indira Gandhi National Center for	Value of Arts and
	Arts, New Delhi	Humanities in Education
31 Jul 2019	11 th Convocation, MGM Institute of Health Sciences	Emerging Directions in
	(Deemed to be University), Navi Mumbai	Health Science Education
13 Apr 2019	10 th Convocation, Dr. D.Y. Patil Vidyapeeth	Universal Health Coverage:
	(Deemed to be University) Pune	Integrative Model for India
08 Mar 2019	7 th Convocation, D.Y. Patil Education Society	Moving Towards Integrative
	(Deemed to be University) Kolhapur	Health System

Invited Lectures (Indicative list)

Year	Title of Presentation / Organizer /Location
2021 July 09	Invited talk, Role of traditional medicine in Covid-19 – Spotlight on Ayush-64. Webinar organized by Council for Scientific and Industrial Research (CSIR)
2021 June 26	Invited speaker, AYUSH research on Covid-19 in India at the American Association of Ayurvedic Professionals (AAAP) Annual Conference.
2021 June 26	Invited speaker, Atmanirbhar Bharat- Atmanirbhar in Wellness and Health, Online conference organized by Arogra Bharati.
2021 June 8	Invited speaker, Transforming Ayurveda for the Future Scopes and Challenges, Shatapoornima l00lh Birlhday program of Padmabhooshan Dr. P K Warrier
2021 May 25	Invited speaker, Yoga: Scientific Research and Education Webinar by Heartfulness Foundation
2021 May 14	Invited speaker, AyurTalk, World Ayurveda Foundation Webinar Series
2021 May 1	Invited speaker, Transdisciplinary Research Approach for Evidence based Ayurveda, National Ayurveda Medical association (NAMA) USA Annual Conference "Ayurveda: Evidence Based Integrative Medicine"
2021 Apr 29	Valedictory lecture, Integrative Health & Medicine: A Chimeric Notion Or A New Normal? 47 th Annual Conference of Research Society, B.J. Government Medical College and Sassoon General Hospital
2021 Apr 9	Invited speaker, Higher Education in Past Covid Era, Webinar 22nd Annual National Conference of Association of Indian College Principals [AICP], MIT World Peace University, Pune

2021 Mar 30	Invited speaker, Ashwagandha: Ayurveda's flagship herb goes mainstream, Nutraingradients Webinar, USA
2021 Mar 25	Invited speaker, Education Beyond Face-to-Face Mode: Opportunities and Challenges, Maharaja Sayajirao University Vadodara
2021 Mar 18	Invited speaker, International e-Conference – 2021"Covid-19: Challenges and Opportunities in Pharmaceutical Research" Organized by Institute of Pharmacy, Nirma University, and Indrashil University, Ahmedabad
2021 Mar 18	Invited speaker, Governance of Higher Education and NEP 2020, Webinar by National University Education Planning and Administration, New Delhi
2021 Feb 26	Valedictory address at the 48 th National Progressive Schools' Conference, Webinar, New Delhi
2021 Feb 26	Invited lecture, National Webinar on NEP and Indian Ethos National Webinar on NEP and Indian Ethos, Kaveri Education Trust, Pune
2021 Feb 15	Invited speaker, 7th International Congress in association with Society for Ethnopharmacology, Jamia Hamdard University, New Delhi.
2021 Jan 28	Invited Oration, Emerging Directions in Health Sciences Education Eighteenth Dr. Rajammal P. Devadas Annual Oration, Avinashilingam University, Coimbatore
2020 Jan 15	Inaugural lecture, Ayurvedic Biology Program, Jawaharlal Nehru University, New Delhi
2021 Jan 4	Invited speaker, Biological Sciences and Innovative Approaches to Drug Discovery, Webinar by Ramnarain Ruia College Mumbai
2021 Jan 4	AYUSH - Nextgen Business, in the Post Covid-19 Era, Pathy-based System to People-centered Holistic Healthcare. IIM Ahmedabad Alumni Network Webinar
2020 Dec 22	Invited speaker, New Frontiers in Integrative Health and Drug Discovery, Face To Face With New Frontiers In Science, India International Science Festival, Webinar
2020 Dec 10	Invited speaker, Assessing the role of teachers in NEP 2020, Webinar by National University Education Planning and Administration, New Delhi
2020 Nov 21	Invited speaker, Post Covid-19 Era & Future for Health and Humanity: Impact on Humans and Societies, Webinar by Boston Center of Excellence for Health and Human Development, USA

2020 Nov 19	Invited speaker, Integrative Medicine in COVID-19: Ashwagandha as Immunomodulator and Adjuvant Webinar on COVID-19 - Shiraz University of Medical Sciences, Iran
2020 Oct 27	Invited Speaker, Trans NCI-NIH Virtual Conference on International Perspectives on Integrative Medicine for Cancer Prevention and Cancer Patient Management
2020 Oct	Invited participant, Inter Academy Partnership, Combatting Predatory Academic Journals and Conferences
2020 Oct 15	Invited speaker, Confederation of Indian Industries, International Conference and Exposition, On Emerging Opportunities for Ayurveda during Pandemic, "Ayurveda for Immunity" Webinar
2020 Oct 14	Invited Speaker for IAS Batch 2020, Transition from Pathy-based System to People-centered Holistic Healthcare? Lal Bahadur Sastry National Academy of Administration (LBSNAA) Mussoorie
2020 Oct 10	Invited speaker, Emerging Directions in Health Sciences Education, Datta Meghe Institute of Medical Sciences, Wardha.
2020 Oct 9	Invited speaker, Research Methodology and Manuscript Writing, Webinar, Rashtriya Ayurveda Vidyapeeth, New Delhi
2020 Oct 6	Invited speaker, Deccan College Bicentenery Celebration – 199 th Foundation Day
	Invited speaker, Deccan College Bicentenery Celebration – 199 th Foundation Day Invited speaker, Webinar on COVID-19 – Emerging strategies and research in Ayurveda, Council for Research in Ayurveda USA.
Oct 6 2020	Invited speaker, Webinar on COVID-19 – Emerging strategies and research in
Oct 6 2020 Sept 25 2020	Invited speaker, Webinar on COVID-19 – Emerging strategies and research in Ayurveda, Council for Research in Ayurveda USA. Invited speaker, Panel Discussion on Making Mentoring Relevant: NEP 2020
Oct 6 2020 Sept 25 2020 Sept 21 2020	Invited speaker, Webinar on COVID-19 – Emerging strategies and research in Ayurveda, Council for Research in Ayurveda USA. Invited speaker, Panel Discussion on Making Mentoring Relevant: NEP 2020 Perspective, National Institute of Technical Teacher Training and Research Invited speaker, NAAC Bangalore, Webinar on Academic Integrity and Research
Oct 6 2020 Sept 25 2020 Sept 21 2020 Sept 11 2020	Invited speaker, Webinar on COVID-19 – Emerging strategies and research in Ayurveda, Council for Research in Ayurveda USA. Invited speaker, Panel Discussion on Making Mentoring Relevant: NEP 2020 Perspective, National Institute of Technical Teacher Training and Research Invited speaker, NAAC Bangalore, Webinar on Academic Integrity and Research Ethics Invited speaker, Agriculture Universities Vice Chancellor Conclave, Indian
Oct 6 2020 Sept 25 2020 Sept 21 2020 Sept 11 2020 Aug 26 2020	Invited speaker, Webinar on COVID-19 – Emerging strategies and research in Ayurveda, Council for Research in Ayurveda USA. Invited speaker, Panel Discussion on Making Mentoring Relevant: NEP 2020 Perspective, National Institute of Technical Teacher Training and Research Invited speaker, NAAC Bangalore, Webinar on Academic Integrity and Research Ethics Invited speaker, Agriculture Universities Vice Chancellor Conclave, Indian Council of Agricultural Research, New Delhi Invited speaker, Improving Quality & Relevance of Doctoral Research, ITM

2020 Feb 6	Convocation Address, Re-discovering Indian Higher Education: Shivaji University, Kolhapur
2020 Jan 31	Valedictory Lecture, Promoting Excellence in Research, LEAP Program at TISS, Mumbai.
2020 Jan 10	First Convocation Address, Vishwakarma University Pune
2020 Jan 4	Vidyasagar Late Principal K.M Kundnani Memorial Lecture, Re-discovering Indian Education System, HSNC University, K.C. College of Arts and Commerce, Mumbai
2020 Jan 2	Invited Speaker, Health System Perspectives: Biomedical, Ethical and Socioeconomic Faculty Training Program for Medical Officers – National Institute of Health and Family Welfare, New Delhi
2019 Dec 17	Invited Lecture, UGC Quality Mandate and New Initiative. Annual Conference, INSA, NIO, Goa
2019 Dec 5	Invited Lecture, Integrative Approaches for Health and Innovative Approaches to Drug Discovery. IUPHAR-2019, NIN Hyderabad, December 7, 2019
2019 Nov 22	Invited Lecture, 'Prioritising Planet, People and Profits: Health and Environment', Gandhi and Technology: Perspectives and Approaches, Symposium, ASTU, Guwahati
2019 Oct 18	Invited Lecture, 'The New Pharmacognosy: Time to Refresh and Accelerate' International Conference on 'Bimolecular and Biotechnological Aspects of Medicinal Plants', L.M. College of Pharmacy, Ahmedabad
2019 Oct 3	Indian Delegate, International conference on 'Social and Cultural Nexus of Science and Technology Development' National Science Foundation (NSF), Ministry of Science, Technology and Research, Sri Lanka AND Co-organizer: ICSSR, India
2019 Aug 15	Invited Lecture, 'Research Integrity & Publication Ethics: Indian Scenario', Indian Institute of Advance Study, Shimla.
2019 Aug 9	3 rd Dr. S. P. Thyagarajan Endowment Oration, 'Innovative approaches to Drug Discovery" Sri Ramchandra University, Chennai
2019 June 3	Invited Plenary Lecture 'Research integrity and publication ethics: Indian Scenario' at 6 th World Conference on Research Integrity jointly organized by Royal Melbourne Institute of Technology (RMIT), Australia and University of Hong Kong.

2019 May 29	Invited Lecture, 'Promotion of Research in the Universities of Bihar' Sensitization Workshop under aegis of Raj Bhavan Bihar
2019 May 13	Invited Lecture, 'Health Care System: Biomedical, Ethical and Socioeconomic Perspectives', ICSSR Golden Jubilee 2019 New Delhi
2019 Apr 17	Invited Participant, International invitational summit about predatory journals, Center for Journalology, The Ottawa Hospital, Canada.
2019 Mar 27	Invited Lecture, Research Ethics and Scientific Writing, Banaras Hindu University, Varanasi.
2018 Dec 14	Invited Lecture, Overview of Ayurveda and Cancer: Evidence and PracticeCancer Conclave at the 8 th World Ayurveda Congress, Ahmedabad
2018 Nov 4	Invited Lecture, Innovation and Creativity. National Seminar on Entrepreneurship and Business Development in Ayurveda, Ministry of AYUSH, Dr Ambedkar Bhavan, New Delhi.
2018 Oct 26	Invited Lecture, 'Tradition and science of food as medicine', 19 th IUFoST World Congress of Food Science & Technology, Mumbai
2018 Sept 7	Invited Lecture, 'Integrative Approach of Ayurveda to Combat Antimicrobial Resistance 'Newton Bhabha Fund Researcher Links Workshop Jadavpur University September 4-7, 2018
2018 Sept 4	Invited Lecture, Environmental Pathways to Health, FEED Academic Classroom, Pune
2018 Aug 30	Inaugural Lecture, Continuing Education Programme (CEP) sponsored by Pharmacy council of India on "Emerging Trends in Pharma Sciences" NMIMS College of Pharmacy Shirpur.
2018 July 17	Invited Lecture, Strengthening AYUSH Research Becoming Leaders - Not Followers. National Conference - Heads of AYUSH National Institutes, AIIA, New Delhi
2018 June 22	Plenary Lecture, 3rd International Conference on Yoga & Ayurveda, Joseph B. Martin Conference Center, Harvard Medical School, Boston, U.S.A.
2018 Apr 28	Invited Lecture, Integrative Approaches For Health: Ayurveda, Yoga and Biomedicine, Mount Madonna Institute-College of Ayurveda, California, USA
2018 Feb 15	Invited Lecture, Network Ethno-Pharmacology: New Approach for Drug Discovery, Development and Repurposing. 50th Annual Conference of the Indian Pharmacological Society "IPSCON- 2017" Mumbai.

2018 Jan 23	Invited Lecture, 4th Nirma Institute of Pharmacy International Conference NIPiCON – 2018. "Innovation in Pharmaceutical Research by Interdisciplinary Approach"
2018 Jan 5	Invited Lecture, 'Integrative Oncology: Role of Ayurvedic Rasayana as Adjuvants'. 22^{nd} INCOFYRA, S-VYASA, Bengaluru
2017 Nov 9	Plenary Lecture, 1st International AYUSH Conference, World Trade Center, Dubai, Vijana Bharati Science India Forum
2017 Nov 18	Inaugural Lecture, Innovation-2017 for Pharmacy Discipline, Sinhagad College of Pharmacy, Pune
2017 Oct 17	Lead Lecture, Seminar on "Quality Control in Clinical Biochemistry & Microbiology" Association of Clinical Biochemists and Microbiologists, Pune
2017 Oct 1-2	Plenary Lecture, Indo-Hungarian Symposium organized jointly by University of Debrecen, Hungary and Ministry of AYUSH, Government of India.
2017 Sept 25	Lead lecture, Basics of Biomedical Research for Research Officers of Central Council for Research in Ayurvedic Sciences, Northen Regional Workshop at CCRAS HQ, New Delhi.
2017 Sept 17	National Seminar on "Quality Control in Clinical Biochemistry & Microbiology" Association of Clinical Biochemists and Microbiologists, Pune
2017 Sept 9	Plenary speaker, National Symposium on "Ashwagandha" Society For Ethnopharmacology, Jadavpur University, Kolkata.
2017 Sept 5	Lead lecture, Induction to research methodology for Research Officers of Central Council for Research in Ayurvedic Sciences, Western Regional Workshop at Nagpur
2017 Aug 6	Invited panelist, IXth ICTAM - International Congress on Traditional Asian Medicines Conference at Christian Albert University at Kiel, Germany
2017 July 29	Invited Faculty, National Workshop on Research Methodology, Deccan College Deemed University, Pune.
2017 May 5	Invited Plenary, National Seminar on "Molecular Markers in Herbal Drug Discovery", VNS Group of Institutions, Faculty of Pharmacy, May 5 - 6, 2017 Bhopal, India
2017 May 2-3	Invited lecture, Status of Ayurveda Research In India, Indo-Swiss Ayurveda Foundation, Bern, Switzerland

2017 April 1	Invited speaker, Integrative Approaches for Future: Ayurveda, Genomics and Epigenetics, International AyurVeda Congress, London
2017 Mar 17	Invited lecture, Traditional Medicine and IPR, Rashtriya Ayurved Vidyapeeth CME organized by Central Council of Tibetan Medicine, Dharamshala
2017 Jan 6	Invited Lecture, Yoga and Diabetes, International conference organized by CCRYN, New Delhi.
2016 Dec 19	Inaugural Lecture, Emerging Trends in Pharmacological research, AICTE Quality Improvement Program, Poona College of Pharmacy, Pune
2016 Nov 12	Inaugural Lecture, Regulatory aspects of traditional medicine, Dr D Y Patil College of Pharmacy, Akurdi
2016 Oct 14	Inaugural Lecture, Association of Pharmacy Teachers of India (APTI) Annual Conference, Manipal University, Manipal
2016 Oct 1	Invited Plenary, Food and Health, Navadanya Bhoomi Conference, India International Center, New Delhi
2016 Sept 29	Invited Plenary, "Drug and Formulation Discovery: Emerging Opportunities from Phytopharmaceuticals" Drug Discovery India 2016" Conference, Bengaluru,
2016 Sept 16	Invited Plenary 'From Omics To Om: Integration For The Future', 3rd International Congress on Ayurveda, Milan Italy.
2016 Sept 10	BRICS Wellness Summit, RIS, NITI Ayog, and Ministry of AYUSH, Bengaluru
2016 Aug 11	Evidence based Ayurveda for reducing threats to health. Indo-US symposium in collaboration with US Defence Threat Reduction Agency. International Center, SPPU.
2016 July 21	Inaugural address 'Perspectives and Prospective of Traditional Medicine: Phytopharmaceuticals and Formulation Development' at Phytocongress 2016, SASTRA UNIVERSITY, Thunjaur
2016 June 21	Invited Plenary Lecture 'Scientific benefits of Yoga' at National Center for Cell Science, International Yoga Day, 2016
2016 May 14	Invited as lead resource person speaker at Community Workshop on Integrative Approaches for Health, University of South Florida, Tampa, USA
2016 May 11	Special guest lecture on natural product drug discovery and development, Department of Pharmacy, University of South Florida, Tampa, USA

2016 May 11	Keynote speaker at community seminar 'Integrative approaches to wellness and longevity – Ayurveda and Yoga', Sun City Center, Tampa, Florida, USA
2016 May 3	Invited to organize Mini Symposium and lead speaker 'Evidence-based Traditional Medicine and Healthcare System in India - Special Reference to Cancer' at NIH NCI, Bethesda, USA
2016 Apr 13	Invited Keynote Lecture, International Conference on AYUSH at Mauritius, Ministry of AYUSH and Indian High Commission, Mauritius
2016 Apr 7	Invited Plenary Lecture, National Workshop on Drug Discovery and Development from Plants, ICMR and Arya Vaidya Pharmacy, Kottakal
2016 Apr 4	Invited Plenary Lecture at Manipal Research Colloquium, Manipal University, Manipal
2016 Feb 25	Invited Plenary Lecture, Seminar at ICMR Regional Medical Research Center, Belagavi
2016 Feb 13	Invited for Annual Day Commemoration Lecture, Manipal College of Pharmacy, Manipal
2016 Feb 9	Invited talk at National Consultation on the Road to Sustainable Development Goals with special focus on Health and Education, RIS and NITI Ayog, New Delhi
2016 Feb 1	Invited Plenary Lecture, Global Ayurveda Festival, Kozikode, Kerala
2016 Jan 17	Inaugural Plenary Lecture, International Conference HERBESCON, Sri Ramachandra University, Chennai
2016 Jan 4	Invited Plenary Lecture at International Conference INCOFYRA, S-VYASA University
2015 Dec 28	Invited Lecture at 8 th International Conference on Yoga and Education, Kaivalyadham, Lonavala
2015 Oct 26	Invited lecture Continuing Medical Education at Central Council for Tibetan Medicine, Dharamsala
2015 Oct 18	Invited plenary lecture at Indian Pharmacology Association Annual Conference IPSCON, Saurashtra University, Rajkot
2015 Oct 10	Professor M C Nath Memorial Lecture, Department of Biochemistry, Nagpur University, Nagpur

2015 Sept 24	Invited opening plenary lecture at Conference on Integrative Medicine hosted by Center for Global Health, Colleges of Medicine and Pharmacy, University of Illinois at Chicago, USA.
2015 Aug 27	Exploring the Potential of Ayurvedic Science in Current Cancer Research and Treatments, invited talk given at Webinar organized by the National Institutes of Health, Bethesda, USA.
2015 July 29	Inaugural talk at Workshop on Modern Scientific Techniques for Indian Medicine AU-KBC Research Center, Anna University Chennai, Tamilnadu
2015 July 23	Invited lecture, Drug Discovery and Network Pharmacology, Central Council for Research in Ayurvedic Sciences, New Delhi
2015 Apr 11	Keynote speaker, Ayurveda for Global Health, International Ayurveda Congress, Roermond, The Netherlands (Talk delivered via video conferencing)
2015 Apr 9	Keynote speaker, Evidence based Ayurveda, Second All Russian Ayurveda Congress, Moscow (Talk delivered video conferencing)
2014 Nov 1	Keynote speaker and session chair, 8 th INTRACOM Conference, Ministry of Health, Government of Malaysia
2014 Oct 26	Invited Speaker, 14 th International Symposium on Traditional Medicine, Institute of Natural Medicine University of Toyama, Japan.
2014 Sept 11	Invited speaker and Session Chair, Drug Discovery India 2014, Organized by Select Biosciences, Mumbai
2014 May 16	Session Speaker, International Research Congress on Integrative Medicine and Health, Miami, USA. Presented via video.
2014 May 14	Invited Delegate, Global Health Workshop, Penn State University, USA
2014 Mar 20	Invited Speaker, Royal Society of Chemistry DSI Conference on Medicinal Chemistry, Overcoming the Bottlenecks in Drug Discovery, New Delhi. Presented by representative.
2014 Feb 20	Keynote speaker, Global Ayurveda Festival, Kochi, India. Could not attend
2014 Feb 7	National Symposium on Molecular and Ayurvedic Biology of Inflammation Molecular Biology Unit, IMS, BHU, Banaras
2014 Jan 10	Dr. Waldemar Mordecai Haffkine Oration at 116 th Foundation Day of Haffkine Institute, Mumbai

2013 Dec 12	Invited convener for panel discussion at 46 th Annual National Conference of Indian Dietetics Association, Pune. I am also advisor to this conference.
2013 Dec 3	Invited speaker for a workshop 'Convergence of Ayurveda & Modern Medicine' organized and sponsored by Government of Gujarat.
2013 Dec 16	Sir Ram Nath Chopra Oration 2013, Indian Pharmacological Society Annual Conference, Bangalore
2013 Dec 2	Invited keynote speaker and convener of Workshop on traditional knowledge and systems biology at Applied Systems Biology Conference, Berlin. Sponsor IQPC Berlin. I am working as advisor to this conference. This event was called off by organizers.
2013 Nov 26	Invited speaker for UNESCO Peace Chair MIT endowment lecture series to talk on 'Ayurveda – the holistic science of mind, body and spirit.
2013 Nov 20	Invited speaker at International Workshop on "Botanical Identification & Evaluation of Indian Medicinal Plants" Sponsor – School of Natural Product Studies, Jadavpur University.
2013 Nov 13	Invited speaker 'Evidence-based Ayurveda' at International Conference on Integrative Medicine organized by College of Medicine UK and SOUKYA Foundation, Bengaluru, India. Sponsor Saukya Foundation. Could not participate due to other exigencies.
2013 Oct 25	Participated in conference and convocation to receive scroll of honor at NAMSCON 2013, Annual Conference of National Academy of Medical Sciences, AIIMS Jodhpur.
2013 Oct 21	Opening Plenary 'Importance of bioprospecting and new approaches in drug development' 148 th Omics Group conference 'Pharmacognosy 2013' Radisson Blu, Hyderabad.
2013 Oct 7	Invited speaker at ICBS 2013, Conference of International Chemical Biology Society organized at Kyoto University Japan. Sponsor ICBS (Declined due to conflicting travels)
2013 Oct 3	Invited keynote speaker at National Conference on 'New Frontiers in Medicinal Plant Research' Gangtok, Sikkim. Sponsor Central University Sikkim.
2013 Sept 27	Invited keynote 'Natural product drug discovery' at Drug Discovery India Conference, Bangalore. I also served as advisor to the conference to construct sessions and invite speakers. Sponsor Select Biosciences.
Oct 3 2013	Invited keynote speaker at National Conference on 'New Frontiers in Medicinal Plant Research' Gangtok, Sikkim. Sponsor Central University Sikkim. Invited keynote 'Natural product drug discovery' at Drug Discovery India Conference, Bangalore. I also served as advisor to the conference to construct

2013 Sept 14	Invited speaker 'Newer approaches in drug discovery' at 68 th Saturday Seminar of Department of Microbiology, University of Pune.
2013 Aug 2	Invited speaker at National conference 'Samyukti - an evidence based approach to integrating Ayurveda and Allopathy'
2013 July 20	Dr P.M. Mehta Oration 'Evidence-Based Medicine and Ayurveda: Where are the epistemological meeting grounds?' Gujarat Ayurved University, Jamnagar
2013 July 5	Invited speaker at BMM Continuing Medical Education Program (July 6) BMM Indo-US Educators Meet at Northeastern University (July 8)
2013 Apr 23	Decadal Celebration Oration 'Ayurveda, drug discovery and beyond' Nirma University Ahmedabad. Sponsor Nirma University
2013 Apr 13	KLE University Oration 'Integrative Medicine: The Future of Universal Health Care'. Jawaharla Nehru Medical College, Belgaum. Sponsor KLE University.
2013 Apr 5	Invited speaker at Conference on New Drug Discovery and Opportunity for India, Hyderabad. Sponsor Zahir Science Foundation, New Delhi.
2013 Mar 7	Inaugural speaker 'Innovations in Natural Product Drug Discovery: A Traditional Knowledge Perspective' National Conference "Natural products in the management of Cancer, Diabetes and Viral infections" at SASTRA University, Thunjavur. Sponsor SASTRA University.
2013 Feb 18	Invited speaker – 'A pharmacognosy perspective for innovations in forging drug discovery partnerships' 5th ICDDT Conference, Dubai. Sponsor AlphaBetaPharma, UK
2013 Jan 5	Invited speaker 'Ayugenomics: Ancient Concepts - Modern Pharmacogenomics' 45th Indian Pharmacology Society Conference, Nagpur.
2012 Dec9	Invited speaker 'Challenges in Privatization and Globalization in Pharma Education' at 64th Indian Pharmaceutical Congress, Chennai. Sponsor SRM University.
2012 Nov 22	Invited inaugural speaker at Emerging Trends in Ayurveda and Herbal Drug Technology, Teresian College, Mysore
2012 Nov 5	Invited inaugural speaker National Conference on Medicinal Plants Shivaji University, Kolhapur
2012 Sept 6	Invited speakers and session chair at 4th International Conference on Medicinal Plants and Health Products, organized by George Washington University at JHU, Rockville

Invited speaker Indian National Academy of Science Seminar 'Evolution of Indian Medicine' Lucknow.
Invited speaker and session Chair at The ICMR Strategic Thrust Symposium on "Translational Research and Reverse Pharmacology: The Interface of Basic Sciences with Traditional Medicine", Kasturba Health Society, Mumbai.
Invite speaker at the 10th Annual Oxford International Conference on the Science of Botanicals, University of Mississippi
Invited speaker at the American Chemical Society 241st annual conference in Anaheim, California Mini symposium on "Ancient-Medicine Based Drug Discovery"
Invited speaker at the International Organization for Chemical Sciences in Development the University of the Western Cape, South Africa.
Invited speaker at the 10th World Bioethics Forum, "Bioethics in a Globalised World" Singapore
Visited Medical Research Council of South Africa and interactions /lectures at University of Western Cape, University of Pretoria, Durban University, University of KwaZulu Natal
Chief guest lecturer at Start Award ceremony of American Association of Government College of Pharmacy Bangalore
Inaugural speech at Seminar on Herbs and Herbal Products, Organized by St Joseph's College Irinjalakuda, Kerala
Invited speaker at the International Pharmaceutical Federation, FIP World Congress of Pharmacy and Pharmaceutical Sciences, Lisbon, Portugal.
Invited lecture, Confederation Indian Industries 'Global Ayurveda Summit', Cochin
Invited speaker, INSA Platinum Jubilee International Symposium, NCL, Pune Invited speaker, Royal Society of Chemistry and IUPAC Symposium, Glasgow Invited speaker, 7th INTRACOM, Government of Malaysia, July, Kuala Lumpur Invited speaker 1st International Ayurveda Congress, Milan, Italy Session Chair, AIEA Higher Education Conference, Atlanta, US Session Chair, NAFSA Higher Education Conference, Washington DC Invited lecture Indo-Australian Conference on Pharmacogenomics, Manipal Invited speaker at Indian Pharmaceutical Association Conference, Varanasi Keynote, Indian Pharmacological Society Conference, NIPER, Mohali Invited speaker Int. Symposium on Medicinal Plants, University of Toronto

2005	Invited speaker Whole Person Health Summit Chopra Foundation, Bethesda.
2005	Co Chair and speaker at WHAT Medicine Conference, Kuala Lumpur
2005	Invited Speaker at CAM Center of Johns Hopkins University, USA
2005	Invited Expert and Resource person at WHO SEARO meeting, Korea
2005	Invited Speaker on Ayurveda and Science at NIH/NCCAM, Bethesda
2004	Invited speaker at 70th Annual Meeting, Indian Academy of Sciences, Varanasi

$Funded\ Projects\ ({\tt Indicative\ list})$

Funding Information

Year	Details
	Major Research Projects
2017-	Proposal to conduct one week course 'Drug transporters in health and disease' under Global Initiative of Academic Networks (GIAN) program. A grant of Rs 5,68,600 has been approved by Ministry of Human Resource Development, Government of India to host foreign faculty to conduct this course.
2017 -	Center of Excellence grant for collaborative research project entitled 'Preclinical study on development of therapeutic adjuvants based on Ayurveda' from Ministry of AYUSH. This three year project involves IISER, NCCS, Serum Institute and Manipal University from India and NCI/NIH and Memorial Slone Kettering Cancer Center from USA. The Ministry of AYUSH has approved a grant of Rs 3,50,99,680 for a period of three years.
2017 -	Human Resource Development project 'Traditional Medicine and Integrative Health' has been approved by Department of Health Research, Ministry of Health and Family Welfare, Government of India. The DHR has approved grant of Rs 26,50,000/- for a period of three years.
2016 -	Invited by National Cancer Institute, National Institutes of Health, USA to submit P20 Grant proposal for planning and establishment of 'Regional Center of Research Excellence'. This collaborative proposal involves IISER, NCCS, Serum Institute and Manipal University from India and NCI/NIH and Memorial Slone Kettering Cancer Center from USA. This project received very good comments in the peer review, however was not funded due to unique situation.
2015 -	Network ethnopharmacological investigation for natural phosphodiesterase inhibitors. Principal Investigator in a project under 12 th Plan Funding of Rs 5,00,000/-
2013 -2015	Development of e-courses in 'Food and Nutrition'. Invited as Principal Investigator by the University Grants Commission's e-Pathshala program. Funding is Rs 7,00,000 for one year.
2013 - 2015	Herb-Drug interaction studies between prescription drugs and herbal drugs during treatment of Diabetes. Funded by Board of College and University Development, University of Pune. Amount Rs 300,00 for two year duration.
2007 – 2011	Conceptualized and developed an innovative project 'Genomic Variation Analysis and Gene Expression Profiling of Human Dosha Prakriti based on Principles of Ayurveda'. The Office of Principal Scientific Advisor to Government of India approved this project after rigorous peer review and defense made by me. Funding to the extent of Rs 11 million have been granted. During this time, I went on sabbatical and hence the responsibility of Principal Investigator was transferred to my colleague Dr Kalpana Joshi. I continue to participate and guide this project now known as
2006 – 2008	'Ayurgenomics'. Contributed significantly as PI to develop Indo – US Collaborative program. The Ministry of Health and Family Welfare approved a project 'LCPUFA Status and Birth Outcome in India' with collaborators KEM Hospital Research Center Pune and Cornell University. This project was supported by the National Institutes of Health (NIH), USA under RO1 Scheme with financial outlay of Rs. 1.6 million. During this time, I went on sabbatical and hence the responsibility of Principal Investigator was transferred to my colleague Dr Kalpana Joshi.

- 2003 2006 A major project 'Development of AyuSoft An intelligent decision support system based on Ayurvedic knowledge' in collaboration with Center for Development of Advance Computing (C-DAC). Approximate financial outlay of Rs 30 million. Department of Information Technology, Government of India.
- 2004 2007 The Drugs and Pharmaceutical Research Cell granted a major project entitled 'Development of novel herbal adjuvants for vaccines' in collaboration with India's largest vaccine manufacturing company Serum Institute of India. Approximate financial outlay of Rs 15 million supported by Department of Science & Technology, Government of India
- 2002 2006 Invited as one of three Champions by the New Millennium Indian Technology Leadership Initiative (NMITLI) of CSIR Government of India to develop and execute a national network project entitled 'Development of Ayurveda based formulations for treatment of arthritis' in collaboration with over 14 leading national research laboratories and industry partners. Approximate financial outlay of NMITLI herbal drug was Rs140million and that of arthritis component is Rs 35 million.
- 2004 2005 Study on 'traditional medicine for affordable global health' commissioned by Commission on Intellectual Property Innovation and Public Health, World Health Organization, Geneva. http://www.who.int/intellectualproperty/studies/B.Patwardhan2.pdf

1996 – 2012 Minor Research Projects

Conceptualize and implement national program 'Vaidya Scientists' for scientific capacity building among young teachers of Ayurveda

Development of High Impact research projects for Ayurveda sector commissioned by Department of AYUSH

Vision and development plan for creating education hubs in Pune Mumbai area commissioned by Lavasa City Corporation and Akruti City Corporation Study on Internationalization of Higher Education, commissioned by University Grants Commission, Government of India

Study on 'Sexuality Sexual Behaviour in relation to HIV/AIDS in India' commissioned by the Ford Foundation.

Study on 'River pollution of Pune city' commissioned by Impact India Foundation Study on 'Ambient air quality of Pune city' commissioned by Pune Municipal Corporation

Other Projects

2015	Network Pharmacology of Triphla
2014	Counterfeits in herbal drugs
2014	Pharmacodynamics of Arjuna
2014	Effect of Rasayana drugs on cell differentiation
2013	Studies on Herb Drug Interactions
2013	Standardization and quality control of poly herbal formulation Britesite
2013	Vaccine adjuvant discovery and development from Botanical sources
2013	Studies on possible counterfeits from herbal medicines
2013	Studies on concurrent consumption of herbal drugs with prescription drugs

Teaching and Training (Indicative list)

Year	Subjects	Courses
1996 –	Integrative Approaches for Health	MSc & PhD Health Science, MSc Dietetics
Present	Pharmacology & Toxicology	Master of Public Health
	Plural Systems of Medicine & Yoga	M. Pharm. Pharmacognosy,
	Human Biology	M.Pharm. Pharm. Biotech
	Drug Discovery & Development	M.Sc. Ayurvedic Biology
	Environmental Health	PhD Pharmaceutical sciences
	Plural Systems of Medicine and Yoga	Teaching Institutes
	Principles of Nutrition	Savitribai Phule Pune University
	Research Methods	Indian Drug Research Laboratory, Pune
	Scientific Writing, Publication Ethics	Poona College of Pharmacy, Pune
		TransDisciplinary University, Bangalore

Research Students Supervised

Uma Chandran DSK UGC PDF Network pharmacology and Drug discovery	Year/ Award	Name / Degree	Subject
2013 Dada Patil Herb – Drug Interactions, Pharmacokinetics		Sarika Chaturvedi, DSK UGC PDF	Evidence-based Ayurveda and Public Health Network pharmacology and Drug discovery Herb – Drug Interactions, Pharmacokinetics

Year	Doctoral Students	Research topic
2017/	Akash Saggam	Vaccine Adjuvant and Networkpharmacology
2017	Pradeep Nair	Therapeutic Fasting in Naturopathy
2017	Hyndavi Salva	Sunbath on Health and Wellness
2016/	Sonali Wagle	Diet and metabolic diseases
2016/	Sangeeta Palaskar	Oral cancers in Indian population
2016/	Sameer Jadhav	Ayurveda and Oral Health
2016/	Bapu Borotikar	Yoga in Mental Health
2016/Awarded	Tillu Girish / Ph.D	Pharmacoepidemiology
2014/Awarded	Paranjpe Maithili / Ph.D	Nutrition and birth outcomes in pregnant women
2012/Awarded	Dada Patil / PhD	Pharmaceutical and Biomedical Analysis
2011/Awarded	Sanjay Mishra / PhD	Imuunoadjuvant activity
2010/Awarded	Puranik Amrutesh / Ph.D	Safety pharmacology of Cassia ariculata
2009/Awarded	Ghodke Yogita / Ph.D	Pharmacogenomics and Rheumatoid arthritis
2007/Awarded	Chavan Preeti / Ph.D	Molecular markers for medicinal plants
2007/Awarded	Warude Dnyanesh / Ph.D	Molecular markers for medicinal plants
2006/Awarded	Sharma Hema / Ph.D	Anti aging Ayurvedic formulations
2006/Awarded	Gautam Manish / Ph.D	Vaccine adjuvants from Rasayana plants
2005/Awarded	Afsaneh Kermavat / Ph.D	Osteoporosis risk factors among Iranian women
2005/Awarded	Joshi Nandini / Ph.D	Occupational hazards of noise pollution
2004/Awarded	Patil Manohar / Ph.D	Immunomodulatory activity of Tinospora
2001/Awarded	Diwanay S.S / Ph.D	Cancer adjuvant activity of Ayurvedic plants

1999/AwardedOseperampil S. / Ph.DComplementary & Alternative Medicine1999/AwardedChavan R.K. / Ph.DTobacco addiction, adulteration and public health1998/AwardedMujumdar S.M. / Ph.DPharmacology of medicinal plants1997/AwardedSarmukaddam S. / Ph.DBiostatistics and epidemiological methods

Graduate Students

Year	Name	Research topic
2016	Shriya Lele/MSc	Biotechnology
2015	Mayuri Dharne/MSc	Biotechnology
2015	Saniya Patil/M.Sc	Network Pharmacology
2014	Neelay Mehendale/M.Sc	Network pharmacology
2008	Camy Goyal / M.Pharm	Pharmaceutical Sciences
2007	Gujar Abhijit/ M.Pharm.	Stability studies
2007	Narendra Sahoo/M.Pharm	Stability studies
2007	Thube Nitin / M.Pharm.	Safety studies on selected Bhasmas
2007	Joshi Varsha / M.Pharm.	Safety studies on selected Bhasmas
2007	Mane Madanrao / M.Pharm	Immunomodulatory activity
2006	Jadhav U / M.Pharm.	Studies on Herbal Formulations Stability
2005	Patil Dada / M.Pharm.	Studies on Herbal Formulations Stability
2005	Mishra Sanjay / M.Pharm.	Herbal Vaccine Adjuvants
2004	Takawale S / M.Pharm.	Pharmacokinetik studies
2003	Shinde V./ M.Pharm.	Molecular pharmacognosy
2002	Warude D./M.Pharm.	Etnopharmacological Applications
2001	Gautam M./ M.Pharm.	Botanical immunomodulators
1999	Jadhav Anil / M.Pharm.	Anti-inflammatory activity of Ayurvedic plants
1998	Jadhav Ram / M.Pharm.	Anxiolytic potential of celastrus paniculatus
1997	Agarwal R./M.Pharm.	Withania Somnifera on immune inflammation.
1996	Anu Grandhi/M.Pharm.	Pharmacology of Ashwagandha and Ginseng.
1995	Manu Acharya/ M.Pharm.	Toxicity studies on Abhrak
1995	Moha Ziauddin/ M.Pharm	Immunomodulatory effect of Withania
1995	Rajendra Pant / M.Pharm.	Comparative biological studies on Pongamia glabra
1994	Golikere Chai / M.Pharm.	Studies on Artemisia pallens wall. Ex DC
1994	Nehete J. / M.Pharm.	Immunomodulatory effect of Asparagus racemosus

Scientific Assessments (Indicative list)

Worked on several national and international committees for scientific assessment including research project review, funding, institutional reviews, performance assessment. (Indicative list)

Year 2016 -	Nature of Experience Member, Research Review Committee, Central Council for Research in Ayurvedic	Institution Ministry of AYUSH, Government of India
2016 -	Sciences (CCRAS) Member, Inter-Departmental Committee for identifying viable new systems of medicine	Ministry of Health and Family Welfare, Department of Health Research, Government of India
2016 -	Member, Committee for National Policy on AYUSH	Ministry of AYUSH, Government of India
2016 -	Member, Committee to Review Functioning of Research Councils	Ministry of AYUSH, Government of India
2016 -	Member, Board of Studies, Pharmaceutical Sciences	All India Council for Technical Education, Government of India
2016 -	Member, Research Policy Committee	Bharati Vidyapeeth Deemed University
2016 -	Chairman, Board of Studies in Basic Medical Sciences and Health Sciences	Savitribai Phule Pune University
2015 -	Member, Research Advisory Council	Manipal University, Manipal
2015 -	Member, Task Force	Ministry of AYUSH, Government of India
2015 -	Expert Member, ICMR-DRDO Committee	Indian Council of Medical Research, Government of India
2015 -	Chairman, Committee for 'Guidelines for Research Publications'	Savitribai Phule Pune University
2014/05 -	Vice Chairman, Expert Group on	Department of Biotechnology, Government
Present	Translational Research for Products and Processes from Medicinal and Aromatic	of India
	Plants	
2013/11 - Present	Expert Member, Working Group on Nutraceuticals,	Food Safety and Standards Authority of India, Government of India, New Delhi
2013 /09 -	Member Institutional Review Committee	Tata Institute of Social Sciences, A deemed University, Mumbai
2013 – Present	Member, Ayurveda Advisory Committee	Government of Madhya Pradesh (M.P.) Bhopal, India
2013 –	Member Health Centre Advisory	University of Pune
Present	Committee	0111,01011,011
2013 –	Member, Scientific Advisory Committee	Nirma University, Ahmedabad
Present	•	•
2012 –	Member Advisory Board	Vanarai Trust Pune – an NGO dedicated to
Present		nature and environment conservation
2011 –	Member Research Council, National	Council for Scientific and Industrial
Present	Botanical Research Institute, Lucknow	Research
2011 – 2012	Chairman, Mission Group on Traditional Knowledge	Government of Karnataka, Bangalore

2010 – Present	Member Research Advisory Committee, Regional Medical research Centre Belgaum	Indian Council of Medical Research
	-	Description of AVIICH Community of
2010 – 2011	Member Inter-sectoral Innovation Council	Department of AYUSH Government of India
2009 - 2012	Chairman Research Monitoring Committee	Technology Information Forecasting and
	of Centre of Relevance and Excellence in Pharmacogenomics, Manipal University	Assessment Council, Government of India
2009 - 2010	Member International Council Research	Government of India
200) 2010	Committee AYUSH	Government of mala
2006 –	Member Research Advisory Committee	Jana Prabodhini Research Institute Pune
Present		
2008 - 2012	Member Subcommittee, Karnataka	Government of Karnataka
	Knowledge Commission	
2002 - 2006	Member, Academic Advisory Board,	Government of India
	National Institute of Pharmaceutical	
	Education and Research	
2006 - 2007	Chairman, Working group on Traditional	National Knowledge Commission,
2000 2007	Knowledge	Government of India
2005 – 2006	Member Task force 11 th Five Year Plan	Planning Commission, Government of India
2003 - 2000 $2002 - 2004$		Maratha Chamber of Commerce and
2002 – 2004	Co Chair, Biotechnology Committee,	Industries
2002 - 2005	Chairman Steering Committee, New	Council for Scientific and Industrial
	Millennium Indian Technology Leadership	Research
	Initiative, Arthritis Herbal Drug	
	Development Group	
2000 - 2001	Member Task force for Maharashtra	Government of Maharashtra
2000 2001	Biotechnology Policy	Government of Manarashtra
1999 – 2000	Member Organizing Committee, Local	87 th Indian Science Congress, Pune
1999 — 2000		o/ mulan science congress, rune
	Organizing Secretary and Chief coordinator	

Grant Reviews

Year of Membership	Name of Committee	Organization
2014/05 - Present	Vice Chairman, Expert Group on Translational Research for Products and Processes from Medicinal and Aromatic Plants	Department of Biotechnology, Government of India
2012 – Present	Member Program Advisory and Monitoring Committee, Technology Enabled Interventions for Disabled and Elderly (TIDE) program. This scheme receives over 100 grant proposals from reputed research institutions and industries	Department of Science and Technology, Government of India

2010 – 2011	Member of Technical Steering Committee of Small Business Innovative Research Initiative (SBIRI). This scheme receives over 100 grant proposals from reputed research institutions and industries	For Department of Biotechnology, Government of India
2006	Grant review performed for Comprehensive HIV/AIDS Care Treatment and Management Plan for South Africa	Department of Health, Medical research Council, South Africa
2006 – 2011	Member, Project Monitoring Committee to Review scientific progress of major grant given to establish national facility in Pharmacogenomics at Manipal Life Science Center	For Department of Science and Technology, Government of India
2006 – 2007	Member Independent Review Committee to consider major grant to Foundation for Revitalization of Local Health traditions, Bangalore.	For Sir Ratan Tata Trust, Mumbai
1996 – Present	During my tenure as full professor at the State University, I must have reviewed over 50 major grant proposals received from national funding agencies. This list is very large. Few examples of involvement in review of grants and performances of institutions or persons are given here only as indicative	I have done reviewing for most of major funding agencies. The indicative list is as under: Department of Science and Technology; Department of Biotechnology; Council for Scientific and Industrial Research' Indian Council for Medical Research; Government of Maharashtra; Government of Karnataka; North Eastern States Council; Tata Trusts; Medical Research Council South Africa
2014	Other Reviews Review of Recommendations and Vision	Government of Madhya Pradesh, Bhopal
2013	Plan of Ayurveda Advisory Committee, Review of online courses on Ayurveda National Program on Technology Enabled Learning (NPTEL)	Indian Institute of Technology, Madras
2013	Invited as one of the three Juries to review Lead India Program to identify young agents of change based on national competitive search. Five youngsters were selected from amongst hundreds of	Times of India Group of Newspapers
2013	aspirants Invited as Member of Selection cum search Committee for Director of National Institute of Pharmaceutical Education and Research	Indian Council for Medical Research, Government of India
2010	Review of nominations for awards to entrepreneurs. Innovations. Invited as referee.	The Indian Science and Technology Entrepreneurs Parks and Business Incubator Association (ISBA)

2009	Review of nominations received for Young EDGE Award.	The EDGE Forum
	Review of Dissertations / Books	Names of Organizations
1996 – Present	Invited by many reputed Universities as external examiner to review and evaluate PhD thesis / dissertations. List of PhD / Graduate thesis reviewed by me is very extensive. Names of few indicative Universities are given here.	University of Aalborg, Denmark; Hamdard University, Karachi; Jadavpur University, Kolkata; JIPMER, Puducherry; National Institute of Pharmaceutical Education & Research, Mohali; Mumbai University, Mumbai; Nirma University, Ahmedabad; Mysore University, Mysore; Manipal University, Manipal; Mangalore University, Mangalore; SASTRA University, Thunjavur; NMIMS University, Mumbai
2000 to Present	Reviewed several proposals for new books / special issues for reputed publishers	Elsevier Publishers; Springer Publishers; Hindawi Publishers; Bentham Science; Wolters Kluver

Performance Reviews

2000

Invited by many reputed agencies for Performance/ Appraisal of senior positions like Professors in Universities, Directors of National Institutions. Few reprehensive names are as follows:

Central Council for Research in Ayurvedic Sciences; Council for Scientific & Industrial Research, New Delhi; National Institute of Advanced Studies, Bangalore; National Institute of Pharmaceutical Education and Research, Mohali; Maharashtra University of Health Sciences, Nasik; Institute of Ayurveda & Integrative Medicine, Bangalore; Karnataka Knowledge Commission; National Chemical Laboratory, Pune; University of Pune; National AIDS Research Institute, Pune; Serum Institute of India, Pune; Unilever Research Center, Bangalore; Torrent Pharmaceuticals Ltd, Ahmedabad; Centaur Pharmaceuticals, Mumbai; DY Patil University, Pune; Bharati; Vidyapeeth University Pune; YASHADA Pune.

Editorial Activities

Journal Editor

Year	Role	Journal name
2009 –	Founder Editor-in-Chief	Journal of Ayurveda & Integrative
Present	www.jaim.in	Medicine (J-AIM), Elsevier
2010 -	Academic Editor	Evidence-based Complementary &
Present	http://www.hindawi.com/journals/ecam/editors/	Alternative Medicine (eCAM)
		Hindawi Publishing Corporation
2008 -	Editorial Board Member	Journal of Alternative &
Present	http://www.liebertpub.com/editorialboard/journal-	Complementary Medicine (JACM)
	of-alternative-and-complementary-medicine-the/26/	Mary Ann Liebert Inc Publisher
2012 -	Editorial Board Member	Chinese Journal of Integrative
Present	http://www.springer.com/medicine/journal/11655?d	Medicine (CJIM)
	etailsPage=editorialBoard	Springer
2015-	Editorial Board Member	Current Traditional Medicine
		Bentham Science Publishers
2013 –	Editorial Board Member	Combinatorial Chemistry & High
Present	(Section Editor Pharmacognosy (2013-16)	Throughput Screening (CCHTS)
	http://www.benthamscience.com/cchts/EBM.htm	Bentham Science Publishers
2008 -	Editorial Board Member	Indian Drugs
Present	http://www.indiandrugsjournal.com/indiandrugs/edit	Indian Drug Manufacturer
	orial_board.php	Association
2012 -	Member	Committee on Publication Ethics
		(COPE)
2012 –	Member	World Association of Medical Editors
		(WAME)
2013 –	Member	Indian Association of Medical Journal
		Editors (IAMJE)

Journal Reviewer (Indicative list)

Applied Biochemistry and Biotechnology;	Indian Journal of Medical Sciences
Ancient Science of Life	International Journal of Ayurveda Research
AYU International	International Journal of Integrative Biology
BMC Complementary & Alternative Medicine	Journal of Alternative & Complementary
BMC Medicine	Medicine
Chimica Oggi/ Chemistry Today	Journal of Biosciences
Clinical Microbiology & Infection	Journal of Ethnopharmacology
Current Science	Journal of Medicinal Plant Research
Expert Opinion in Drug Discovery	Journal of Pharmacy and Pharmacology
European Journal of Integrative Medicine	Journal of Pharmacognosy & Phytotherapy
Evidence-based Complementary & Alternative	Journal of Translational Medicine
Medicine	Nature Scientific Reports
Food Chemistry	Phytotherapy Research
Indian Drugs	The Biological Bulletin
Indian Journal of Biotechnology	Vaccine

Intellectual Property

Trademarks:

- 1. **Ayugenomics**TM Issued Certificate of Registration of Trade Mark under Trade Mark Act 1999 Section 23(2), Rule 62(I) by Trademark Registry, Government of India. Number 1127075 dated 19-08-2002, J.No. MEGA-6.
- **2. AyuSoft**TM Issued Certificate of Registration of Trade Mark under Trade Mark Act 1999 Section 23(2), Rule 62(I) by Trademark Registry, Government of India. Number 1259514 dated 06-01-2004, J.No. MEGA-1326 S-I.

Patents:

- 1. Jadhav S S, Patwardhan B, Gautam M. US Patent Number 8 501 186 B2. August 8, 2013. 'Adjuvant Composition for Vaccine'
- 2. Puranik A, Patwardhan B. WO Patent Application WO 2012/140666 A2. October 18, 2013. 'Herbal extracts and compositions prepared therefrom'.
- 3. Patwardhan B et al. US Patent Application 2012/0021077 A1. January 26, 2012. 'A composition useful for treatment of rheumatic and musculoskeletal disorders (RMSDs) comprising a poly herbal fully standardized base formulation'.
- 4. Patwardhan B et al. January 22, 2009. WO Patent Application. WO 2009/010992 A2. WO 2009/010992 A3R4. March 26, 2009. 'Synergistic herbal composition for treatment of rheumatic and musculoskeletal disorders'
- 5. Gautam. M. and Patwardhan.B. Aqueous extracts of plant products. Indian Patent Number 234927 (Granted Year 2009). (International classification number: A67K35/78.
- Gautam. M. and Patwardhan. B. A novel process for preparation of aqueous extracts of medicinal plants. Indian Patent Number 234928 (Granted Year 2009). International Classification Number: A67K 35/78.
- 7. Gautam. M and Patwardhan. B. A kit containing a vaccine and an immunological adjuvant. Indian Patent Number 236009 (Granted Year 2009). International classification number: A61K39/39 A61K35/78.
- 8. Jadhav SS, Patwardhan B, Gautam M. Adjuvant composition for vaccine. Indian Patent Application under grant -1184/MUM/2009 (Filed in Year 2009; Under Grant).
- 9. Patwardhan B. US Patent Number 5474668. February 27, 1996. 'Method of treating musculoskeletal diseases and a novel composition therefor'.

Scientific Publications Retrieved from Scopus on 15 June 2021

Google Scholar data shows total 9800 citations with h-index 49 and i10-index 114. A list of 175 publications in chronological order retrieved from Scopus as on 15 June 2021is as follows:

- 1. Aiyar Y, Chandru V, Chatterjee M, Desai S, Fernandez A, Gupta A, Kang G, Khanna T, Mazumdar-Shaw K, Mor N, Mukherji A, Muttreja P, Narayan T, Patwardhan B, Rao KS, Sharma S, Shetty D, Subramanian SV, Varkey LEC, Venkateswaran S, Patel V. India's resurgence of COVID-19: Urgent actions needed. Lancet . 2021;397(10291):2232-4.
- 2. Saggam A, Limgaokar K, Borse S, Chavan-Gautam P, Dixit S, Tillu G, Patwardhan B. Withania somnifera (L.) dunal: Opportunity for clinical repurposing in COVID-19 management. Front Pharmacol . 2021;12
- 3. Patwardhan B, Sarwal R. Significance of AYUSH: India's first line of defence against COVID-19. J Ayurveda Integr Med . 2021;12(2):227-8.
- 4. Patwardhan B, Lakhotia SC. Traditional knowledge systems and new science policy thrust. Curr Sci . 2021;120(4):603-4.
- 5. Anand A, Patwardhan B. Whose duty is it anyway? Ann Neurosci . 2021
- 6. Chaturvedi S, Randive B, Pathak A, Agarkhedkar S, Tillu G, Darmstadt GL, Patwardhan B. Prevalence and perceptions of infant massage in india: Study from maharashtra and madhya pradesh states. BMC Pediatr . 2020;20(1)
- 7. Patwardhan B, Chaturvedi S. India in COVID-19 times: Modern and wiser. J Ayurveda Integr Med . 2020;11(4):367-8.
- 8. Lele RD, Patwardhan B. Transiting from pathy-based to people-centered holistic healthcare. J Ayurveda Integr Med . 2020;11(3):A1-3.
- 9. Patwardhan B, Desiraju GR. Assessing research: The slippery slope. Curr Sci . 2020;118(12):1869-70.
- 10. Mittal P, Radkar A, Kurup A, Kharola A, Patwardhan B. Measuring access, quality and relevance in higher education. Econ Polit Wkly . 2020;55(24):34-8.
- 11. Saggam A, Tillu G, Dixit S, Chavan-Gautam P, Borse S, Joshi K, Patwardhan B. Withania somnifera (L.) dunal: A potential therapeutic adjuvant in cancer. J Ethnopharmacol . 2020;255
- 12. Patwardhan B, Chavan-Gautam P, Gautam M, Tillu G, Chopra A, Gairola S, Jadhav S. Ayurveda rasayana in prophylaxis of COVID-19. Curr Sci . 2020;118(8):1158-60.
- 13. Tillu G, Chaturvedi S, Chopra A, Patwardhan B. Public health approach of ayurveda and yoga for COVID-19 prophylaxis. J Altern Complement Med . 2020;26(5):360-4.
- 14. Tillu G, Salvi S, Patwardhan B. AYUSH for COVID-19 management. J Ayurveda Integr Med . 2020;11(2):95-6.
- 15. Patwardhan B, Nagarkar S, Sarma VV. UGC-CARE list. Curr Sci. 2020;118(1):9a-10a.
- 16. Girme A, Saste G, Chinchansure A, Joshi S, Kunkulol R, Hingorani L, Patwardhan B. Simultaneous determination of anthraquinone, flavonoids, and phenolic antidiabetic compounds from cassia auriculata seeds by validated uhplc based ms/ms method. Mass Spectrom Lett . 2020;11(4):82-9.
- 17. Patwardhan B. Ten years of J-AIM. J Ayurveda Integr Med . 2020;11(1):1-2.
- 18. Grudniewicz A, Moher D, Cobey KD, Bryson GL, Cukier S, Allen K, Ardern C, Balcom L, Barros T, Berger M, Ciro JB, Cugusi L, Donaldson MR, Egger M, Graham ID, Hodgkinson M, Khan KM, Mabizela M, Manca A, Milzow K, Mouton J, Muchenje M, Olijhoek T, Ommaya A, Patwardhan B, Poff D, Proulx L, Rodger M, Severin A, Strinzel M, Sylos-Labini M, Tamblyn R, van Niekerk M, Wicherts JM, Lalu MM. Predatory journals: No definition, no defence. Nature . 2019;576(7786):210-2.

- 19. Patwardhan B, Patwardhan K. Contesting predators: Cleaning up trash in science. J Altern Complement Med . 2019;25(10):979-82.
- 20. Patwardhan B, Thakur A. UGC-CARE initiative to promote research quality, integrity and publication ethics. Curr Sci . 2019;117(6):918-9.
- 21. Patwardhan B. Why india is striking back against predatory journals. Nature . 2019;571(7763):7.
- 22. Mutalik G, Tillu G, Patwardhan B. AyurYoga, the confluence of healing sciences: A call for global action. J Ayurveda Integr Med . 2019;10(2):79-80.
- 23. Shengule SA, Mishra S, Patil D, Joshi KS, Patwardhan B. Phytochemical characterization of ayurvedic formulations of terminalia arjuna: A potential tool for quality assurance. Indian J Trad Knowl . 2019;18(1):127-32.
- 24. Patwardhan B, Tillu G. A tribute to the visionaries. J Ayurveda Integr Med . 2018;9(3):159-60.
- 25. Shengule S, Kumbhare K, Patil D, Mishra S, Apte K, Patwardhan B. Herb-drug interaction of nisha amalaki and curcuminoids with metformin in normal and diabetic condition: A disease system approach. Biomed Pharmacother . 2018;101:591-8.
- 26. Patwardhan B, Payyappalli U. Ayurveda and anti-microbial resistance. J Ayurveda Integr Med . 2018;9(2):85-6.
- 27. Patwardhan B, Tillu G. Universal health coverage and AYUSH systems. J Ayurveda Integr Med . 2018;9(1):1-2.
- 28. Patwardhan B, Nagarkar S, Gadre SR, Lakhotia SC, Katoch VM, Moher D. A critical analysis of the 'UGC-approved list of journals'. Curr Sci . 2018;114(6):1299-303.
- 29. Patwardhan B, Tillu G. J-AIM: Progress, policy and future plans. J Ayurveda Integr Med . 2017;8(4):213-4.
- 30. Shankar D, Patwardhan B. AYUSH for new india: Vision and strategy. J Ayurveda Integr Med . 2017;8(3):137-9.
- 31. Patwardhan K, Patwardhan B. Ayurveda education reforms in india. J Ayurveda Integr Med . 2017;8(2):59-61.
- 32. Mukherjee PK, Katiyar CK, Patwardhan B. Editorial: Special issue on ayurveda. J Ethnopharmacol . 2017;197:2.
- 33. Chandran U, Patwardhan B. Network ethnopharmacological evaluation of the immunomodulatory activity of withania somnifera. J Ethnopharmacol . 2017;197:250-6.
- 34. Patwardhan B, Chaguturu R. Preface. Innov Approach in Drug Discov : Ethnopharmacol , Syst Biol and Holist Target . 2017:xxix-xxxvi.
- 35. Chaturvedi S, Raven J, Patwardhan B. Addressing child under nutrition: Can traditional practices offer a solution? Global Health Action . 2017;10(1)
- 36. Patwardhan B. Indian science and predatory journals. J Ayurveda Integr Med . 2017;8(1):1-2.
- 37. Chaguturu R, Patwardhan B. Collaborative Strategies for Future Drug Discovery In: Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. .; 2017 p. 387-410. DOI: 10.1016/B978-0-12-801814-9.00015-5
- 38. Chandran U, Mehendale N, Patil S, Chaguturu R, Patwardhan B. Network Pharmacology In: Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. .; 2017 p. 127-64. DOI: 10.1016/B978-0-12-801814-9.00005-2
- 39. Gautam M, Patwardhan B, Gairola S, Jadhav S. Vaccines and Immunodrugs Discovery In: Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. .; 2017 p. 315-41. DOI: 10.1016/B978-0-12-801814-9.00011-8
- 40. Chaguturu R, Patwardhan B. Drug Discovery Impasse: Pharmacognosy Holds the Key In: Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. .; 2017 p. 1-22. DOI: 10.1016/B978-0-12-801814-9.00001-5

- 41. Patil D, Patwardhan B, Kumbhare K. Why and How Drugs Fail In: Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. . ; 2017 p. 23-64. DOI: 10.1016/B978-0-12-801814-9.00002-7
- 42. Tillu G, Patwardhan B. Holistic Lifestyle In: Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. . ; 2017 p. 367-85. DOI: 10.1016/B978-0-12-801814-9.00014-3
- 43. Patwardhan B, Chaguturu R. Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting In: Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. . ; 2016 p. 1-442.
- 44. Patwardhan B. Integrity of ayurveda. J Ayurveda Integr Med . 2016;7(4):189-90.
- 45. Chaturvedi S, Patwardhan B. Building bridges for integrative medicine. Lancet Psychiatry . 2016;3(8):705-6.
- 46. Patwardhan B. Ayurvedic drugs in case: Claims, evidence, regulations and ethics. J Ayurveda Integr Med . 2016;7(3):135-7.
- 47. Roy A, Patwardhan B, Chaguturu R. Reigniting pharmaceutical innovation through holistic drug targeting. Drug Discov World . 2016;17:45-55.
- 48. Patwardhan B. Strengthening the ayurveda ecosystem. J Ayurveda Integr Med . 2016;7(2):73-5.
- 49. Nizamuddin S, Govindaraj P, Saxena S, Kashyap M, Mishra A, Singh S, Rotti H, Raval R, Nayak J, Bhat BK, Prasanna BV, Dhumal VR, Bhale S, Joshi KS, Dedge AP, Bharadwaj R, Gangadharan GG, Nair S, Gopinath PM, Patwardhan B, Kondaiah P, Satyamoorthy K, Valiathan MS, Thangaraj K. Reply to 'lack of replication of association of THSD7A with obesity'. Int J Obes . 2016;40(4):727-8.
- 50. Patwardhan B. Need to recognize efforts from developing countries. J Bioethical Inq. 2016;13(1):19.
- 51. Patwardhan B. Strategic cooperation with WHO. J Ayurveda Integr Med . 2016;7(1):1-2.
- 52. Aggarwal R, Gogtay N, Kumar R, Sahni P, Abbas Z, Abraham P, Aggarwal A, Bala Bhaskar S, Bhaumik S, Deepak KK, Desai C, Divakar MC, Goel A, Gopi Krishna V, Grewal A, Gupta OP, Iyer P, Jain V, Jesani A, Kadri SM, Kapil A, Katoch VM, Kulkarni GK, Kumar A, Kumar S, Malik GM, Mallath MK, Mathur VP, Mishra S, Misra V, Mohan A, Nundy S, Pai SA, Patwardhan B, Prakash A, Ramakrishna BS, Raveenthiran V, Sachdev HPS, Sarin YK, Shah C, Shah D, Srinivasa Rao PVLN, Suresh N, Thomas G, Yadav M. The revised guidelines of the medical council of india for academic promotions: Need for a rethink. Indian J Anaesth . 2016;60(1):1-5.
- 53. Aggarwal R, Gogtay N, Kumar R, Sahni P, Abbas Z, Abraham P, Aggarwal A, Bhaskar SB, Bhaumik S, Deepak KK, Desai C, Divakar MC, Goel A, Krishna VG, Grewal A, Gupta OP, Iyer P, Jain V, Jesani A, Kadri SM, Kapil A, Katoch VM, Kulkarni GK, Kumar A, Kumar S, Malik GM, Mallath MK, Mathur VP, Mishra S, Misra V, Mohan A, Nundy S, Pai SA, Patwardhan B, Prakash A, Ramakrishna BS, Raveenthiran V, Sachdev HPS, Sarin YK, Shah C, Shah D, Rao PVLNS, Suresh N, Thomas G, Yadav M. The revised guidelines of the medical council of india for academic promotions: Need for a rethink. Indian J Urol . 2016;32(1):1-4.
- 54. Ghodke-Puranik Y, Puranik AS, Shintre P, Joshi K, Patwardhan B, Lamba J, Niewold TB, Chopra A. Folate metabolic pathway single nucleotide polymorphisms: A predictive pharmacogenetic marker of methotrexate response in indian (asian) patients with rheumatoid arthritis. Pharmacogenomics . 2015;16(18):2019-34.
- 55. Chandran U, Mehendale N, Tillu G, Patwardhan B. Network pharmacology of ayurveda formulation triphala with special reference to anti-cancer property. Comb Chem High Throughput Screen . 2015;18(9):846-54.

- 56. Govindaraj P, Nizamuddin S, Sharath A, Jyothi V, Rotti H, Raval R, Nayak J, Bhat BK, Prasanna BV, Shintre P, Sule M, Joshi KS, Dedge AP, Bharadwaj R, Gangadharan GG, Nair S, Gopinath PM, Patwardhan B, Kondaiah P, Satyamoorthy K, Valiathan MVS, Thangaraj K. Genome-wide analysis correlates ayurveda prakriti. Sci Rep . 2015;5
- 57. Patwardhan B. Ready for the next leap. J Ayurveda Integr Med . 2015;6(4):223-4.
- 58. Patwardhan B, Chandran U. Network ethnopharmacology approaches for formulation discovery. Indian J Trad Knowl . 2015;14(4):574-80.
- 59. Patwardhan B. Public perception of AYUSH. J Ayurveda Integr Med . 2015;6(3):147-9.
- 60. Chandran U, Mehendale N, Tillu G, Patwardhan B. Network pharmacology: An emerging technique for natural product drug discovery and scientific research on ayurveda. Proc Indian Natl Sci Acad . 2015;81(3):561-8.
- 61. Rotti H, Mallya S, Kabekkodu S, Chakrabarty S, Bhale S, Bharadwaj R, Bhat BK, Dedge AP, Dhumal V, Gangadharan GG, Gopinath PM, Govindaraj P, Joshi KS, Kondaiah P, Nair S, Nair, Nayak J, Prasanna BV, Shintre P, Sule M, Thangaraj K, Patwardhan B, Valiathan M, Satyamoorthy K. DNA methylation analysis of phenotype specific stratified indian population. J Transl Med . 2015;13(1)
- 62. Patwardhan B, Mutalik G, Tillu G. Integrative Approaches for Health: Biomedical Research, Ayurveda and Yoga In: Integrative Approaches for Health: Biomedical Research, Ayurveda and Yoga.; 2015 p. 1-357. DOI: 10.1016/C2013-0-19395-6
- 63. Patwardhan B. Good publications need good research. J Ayurveda Integr Med . 2015;6(2):73-4.
- 64. Patwardhan B. Traditional Medicine-Inspired Evidence-Based Approaches to Drug Discovery In: Evidence-Based Validation of Herbal Medicine. . ; 2015 p. 259-69. DOI: 10.1016/B978-0-12-800874-4.00012-X
- 65. Nizamuddin S, Govindaraj P, Saxena S, Kashyap M, Mishra A, Singh S, Rotti H, Raval R, Nayak J, Bhat BK, Prasanna BV, Dhumal VR, Bhale S, Joshi KS, Dedge AP, Bharadwaj R, Gangadharan GG, Nair S, Gopinath PM, Patwardhan B, Kondaiah P, Satyamoorthy K, Valiathan MS, Thangaraj K. A novel gene THSD7A is associated with obesity. Int J Obes . 2015;39(11):1662-5.
- 66. Patwardhan B, Deshpande S, Sardeshpande N, Gadhve S, Tillu G. Human resource development in health services. Econ Polit Wkly . 2015;50(36):77-8.
- 67. Patwardhan B. National health policy: Need to innovate. J Ayurveda Integr Med . 2015;6(1):1-3.
- 68. Patwardhan B. Bridging ayurveda with evidence-based scientific approaches in medicine. EPMA J . 2014;5(1)
- 69. Patwardhan B. Five years of J-AIM. J Ayurveda Integr Med . 2014;5(4):199-200.
- 70. Patwardhan B. Traditions, rituals and science of ayurveda. J Ayurveda Integr Med . 2014;5(3):131-3.
- 71. Rotti H, Raval R, Anchan S, Bellampalli R, Bhale S, Bharadwaj R, Bhat B, Dedge A, Dhumal V, Gangadharan G, Girijakumari T, Gopinath P, Govindaraj P, Halder S, Joshi K, Kabekkodu S, Kamath A, Kondaiah P, Kukreja H, Kumar KL, Nair S, Nair SN, Nayak J, Prasanna B, Rashmishree M, Sharanprasad K, Thangaraj K, Patwardhan B, Satyamoorthy K, Valiathan MV. Determinants of prakriti, the human constitution types of indian traditional medicine and its correlation with contemporary science. J Ayurveda Integr Med . 2014;5(3):167-75.
- 72. Patwardhan B. Death of Drugs and Rebirth of Health Care: Indian Response to Discovery Impasse In: Collaborative Innovation in Drug Discovery: Strategies for Public and Private Partnerships. . ; 2014 p. 173-94. DOI: 10.1002/9781118778166.ch12

- 73. Patil D, Gautam M, Gairola S, Jadhav S, Patwardhan B. Effect of botanical immunomodulators on human CYP3A4 inhibition: Implications for concurrent use as adjuvants in cancer therapy. Integr Cancer Ther . 2014;13(2):167-75.
- 74. Patwardhan B. Editorial: Rediscovering drug discovery. Comb Chem High Throughput Screen . 2014;17(10):819.
- 75. Patil D, Gautam M, Gairola S, Jadhav S, Patwardhan B. HPLC/Tandem mass spectrometric studies on steroidal saponins: An example of quantitative determination of shatavarin IV from dietary supplements containing asparagus racemosus. J AOAC Int . 2014;97(6):1497-502.
- 76. Gadgil MS, Joshi KS, Naik SS, Pandit AN, Otiv SR, Patwardhan BK. Association of homocysteine with global DNA methylation in vegetarian indian pregnant women and neonatal birth anthropometrics. J Matern -Fetal Neonatal Med . 2014;27(17):1749-53.
- 77. Patwardhan B. Envisioning AYUSH: Historic opportunity for innovation and revitalization. J Ayurveda Integr Med . 2014;5(2):67-70.
- 78. Gadgil M, Joshi K, Pandit A, Otiv S, Joshi R, Brenna JT, Patwardhan B. Imbalance of folic acid and vitamin B12 is associated with birth outcome: An indian pregnant women study. Eur J Clin Nutr . 2014;68(6):726-9.
- 79. Patwardhan B, Mutalik G. Search of novel model for integrative medicine. Chin J Integr Med . 2014;20(3):170-8.
- 80. Patwardhan B. The new pharmacognosy. Comb Chem High Throughput Screen . 2014;17(2):97.
- 81. Chopra A, Saluja M, Tillu G, Sarmukkaddam S, Venugopalan A, Narsimulu G, Handa R, Sumantran V, Raut A, Bichile L, Joshi K, Patwardhan B. Ayurvedic medicine offers a good alternative to glucosamine and celecoxib in the treatment of symptomatic knee osteoarthritis: A randomized, double-blind, controlled equivalence drug trial. Rheumatology . 2013;52(8):1408-17.
- 82. Patil D, Gautam M, Mishra S, Karupothula S, Gairola S, Jadhav S, Pawar S, Patwardhan B. Determination of withaferin A and withanolide A in mice plasma using high-performance liquid chromatography-tandem mass spectrometry: Application to pharmacokinetics after oral administration of withania somnifera aqueous extract. J Pharm Biomed Anal . 2013;80:203-12.
- 83. Raut A, Bichile L, Chopra A, Patwardhan B, Vaidya A. Comparative study of amrutbhallataka and glucosamine sulphate in osteoarthritis: Six months open label randomized controlled clinical trial. J Ayurveda Integr Med . 2013;4(4):229-36.
- 84. Patwardhan B. Historical future of ayurveda. J Ayurveda Integr Med . 2013;4(4):189-92.
- 85. Patwardhan B. Ethical and scientific aspects of research publications. J Ayurveda Integr Med . 2013;4(3):129-31.
- 86. Patwardhan B. Time for evidence-based ayurveda: A clarion call for action. J Ayurveda Integr Med . 2013;4(2):63-6.
- 87. Patwardhan B. Traditional knowledge patents: New guidelines or deterrents? J Ayurveda Integr Med . 2013;4(1):1-3.
- 88. Patwardhan B. Editorial note. J Ayurveda Integr Med . 2013;4(1):3.
- 89. Puranik A, Patwardhan B. Ayurveda and Metabolic Diseases: The Whole is Greater than the Sum of the Parts In: Nutritional and Therapeutic Interventions for Diabetes and Metabolic Syndrome. . ; 2012 p. 443-56. DOI: 10.1016/B978-0-12-385083-6.00035-8
- 90. Patwardhan B. Adding life to years with ayurveda. J Ayurveda Integr Med . 2012;3(2):55-6.
- 91. Chopra A, Saluja M, Tillu G, Venugopalan A, Narsimulu G, Handa R, Bichile L, Raut A, Sarmukaddam S, Patwardhan B. Comparable efficacy of standardized ayurveda formulation and hydroxychloroquine sulfate (HCQS) in the treatment of rheumatoid arthritis (RA): A randomized investigator-blind controlled study. Clin Rheumatol . 2012;31(2):259-69.

- 92. Patwardhan B. Health for india: Search for appropriate models. J Ayurveda Integr Med . 2012;3(4):173-4.
- 93. Patwardhan B. Ayurveda: Finding place in own house. J Ayurveda Integr Med . 2012;3(3):109-10.
- 94. Chopra A, Saluja M, Tillu G, Venugopalan A, Narsimulu G, Sarmukaddam S, Patwardhan B. Evaluating higher doses of shunthi guduchi formulations for safety in treatment of osteoarthritis knees: A government of india NMITLI arthritis project. J Ayurveda Integr Med . 2012;3(1):38-44.
- 95. Patwardhan B. Two years of J-AIM. J Ayurveda Integr Med . 2012;3(1):1-2.
- 96. Joshi K, Ghodke Y, Patwardhan B. Traditional medicine to modern pharmacogenomics: Ayurveda prakriti type and CYP2C19 gene polymorphism associated with the metabolic variability. Evid -Based Complement Altern Med . 2011;2011
- 97. Patwardhan B, Datta HS, Mitra SK. Wound healing activity of topical application forms based on ayurveda. Evid -Based Complement Altern Med . 2011;2011
- 98. Mitra SK, Datta HS, Paramesh R, Patwardhan B. Theories and management of aging: Modern and ayurveda perspectives. Evid -Based Complement Altern Med . 2011;2011
- 99. Sumantran VN, Joshi AK, Boddul S, Koppikar SJ, Warude D, Patwardhan B, Chopra A, Chandwaskar R, Wagh UV. Antiarthritic activity of a standardized, multiherbal, ayurvedic formulation containing boswellia serrata: In vitro studies on knee cartilage from osteoarthritis patients. Phytother Res . 2011;25(9):1375-80.
- 100. Puranik AS, Halade G, Kumar S, Mogre R, Apte K, Vaidya ADB, Patwardhan B. Cassia auriculata: Aspects of safety pharmacology and drug interaction. Evid -Based Complement Altern Med . 2011;2011
- 101. Ghodke Y, Chopra A, Shintre P, Puranik A, Joshi K, Patwardhan B. Profiling single nucleotide polymorphisms (SNPs) across intracellular folate metabolic pathway in healthy indians. Indian J Med Res . 2011;133(3):274-9.
- 102. Balasubramani SP, Venkatasubramanian P, Kukkupuni SK, Patwardhan B. Plant-based rasayana drugs from ayurveda. Chin J Integr Med . 2011;17(2):88-94.
- 103. Patwardhan B, Joglekar V, Pathak N, Vaidya A. Vaidya-scientists: Catalysing ayurveda renaissance. Curr Sci . 2011;100(4):476-83.
- 104. Joshi K, Chavan-Gautam P, Patwardhan B. Applications of biotechnology and molecular markers in botanical drug standardization and quality assurance In: Genetic Resources, Chromosome Engineering, and Crop Improvement: Medicinal Plants. . ; 2011 p. 959-81.
- 105. Patwardhan B. Planned progress for health. J Ayurveda Integr Med . 2011;2(4):161-2.
- 106. Patwardhan B. Let's plan for national health. J Ayurveda Integr Med . 2011;2(3):103-4.
- 107. Patwardhan B. European union ban on ayurvedic medicines. J Ayurveda Integr Med . 2011;2(2):47-8.
- 108. Patwardhan B. Ayurveda GCP guidelines: Need for freedom from RCT ascendancy in favor of whole system approach. J Ayurveda Integr Med . 2011;2(1):1-4.
- 109. Chopra A, Saluja M, Tillu G, Venugopalan A, Sarmukaddam S, Raut AK, Bichile L, Narsimulu G, Handa R, Patwardhan B. A randomized controlled exploratory evaluation of standardized ayurvedic formulations in symptomatic osteoarthritis knees: A government of india NMITLI project. Evid -Based Complement Altern Med . 2011;2011
- 110. Patil D, Gautam M, Jadhav U, Mishra S, Karupothula S, Gairola S, Jadhav S, Patwardhan B. Physicochemical stability and biological activity of withania somnifera extract under real-time and accelerated storage conditions. Planta Med . 2010;76(5):481-8.

- 111. Patwardhan B, Vaidya ADB. Natural products drug discovery: Accelerating the clinical candidate development using reverse pharmacology approaches. Indian J Exp Biol . 2010;48(3):220-7.
- 112. Patil D, Gautam M, Mishra S, Kulkarni P, Suresh K, Gairola S, Jadhav S, Patwardhan B. Quantitative determination of protoberberine alkaloids in tinospora cordifolia by RP-LC-DAD. Chromatographia . 2010;71(3-4):341-5.
- 113. Patwardhan B. Ayurveda for all: 11 action points for 2011. J Ayurveda Integr Med . 2010;1(4):237-9.
- 114. Patwardhan B. Ayurveda and integrative medicine: Riding a tiger. J Ayurveda Integr Med . 2010;1(1):13-5.
- 115. Patwardhan B. J-AIM receives warm welcome. J Ayurveda Integr Med . 2010;1(2):85-6.
- 116. Patwardhan B. J-AIM-A renaissance for ayurveda. J Ayurveda Integr Med . 2010;1(1):1-2.
- 117. Patwardhan B. Ayurveda, evidence-base and scientific rigor. J Ayurveda Integr Med . 2010;1(3):169-70.
- 118. Patwardhan B, Vaidya AD. Ayurveda: Scientific research and publications. Curr Sci . 2009;97(8):1117-21.
- 119. Sahoo NK, Sarkar S, Patwardhan B. Erratum: Stability study on boswellia serrata (hydroalcoholic) extract (asian journal of chemistry (2009) 21:5 (3529-3534)). Asian J Chem . 2009;21(7):5702.
- 120. Patwardhan B, Mashelkar RA. Traditional medicine-inspired approaches to drug discovery: Can ayurveda show the way forward? Drug Discov Today . 2009;14(15-16):804-11.
- 121. Kurup A, Mohan A, Patwardhan B. Emerging directions in global education. Curr Sci . 2009;96(10):1301-3.
- 122. Sahoo NK, Sarkar S, Patwardhan B. Stability study on boswellia serrata (hydro-alcoholic) extract. Asian J Chem . 2009;21(5):3529-34.
- 123. Gautam M, Saha S, Bani S, Kaul A, Mishra S, Patil D, Satti NK, Suri KA, Gairola S, Suresh K, Jadhav S, Qazi GN, Patwardhan B. Immunomodulatory activity of asparagus racemosus on systemic Th1/Th2 immunity: Implications for immunoadjuvant potential. J Ethnopharmacol . 2009;121(2):241-7.
- 124. Chitlange SS, Kulkarni PS, Patil D, Patwardhan B, Nanda RK. High-performance liquid chromatographic fingerprint for quality control of terminalia arjuna containing ayurvedic churna formulation. J AOAC Int . 2009;92(4):1016-20.
- 125. Patwardhan B, Vaidya ADB, Chorghade M, Joshi SP. Reverse pharmacology and systems approaches for drug discovery and development. Curr Bioact Compd . 2008;4(4):201-12.
- 126. Sumantran VN, Chandwaskar R, Joshi AK, Boddul S, Patwardhan B, Chopra A, Wagh UV. The relationship between chondroprotective and antiinflammatory effects of withania somnifera root and glucosamine sulphate on human osteoarthritic cartilage in vitro. Phytother Res . 2008;22(10):1342-8.
- 127. Gautam M, Gairola S, Jadhav S, Patwardhan B. Ethnopharmacology in vaccine adjuvant discovery. Vaccine . 2008;26(41):5239-40.
- 128. Sumantran VN, Kulkarni A, Chandwaskar R, Harsulkar A, Patwardhan B, Chopra A, Wagh UV. Chondroprotective potential of fruit extracts of phyllanthus emblica in osteoarthritis. Evid -Based Complement Altern Med . 2008;5(3):329-35.
- 129. Anitha BK, Patwardhan B. Emerging directions in global education. Curr Sci . 2008;95(3):303-4.
- 130. Patwardhan B, Bodeker G. Ayurvedic genomics: Establishing a genetic basis for mind-body typologies. J Altern Complement Med . 2008;14(5):571-6.

- 131. Ghodke Y, Chopra A, Joshi K, Patwardhan B. Are thymidylate synthase and methylene tetrahydrofolate reductase genes linked with methotrexate response (efficacy, toxicity) in indian (asian) rheumatoid arthritis patients? Clin Rheumatol . 2008;27(6):787-9.
- 132. Chavan P, Warude D, Joshi K, Patwardhan B. Development of SCAR (sequence-characterized amplified region) markers as a complementary tool for identification of ginger (zingiber officinale roscoe) from crude drugs and multicomponent formulations. Biotechnol Appl Biochem . 2008;50(1):61-9.
- 133. Keramat A, Patwardhan B, Larijani B, Chopra A, Mithal A, Chakravarty D, Adibi H, Khosravi A. The assessment of osteoporosis risk factors in iranian women compared with indian women. BMC Musculoskelet Disord . 2008;9
- 134. Ghodke Y, Joshi K, Arya Y, Radkar A, Chiplunkar A, Shintre P, Patwardhan B. Genetic polymorphism of CYP2C19 in maharashtrian population. Eur J Epidemiol . 2007;22(12):907-15.
- 135. Shinde VM, Dhalwal K, Mahadik KR, Joshi KS, Patwardhan BK. RAPD analysis for determination of components in herbal medicine. Evid -Based Complement Altern Med . 2007;4(SUPPL. 1):21-3.
- 136. Joshi K, Hankey A, Patwardhan B. Traditional phytochemistry: Identification of drug by 'taste'. Evid -Based Complement Altern Med . 2007;4(2):145-8.
- 137. Sumantran VN, Kulkarni A, Boddul S, Chinchwade T, Koppikar SJ, Harsulkar A, Patwardhan B, Chopra A, Wagh UV. Chondroprotective potential of root extracts of withania somnifera in osteoarthritis. J Biosci . 2007;32(2):299-307.
- 138. Chavan P, Joshi K, Patwardhan B. DNA microarrays in herbal drug research. Evid -Based Complement Altern Med . 2006;3(4):447-57.
- 139. Hankey A, Patwardhan B. Second world ayurveda congress: University of pune, pune, maharashtra, india, november 5-12, 2006. Evid -Based Complement Altern Med . 2006;3(4):547-8.
- 140. Dnyaneshwar W, Preeti C, Kalpana J, Bhushan P. Development and application of RAPD-SCAR marker for identification of phyllanthus emblica linn. Biol Pharm Bull . 2006;29(11):2313-6.
- 141. Bani S, Gautam M, Sheikh FA, Khan B, Satti NK, Suri KA, Qazi GN, Patwardhan B. Selective Th1 up-regulating activity of withania somnifera aqueous extract in an experimental system using flow cytometry. J Ethnopharmacol . 2006;107(1):107-15.
- 142. Patwardhan B, Gautam M, Diwanay S. Botanical Immunomodulators and Chemoprotectants in Cancer Therapy In: Drug Discovery and Development. . ; 2006 p. 405-24. DOI: 10.1002/0471780103.ch16
- 143. Patwardhan B, Joshi K, Ghodke Y. Genetic basis to concept of prakriti [3]. Curr Sci . 2006;90(7):896.
- 144. Joshi K, Lad S, Kale M, Patwardhan B, Mahadik SP, Patni B, Chaudhary A, Bhave S, Pandit A. Supplementation with flax oil and vitamin C improves the outcome of attention deficit hyperactivity disorder (ADHD). Prostaglandins Leukotrienes Essent Fatty Acids . 2006;74(1):17-21.
- 145. Patwardhan B, Warude D, Pushpangadan P, Bhatt N. Ayurveda and traditional chinese medicine: A comparative overview. Evid -Based Complement Altern Med . 2005;2(4):465-73.
- 146. Patwardhan B. Ethnopharmacology and drug discovery. J Ethnopharmacol . 2005;100(1-2):50-2.
- 147. Ghodke Y, Joshi K, Chopra A, Patwardhan B. HLA and disease. Eur J Epidemiol . 2005;20(6):475-88.
- 148. Bhushan P, Dnyaneshwar W, Girish T. Heavy metals and ayurveda. Curr Sci . 2005;88(10):1535-6.

- 149. Bhushan P, Kalpana J, Arvind C. Classification of human population based on HLA gene polymorphism and the concept of prakriti in ayurveda. J Altern Complement Med . 2005;11(2):349-53.
- 150. Patwardhan B, Gautam M. Botanical immunodrugs: Scope and opportunities. Drug Discov Today . 2005;10(7):495-502.
- 151. Warude D, Patwardhan B. Botanicals: Quality and regulatory issues. J Sci Ind Res . 2005;64(2):83-92.
- 152. Diwanay S, Gautam M, Patwardhan B. Cytoprotection and immunomodulation in cancer therapy. Curr Med Chem Anti-Cancer Agents . 2004;4(6):479-90.
- 153. Chopra A, Lavin P, Patwardhan B, Chitre D. A 32-week randomized, placebo-controlled clinical evaluation of RA-11, an ayurvedic drug, on osteoarthritis of the knees. J Clin Rheumatol . 2004;10(5):236-45.
- 154. Joshi K, Chavan P, Warude D, Patwardhan B. Molecular markers in herbal drug technology. Curr Sci . 2004;87(2):159-65.
- 155. Gautam M, Diwanay SS, Gairola S, Shinde YS, Jadhav SS, Patwardhan BK. Immune response modulation to DPT vaccine by aqueous extract of withania somnifera in experimental system. Int Immunopharmacol . 2004;4(6):841-9.
- 156. Gautam M, Diwanay S, Gairola S, Shinde Y, Patki P, Patwardhan B. Immunoadjuvant potential of asparagus racemosus aqueous extract in experimental system. J Ethnopharmacol . 2004;91(2-3):251-5.
- 157. Patwardhan B, Vaidya ADB, Chorghade M. Ayurveda and natural products drug discovery. Curr Sci. 2004;86(6):789-99.
- 158. Diwanay S, Chitre D, Patwardhan B. Immunoprotection by botanical drugs in cancer chemotherapy. J Ethnopharmacol . 2004;90(1):49-55.
- 159. Patwardhan B, Chopra A, Vaidya ADB. Herbal remedies and the bias against ayurveda [1]. Curr Sci . 2003;84(9):1165-6.
- 160. Vaidya RA, Vaidya ADB, Patwardhan B, Tillu G, Rao Y. Ayurvedic pharmacoepidemiology: A proposed new discipline [1]. J Assoc Phys India . 2003;51(MAY):528.
- 161. Warude D, Chavan P, Joshi K, Patwardhan B. DNA isolation from fresh and dry plant samples with highly acidic tissue extracts. Plant Mol Biol Report . 2003;21(4):467a-f.
- 162. Chopra A, Lavin P, Patwardhan B, Chitre D. Randomized double blind trial of an ayurvedic plant derived formulation for treatment of rheumatoid arthritis. J Rheumatol . 2000;27(6):1365-72.
- 163. Patwardhan B. Ayurveda: The 'designer' medicine: A review of ethnopharmacology and bioprospecting research. Indian Drugs . 2000;37(5):213-27.
- 164. Agarwal R, Diwanay S, Patki P, Patwardhan B. Studies on immunomodulatory activity of withania somnifera (ashwagandha) extracts in experimental immune inflammation. J Ethnopharmacol . 1999;67(1):27-35.
- 165. Devara PCS, Raj PE, Gadgil AS, Patwardhan B, Tillu AD. Optical network for monitoring of environmental pollution. J Opt (India) . 1998;27(3):111-9.
- 166. Patil M, Patki P, Kamath HV, Patwardhan B. Antistress activity of tinospora cordifolia (wild) miers. INDIAN DRUGS . 1997;34(4):211-5.
- 167. Ziauddin M, Phansalkar N, Patki P, Diwanay S, Patwardhan B. Studies on the immunomodulatory effects of ashwagandha. J Ethnopharmacol . 1996;50(2):69-76.
- 168. Grandhi A, Mujumdar AM, Patwardhan B. A comparative pharmacological investigation of ashwagandha and ginseng. J Ethnopharmacol . 1994;44(3):131-5.

- 169. Kulkarni RR, Patki PS, Jog VP, Gandage SG, Patwardhan B. Treatment of osteoarthritis with a herbomineral formulation: A double-blind, placebo-controlled, cross-over study. J Ethnopharmacol . 1991;33(1-2):91-5.
- 170. Patwardhan B, Kalbag D, Patki PS, Nagsampagi BA. Search of immunomodulatory agents: A review. INDIAN DRUGS . 1990;28(2):56-63.
- 171. Patki PS, Singh J, Gokhale SG, Shrotri DS, Patwardhan B. Potassium and magnesium in essential hypertension. Br Med J. 1990;301(6763):1279.
- 172. Paranjpe P, Patki P, Patwardhan B. Ayurvedic treatment of obesity: A randomised double-blind, placebo-controlled clinical trial. J Ethnopharmacol . 1990;29(1):1-11.
- 173. Patki PS, Singh J, Gokhale SV, Bulakh PM, Shrotri DS, Patwardhan B. Efficacy of potassium and magnesium in essential hypertension: A double blind, placebo controlled, crossover study. Br Med J. 1990;301(6751):521-3.
- 174. Saraf MN, Ghooi RB, Patwardhan BK. Studies on the mechanism of action of Semecarpus anacardium in rheumatoid arthritis. J Ethnopharmacol . 1989;25(2):159-64.
- 175. Patwardhan B, Ghooi RB, David SB. A new anaerobic inhibitor of herbal origin. INDIAN J PHARM SCI . 1988;50(2):130-2.

Books and Chapters

- 1. Patwardhan B. Mohanan KP, Mohanan Tara. Higher Education in India Vision, Purpose, Policy and Strategy. Association of Indian Universities Wednesday E-Essay Series, March 2021.
- 2. Patwardhan B. In Quality Mandate for Higher Education Institutes of India, University Grants Commission, New Delhi. March 2021
- 3. Patwardhan B. Reimagining Indian Universities: Learning from the Glorious Past for Building a New India. Association of Indian Universities. August 2020.
- 4. Patwardhan B. et.al. Guidance Document on Good Academic Research Practices (UGC GARP 2020). OSF Preprints, 24 Nov. 2020.
- 5. Patwardhan B, Chaguturu R Innovative Approaches in Drug Discovery: Ethnopharmacology, Systems Biology and Holistic Targeting. Academic Press Elsevier Inc, New York, USA. 2016
- 6. Patwardhan B, Mutalik G, Tillu G. Integrative Approaches for Health: Biomedical Research, Ayurveda and Yoga. Academic Press Elsevier Inc, New York, USA. 2015
- 7. Patwardhan B. Drug Discovery & Development: Ethnopharmacology Perspectives. New India Publishing Agency, 2007, New Delhi, India. Pp. 356.
- 8. Patwardhan B. Annam Food as Heath, Publisher Navadanya, New Delhi, 2017
- 9. Patwardhan B. Shankar D. Modernizing Indian Traditional Systems of Medicine, Grand challenges in Science and Technology A new perspective, INAE, National Institute of Advanced Studies, Bengaluru, 2016.
- 10. Patwardhan B. Death of Drugs and Rebirth of Healthcare: Indian Response to Global Impasse. In Book Ed. Chaguturu R. 'Collaborative Innovation in Drug Discovery', John Wiley & Sons, USA. 2014.
- 11. Patwardhan B. Ayurveda and Natural Product Drug Discovery. Chapter in Textbook of Biochemistry, Biotechnology, Allied & Molecular Medicine. Eds: G. P. Talwar, Seyed E. Hasnain, Shiv K. Sarin. 2014.
- 12. Patwardhan B., Puranik A. Nutritional and Therapeutic Interventions for Diabetes and Metabolic Syndrome Chapter 35. Eds: Bagachi Debasis, Nair Sreejayan. Elsevier, 2012.

- 13. Patwardhan B., Kambholja K. Drug Discovery and Ayurveda: A Win Win Relationship between Contemporary and Ancient Science. Drug Discovery & Development: Present and Future, edited by Izet M. Kapetanovic, ISBN 978-953-307-615-7, InTech, 2011.
- 14. Patwardhan B. From clinical evidence to mechanism of action: The development of standardized phytomedicines. In *'Evaluation Herbal Medicinal Products'* Ed: Mukarjee Pulok and Houghton Peter, Elsevier Science, 2008.
- 15. Patwardhan B. Ayurveda, Drug Discovery & Immunomodulation. Chapter 12, In *Handbook of Ethnopharmacology*, 393-420. Ed: M. Eddouks, Research Signpost, India. 2008.
- 16. Patwardhan B. Ethnopharmacological approaches to botanical immunodrugs and cancer chemoprotectants in cancer therapy. Chapter 11, In *Annals of Traditional Chinese Medicine*, Volume 3, Ed: Leung and Fong, World Scientific, Singapore. 2007.
- 17. Patwardhan B. Traditional Medicine for Global Health: Public Health and Intellectual Property Aspects. Asia pacific Technical Monitor, UN APCTT, New Delhi, India. 2006.
- 18. Patwardhan B. Traditional Medicine: Modern Approach For Affordable Global Health. World Health Organization: CIPIH, Commissioned Report, 2005. Published by Journal *Ancient Science of Life*, Centenary Edition, 2006.
- 19. Patwardhan B. A chapter titled 'Complementary and Alternative Medicine'. Our Health in Our Hands, Ed. Deodhar N.S., University of Pune Press, 2002.
- 20. Patwardhan B. Ayurvedic drugs safety and validation: A critical and comparative review of global and national needs. Proceedings of National Symposium on Ayurvedic Drug Industry: Challenges of Today and Tomorrow, Organized by ADMA at New Delhi 27-29 August 1998.
- 21. Ranade Subhash, Patwardhan Bhushan. Handbook of Research Methods. Anamol Prakashan, Pune. 1990.
- 22. Mardikar B.R., Ranade Subhash, Patwardhan Bhushan. *Occimum santum*: Krishna Tulasi A Monograph. University of Pune Press, 1989.

In addition, have published over 300 articles in Magazines, News Papers, and other popular media sources. These articles are mostly in English and Marathi (mother tongue). Have written on various subjects including popular science, health, medicine, environment, Ayurveda, Yoga and Education. Two books have been recently published compiling selected articles published in Marathi News Papers like Sakal, Lokasatta, Maharashtra Times and English News Papers like Times of India, Indian Express. Three books, several book chapters and articles are published including Arogyadayi Paryavaran (Marathi), A unique book for School children highlighting importance of environment and conservation of nature to promote health and prevent diseases. Continental Publishers, Pune, 1998. Arogya ani Ayurveda (Marathi), A collection on selected articles on health and Ayurveda written by Bhushan Patwardhan, Padmagandha Publishers Pune 2012. Shikshan ani Paryavaran (Marathi), a collection of selected articles on Environment and Education written by Bhushan Patwardhan, Padmagandha Publishers Pune, 2012. Several videos are available on the YouTube and online educational platforms.

Association with Professional Societies

Year	Name	Title of Role
2021	India International Center, New Delhi	Member
2017	International Longevity Center Pune	Hon Director
2017	Indo Swiss Ayurveda Foundation, Geneva	Board Member
2016	National Academy of Sciences (India)	Elected Fellow
2013	National Academy of Medical Sciences	Elected Fellow
2012	Society for Ethnopharmacology	Member
2009	Institute of Indian Medicine	Elected Fellow
2000	Maharashtra Academy of Sciences	Elected Fellow
1998	Maharashtra Association of Anthropological Studies	Life Member
1998	Indian Association for Study of Traditional Asian Medicine	Life Member
1998	Indian Public Health Association	Life Member
1988	Indian Association for Cancer Research	Life Member
1988	Indian Drug Research Association	Life Member
1988	Indian Association for Clinical Pharmacology and Therapeutics	Life Member
1988	Indian Medical Association	Life Member

Personal Information

Born on March 9, 1959 in Pune, married in 1983, blessed with two daughters. Committed for the cause of health, environment, and sustainable development. Promotes traditional knowledge systems, science for society approach, academic integrity, human values, regularly interacts with stakeholders including the governments, industries, voluntary organizations, media, social reformers and thought leaders. Enjoy reading, music, Indian sports, table tennis, chess, and Yoga.