2022-23

ANNUAL REPORT

Vallabhbhai Patel Chest Institute
University of Delhi, Delhi, India

Mr. Manoj Tiwari, Member of Parliament visited VPCI as a chief guest on the occasion of World No Tobacco Day on May 31, 2022

Dr. Dharmendra Pradhan, Hon'ble Education Minister visited VPCI as a chief guest on the occasion of Rastriya Ekta Diwas on October 31, 2022

Prof. Yogesh Singh, Vice Chancellor, University of Delhi visited VPCI as chief guest on the occasion of 70th Institute Day Celebration on January 12, 2023

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Vallabhbhai Patel Chest Institute
University of Delhi, Delhi

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From the Director's Desk

It is my privilege to present the Institute's Annual Report for the year 2022–23. The Institute with the support of the University of Delhi and Ministry of Health and Family Welfare, Government of India, has been able to strive and thrive to achieve its objectives: to conduct research in basic and clinical aspects related to chest diseases, to train post-graduates in Pulmonary and Critical Care Medicine (DM and MD in Pulmonary Medicine) and allied disciplines (MD Microbiology, Biochemistry, Physiology and Pharmacology), and PhD in various subjects, to develop new diagnostic technology and disseminate scientific knowledge related to Chest Medicine to other Institutions of the country and, over and above all, to provide specialised patient care services to patients from India as well as other countries of the Asia during the year under report.

A large number of physicians, paramedical staff and students from other Universities/Institutions/Colleges got training in disciplines, such as Biochemistry, Microbiology, Physiology, Pathology etc in various departments of the Institute during the year. The research laboratories of the Institute are being equipped with the latest technology to keep pace with the rest of the world.

The research contributions from the Institute are widely acclaimed, funded by various Government Departments, like ICMR, CSIR, Ayush, DHR-MoHFW and DRDO. The faculty members and students of the Institute delivered orations, guest lectures and presented papers in the International and National conferences through webinar and virtual mode. The faculty members and students of the Institute received several Awards and Honours in their field of their specialisation. The Institute also organised workshops and eminent experts (virtual mode) shared their experiences.

The Viswanathan Chest Hospital (VCH), the clinical wing of the Institute, is a tertiary care Chest Hospital with state-of-the-art patient-care facilities.

National Tobacco Quitline Services (NTQLS) at VPCI is a pioneering concept in our country to tackle the growing menace of tobacco addiction in a cost-effective manner.

With the aim to disseminate scientific knowledge and latest developments in the field of chest diseases and allied sciences, the Institute continued the publication of its reputed quarterly publication The Indian Journal of Chest Diseases & Allied Sciences, in collaboration with the National College of Chest Physicians (India). The journal has wide national and international circulation. Institute also continues to publish its biannual Newsletter.

Thrust areas identified for special attention in near-future include COPD, Bronchial Asthma and Lung Cancer.

Prof. Raj Kumar

Annual Report (2022–23)

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MILESTONES OF INSTITUTE

April 6,	1949	Foundation stone of the Institute was laid down by Sardar Vallabhbhai Patel.
November,	1951	Ad-hoc Governing Body was appointed by the Executive Council of University of Delhi for administrative affairs of the Institute.
December,	1951	Main building of the Institute was completed.
January 12,	1953	The Institute was formally opened by Rajkumari Amrit Kaur, the Union Minister of Health, Government of India.
		Prof. R. Viswanathan was appointed as the Founder-Director. The grant for 1953- 54 was Rs. 2 lakhs.
January 21,	1955	A regular Governing Body was constituted by the Executive Council of the University of Delhi for the management and administration of the Institute.
April 4,	1955	The first meeting of the regular Governing Body was held.
	1955	Prof. A.S. Paintal reported the discovery of lung deflation receptors, a historical landmark in understanding the functioning of lung and its diseases.
July 1,	1957	Prof. R. Viswanathan took over as full-time Director of the Institute. Previously, he was the Deputy Director-General of Health Services, Government of India and Honorary Director of the Institute.
September 24,	1957	Pt. Jawaharlal Nehru said in a message: "It was a brave act of the University of Delhi to start the V.P. Chest Institute".
October 24,	1957	Clinical Research Centre was inaugurated by Dr Rajendra Prasad, the President of the Republic of India.
January 24,	1959	Indian Association for Chest Diseases was inaugurated by Sir A.L. Mudaliar. It was re-named as the National College of Chest Physicians (India) in January 1981.
July,	1959	*The Indian Journal of Chest Diseases*, a Quarterly Journal, was started under the joint auspices of the V.P. Chest Institute and the Indian Association for Chest Diseases.
July,	1959	A ward of 20 beds was opened to admit patients.
	1959	By a resolution of the Governing Body, V.P. Chest Institute was nominated as a "National Institute for Teaching and Research in Chest and Allied Diseases".
January,	1960	A Diploma course in Tuberculosis Diseases, started in March 1947, was re-named as "Diploma in Tuberculosis and Chest Diseases" (DTCD) from XIV Course. The XV DTCD Course started from July 1960.
April 6,	1961	Foundation Day Celebrations of the Institute was started.
April 7,	1962	Foundation stone of Patel Niwas, a Post Graduate Hostel, was laid down by Dr. C.D. Deshmukh, Vice-Chancellor, University of Delhi.
January 26,	1963	A contingent of the Institute staff participated in the Republic Day parade.
February 20-24,	1963	VII International Congress on Diseases of the Chest was held at Vigyan Bhawan under the auspices of V.P. Chest Institute, Indian Association for Chest Diseases and the University of Delhi.
August 1,	1964	Prof. A.S. Paintal joined as the Director of the Institute.

April 6,	1965	Patel Niwas (a PG Student Hostel) was inaugurated by Dr. C.D. Deshmukh on the XVI Foundation Day of the Institute.
	1966	Prof. A.S. Paintal was elected as the Fellow of the Royal Society of Edinburgh.
	1969	Padma Shree was awarded to Prof. R. Viswanathan.
	1974	Padma Bhushan was awarded to Prof. R. Viswanathan.
	1981	Prof. A.S. Paintal was elected as the Fellow of the Royal Society of London.
	1984	Prof. A.S. Paintal was elected as the General President of the Indian Science Congress Association [1984-85].
	1985	Prof. H.S. Randhawa was elected as the Vice-President of the International Society for Human and Animal Mycology [1985-88].
	1986	Prof. A.S. Paintal was appointed as the Director-General of the Indian Council of Medical Research.
	1986	Padma Vibhushan was awarded to Prof. A.S. Paintal.
	1986	Prof. A.S. Paintal was elected as the President of the Indian National Science Academy [1986-88].
November 10,	1991	Prof. H.S. Randhawa joined as the Director of the Institute.
October 5,	1998	Dr. V.K. Vijayan joined as the Director of the Institute.
April 6,	1999	Golden Jubilee Celebrations of the Foundation Day of the Institute. VPCI Oration was started.
June 14,	1999	24-hour Respiratory Emergency Services were started.
November 12,	1999	His Excellency, Shri K.R. Narayanan, the President of India, received the copy of Compendium of Activities (VPCI) 1949-99.
August 30,	2000	A New Ward (with an additional 40 beds) was inaugurated by Dr. A.K. Walia, Honourable Minister for Health, Govt. of NCT of Delhi.
	2000	Dr. V.K. Vijayan was elected as the International Regent, American College of Chest Physicians [2000-06].
March,	2001	A Respiratory Critical Care Unit was started.
March 15,	2001	CT Scan Centre was inaugurated by the Honourable Padma Shree Dr. C.P. Thakur, the Union Minister of Health and Family Welfare, Government of India.
November 21,	2001	Tobacco Cessation Clinic was started.
August 14,	2002	A State-of-the-Art Oxygen Plant was installed and started.
January 12-14,	2003	International Conference on Chest Diseases and Allied Sciences was held at India Habitat Centre, New Delhi, to commemorate the Golden Jubilee of the Inauguration of the Institute.
	2004	Website of the Institute was started (www.vpci.org.in).
September 24,	2005	Prof. Autar Singh Paintal Memorial Oration was started.
January 10,	2006	An 8-bedded Intensive Care Unit was started.
December 8,	2006	Inauguration of the Golden Jubilee Auditorium by organising an International Symposium on Herbal Drug Research and Therapy in Chest Medicine.

March 2,	2007	The Hospital wing of the Institute, Clinical Research Centre was re-named as "Viswanathan Chest Hospital" in honour of the Founder-Director of the Institute and the Golden Jubilee Auditorium was re-named as "Paintal Memorial Golden Jubilee Auditorium" in honour of the former Director of the Institute by a resolution of the Governing Body.
June 22,	2007	Yoga Therapy and Research Centre [in collaboration with the Morarji Desai National Institute of Yoga (MDNIY), New Delhi], was started.
September 18,	2007	Cardio-pulmonary Rehabilitation Clinic was started.
September 17,	2009	Approval by the University of Delhi to start Superspeciality DM Course in Pulmonary and Critical Care Medicine with an intake of two students per year.
August 3,	2010	Approval by the University of Delhi to start Diploma Course in Allergy and Clinical Immunology in VPCI with an intake of two students per year.
February 12,	2011	National Centre of Respiratory Allergy, Asthma and Immunology was started.
March 15,	2011	Permission from Medical Council of India to start DM (Pulmonary Medicine) course with intake of two students per year from the academic year 2011-12.
June 1,	2011	Prof. S.N. Gaur joined as the Acting Director.
November 21,	2012	Prof. Rajendra Prasad joined as the Director of the Institute.
May 7,	2013	DOTS Centre was started.
August 18,	2013	DMA Centenary Institution Award received from Smt. Sheila Dikshit, the Hon'ble Chief Minister, Government of NCT, Delhi for the "Outstanding Contribution in the Field of Patient Health Care".
August 23,	2013	New Ward (44 beds) was started.
		VPCI Newsletter was started.
September 15,	2014	VPCI Gym was inaugurated.
January 6,	2015	In the memory of Prof. A.S. Paintal, a museum was opened, which was dedicated to Prof. Paintal's life and contributions in the world of science, inspiring young scientist, researchers and academicians.
May 30,	2016	National Tobacco Quit Line Services, which functions from the Institute was inaugurated by Shri J.P. Nadda, Union Minister of Health and Family Welfare, Government of India, during the "World No Tobacco Day" programme organized by WHO-India, Ministry of Health and Family Welfare, Government of India and the National Heritage City Development and Augmentation Yojana (HRIDAY), at New Delhi.
September 30,	2016	Release of VPCI Postal Envelope by Prof. S.N. Gaur, Director (Acting), VPCI at "Neelambari-2016", a District Level Philately Exhibition organized by Sr. Superintendent of Post Offices, Delhi.
February 20,	2017	VPCI Indoor Games Center was inaugurated.
June 6,	2017	Prof. A. Ray joined as the Acting Director.
November 3,	2017	Prof. Raj Kumar joined as the Acting Director.
December 8,	2017	An MOU was signed between Vallabhbhai Patel Chest Institute (VPCI), University of Delhi, Delhi and Department of Allergology, University Hospital, Munster, Germany (UKM) on Teaching and Training; Exchange of Information and Academic Materials and Exchange of Faculty, Research Scholars and Administrative and Other Staff.

January 12,	2018	Patient Education Centre was inaugurated.
April 6,	2018	Daily Digital Pollen Count Information for Public was inaugurated by Shri J.P. Nadda, Hon'ble Union Minister of Health and Family Welfare, Government of India
	2018	DM (Pulmonary Medicine) was re-started.
October 15,	2018	The Renovated Kitchen of Viswanathan Chest Hospital (VCH) was inaugurated, which is dedicated to the patients admitted at VCH and ensures hygienic meal.
September 28,	2018	Prof. Raj Kumar joined as the Director of the Institute.
April 1	2019	Started Short-Term Training Programme on Pulmonay Function Test (3 Months Duration).
May 31,	2019	Prof. Raj Kumar, Director VPCI, received the prestigious World No Tobacco Day Award for 2019.
May 31	2019	Prof. CG Uragoda Oration-2019 was awarded to Prof. Raj Kumar in the field of Allergy and Immunotherapy by Sri Lanka College of Pulmonologists at Sri Lanka.
June 7,	2019	Renovated Canteen of the VPCI was re-opened.
September 16,	2019	Registration and Waiting Hall for Patients at VCH was inaugurated.
	2019	VPCI declared as Centre of Excellence for climate sensitive allergic diseases under Naional Program for Climate change and human Health in 2019.
March 4,	2020	Pradhan Mantri Jan Arogya Yojana (PMJAY) Counter at VCH was inaugurated by Shri Ashwini Kumar Choubey, Hon'ble Minister of State for Health and Family Welfare, Government of India.
March 4,	2020	Inauguration of Expanded National Tobacco Quit Line Services by Shri Ashwini Kumar Choubey, Hon'ble Minister of State for Health and Family Welfare, Government of India.
June 16,	2020	Tele Medicine for registered patients was started.
October 1,	2020	Composter-A unit of Solid Waste Management Mechine was installed at the Institute by Prof. V.S. Chauhan, Chairman, Governing Body, VPCI.
October 1,	2020	VPCI Mobile Application was launched.
	2020	Post COVID-19 Respiratory Management: Expert Panel Report was published.
May 24,	2021	Inauguration of VPCI Post Covid Respiratory Management Center by Prof. P C Joshi, Hon'ble, Pro Vice-Chancellor, University of Delhi.
January 06,	2022	Inauguration of Allergy Testing Centre by Prof. V.S. Chauhan, Chairman, Governing Body, VPCI.
March 11,	2022	Release of Indian Guidelines for Diagnosis of Respiratory Allergy by Prof. V. S. Chauhan, Chairman Governing Body, VPCI
June 12,	2022	Prof. Raj Kumar awarded Dr. N. L. Bordia Oration-2022 in the field of Respiratory Medicine by Department of Respiratory Medicine at MGM Medical College, Indore, MP
July 4,	2022	Started Short-Term Certificate Course in Clinical Pathology (3 Months Duration).
July 13,	2022	Inauguration of Offical Website of the Indian Journal of Chest Diseases and Allied Sciences by Dr. Vijay Chauthaiwale, Chairman Governing Body, VPCI

Prof. R. Viswanathan-VPCI Oration

1st Oration	April 6, 1999	Prof. N.K. Ganguly, Director-General, Indian Council of Medical Research, New Delhi
2nd Oration	April 6, 2000	Prof. A.S. Paintal, former Director-General, ICMR and former Director, VPCI.
3rd Oration	April 6, 2001	Dr. S. Lakshminarayanan, University of Washington School of Medicine, Washington, Seattle, USA.
4th Oration	April 6, 2002	Dr. S. Padmavati, President, All India Heart Foundation and Director, National Heart Institute, New Delhi.
5th Oration	April 7, 2003	Prof. J.S. Bajaj, former Member, Planning Commission, Government of India and former Professor and Head, Department of Medicine, All India Institute of Medical Sciences, New Delhi.
6th Oration	April 6, 2004	Prof. H.S. Randhawa, former Director, V.P. Chest Institute, University of Delhi, Delhi.
7th Oration	April 6, 2005	Prof. Naranjan S. Dhalla, Distinguished Professor and Director, Institute of Cardio- vascular Sciences, St. Boniface General Hospital and Research Centre, University of Manitoba, Winnipeg, Canada.
8th Oration	April 6, 2006	Prof. C.N. Deivanayagam, Former Medical Superintendent, Hospital for Thoracic Medicine, Chennai.
9th Oration	April 6, 2007	Prof. K.K. Talwar, Director, Postgraduate Institute of Medical Education and Research, Chandigarh.
10th Oration	April 6, 2008	Prof. C.R. Babu, former Pro-Vice-Chancellor, University of Delhi, Delhi.
11th Oration	April 7, 2009	Prof. Peter J. Barnes, Head of Respiratory Medicine, Imperial College, London and Professor of Thoracic Medicine and Head of Airway Disease at the National Heart and Lung Institute and Honorary Consultant Physician at Royal Brompton Hospital, London.
12th Oration	April 6, 2010	Prof. M.K. Bhan, Secretary, Government of India, Department of Biotechnology, New Delhi.
13th Oration	April 6, 2011	Dr. Vishwa Mohan Katoch, Secretary to the Government of India, Department of Health Research, Ministry of Health and Family Welfare and Director-General, Indian Council of Medical Research, New Delhi.
14th Oration	April 6, 2012	Prof. Sami Bahna, Chief, Allergy and Immunology Section, Lousiana State University, LA, USA, and Past-President, American College of Allergy, Asthma and Immunology, USA.
15th Oration	April 6, 2013	Dr. W. Selvamurthy, Former Distinguished Scientist and Chief Controller R&D (LS&IC), DRDO, Ministry of Defence, Government of India, New Delhi.
16th Oration	April 6, 2014	Prof. P.S. Shankar, Emeritus Professor of Medicine, Rajiv Gandhi Institute of Health Sciences, Bangalore, Karnataka.
17th Oration	April 6, 2015	Prof. K.C. Mohanty, former Director-Professor, Department of Chest and TB, K.J. Somaiya Medical College and Hospital, Mumbai.

18th Oration	April 6, 2016	Prof. S.K. Jindal, former Head, Department of Pulmonary Medicine, Post Graduate Institute of Medical Education and Research, Chandigarh.
19th Oration	April 6, 2018	Prof. S.K. Katiyar, former Principal and Dean and Professor and Head, Department of Tuberculosis and Respiratory Diseases, Ganesh Shankar Vidhyarthi Memorial (G.S.V.M.) Medical College, Kanpur.
20th Oration	April 6, 2018	Prof. Randeep Guleria, Director, All India Institute of Medical Sciences, New Delhi.
21st Oration	April 5, 2019	Dr. Rohit Sarin, Director, National Institute of Tuberculosis and Respiratory Diseases (NITRD), New Delhi
22nd Oration	April 6, 2023	Prof. S.K. Sarin, Director, Institute of Liver and Biliary Science (ILBS), New Delhi

Prof. A.S. Paintal Memorial Oration

1st Oration	September 24, 2005	Prof. M.S. Valiathan, Honorary Adviser, Manipal Academy of Higher Education, Manipal (Karnataka).
2nd Oration	September 24, 2006	Prof. P.N. Tandon, President, National Brain Research Centre Society, Gurgaon.
3rd Oration	September 24, 2007	Prof. P.N. Srivastava, First Chancellor, Manipur Central University, Imphal and former Vice-Chancellor, Jawaharlal Nehru University, New Delhi.
4th Oration	September 24, 2008	Prof. Nanduri R. Prabhakar, Director, Centre for System Biology of Oxygen Sensing, Department of Medicine, University of Chicago, USA.
5th Oration	September 24, 2009	Prof. Arun Dharmarajan, Winthrop Professor, School of Anatomy and Human Biology, Faculty of Life and Physical Sciences, The University of Western Australia, Nedlands, Perth, Western Australia.
6th Oration	September 24, 2010	Prof. Chulani Tissa Kappagoda, Professor of Medicine, University of California, Davis, USA.
7th Oration	September 23, 2011	Prof. J.S. Guleria, Senior Consultant (General Medicine), Sitaram Bhartia Institute of Science and Research, New Delhi and former Professor and Head, Department of Medicine, and Dean, AIIMS, New Delhi.
8th Oration	September 24, 2012	Prof. S.K. Jain, Senior Consultant, Respiratory Medicine, Max Hospital, Noida, Coordinator, DNB (Respiratory Medicine), Metro Hospital, Noida, Ex-Advisor and Member, Scientific Advisory Committee, NIREH (ICMR), Bhopal and Ex-HOD, Cardio-respiratory Physiology, VPCI.
9th Oration	September 24, 2013	Prof. Samir K. Brahmachari, Secretary, Government of India, Department of Scientific and Industrial Research, and Director-General, CSIR, New Delhi.
10th Oration	September 24, 2014	Prof. M. Fahim, Adjunct Research Professor, Department of Physiology, Hamdard Institute of Medical Sciences and Research, Jamia Hamdard, New Delhi and former Professor and Head, Department of Physiology, VPCI.
11th Oration	September 24, 2015	Prof. A.K. Prasad, Chairman, Influenza Foundation of India, and President, Indian Virological Society and former Professor and Head, Department of Respiratory Virology, VPCI.

12th Oration	September 23, 2016	Dr. Ashima Anand, Principal Investigator, DST Research Project, V.P. Chest Institute, university of Delhi, Delhi.
13th Oration	September 22, 2017	Dr. K. Ravi, Former Professor and Head, Department of Physiology, V.P. Chest Institute, University of Delhi, Delhi.
14th Oration	September 24, 2018	Dr. A.K. Jain, Professor of Excellence, Department of Physiology, Maulana Azad Medical College, New Delhi.
15th Oration	September 24, 2019	Prof. V.S. Chauhan, ICGEB, Jawaharlal Nehru University, New Delhi -110067
16th Oration	September 26, 2022	Prof. Anil Gurtoo, Director Professor, Department of Medicine, Lady Hardinge Medical College, New Delhi.

Prof. H.S. Randhawa Oration

1st Oration	January 12, 2015	Prof. Ziauddin Khan, Chairman, Department of Microbiology, Kuwait, University, Kuwait.
2nd Oration	January 12, 2016	Prof. Indira Nath, former Faculty Member, Department of Pathology, All India Medical Institute of Medical Sciences, New Delhi.
3rd Oration	January 12, 2017	Prof. Subrata Sinha, Director, National Brain Research Centre, Gurugram, Haryana.
4th Oration	January 12, 2018	Prof. Rajesh S. Gokhale, Former Director, CSIR-IGIB, Delhi.
5th Oration	January 12, 2019	Prof. Yogendra Singh, Department of Zoology, University of Delhi, Delhi.
6th Oration	March 4, 2020	Prof. Rakesh Bhatnagar, Vice Chancellor, Banaras Hindu University, Varanasi, Uttar Pradesh.
7th Oration	January 12, 2023	Prof. Atul Goel, Director General of Health Services, Ministry of Health and Family Welfare, New Delhi.

Dr V.K. Vijayan Oration

1st Oration	October 26, 2015	Dr. Soumya Swaminathan, Secretary, Department of Health Research, Ministry of Health and Family Welfare, Government of India, and Director- General, ICMR, New Delhi.
2nd Oration	October 26, 2016	Prof. Digambar Behera, Head, Department of Pulmonary Medicine, Post-Graduate Institute of Medical Education and Research, Chandigarh.
3rd Oration	October 24, 2017	Prof. Seyed Ehtesham Hasnain, Vice-Chancellor, Jamia Hamdard, New Delhi.
4th Oration	October 24, 2018	Dr. J.C. Suri, former Consultant, Professor and Head, Department of Pulmonary, Critical Care and Sleep Medicine, VMMC and Safdarjung Hospital, New Delhi.
5th Oration	October 24, 2019	Dr. S.K. Luhadia, Professor and Head, Department of Respiratory Medicine, Geentanjali Medical College and Hospital, Udaipur, Rajasthan.
6th Oration	October 26, 2022	Prof. Surender Kashyap, Vice Chancellor, Atal Medical and Research University, Mandi, Himachal Pradesh.

THE INSTITUTE

The Vallabhbhai Patel Chest Institute (VPCI) is a post-graduate medical Institution devoted to the study of chest diseases. It is located in the Delhi University main campus providing the requisite academic environment in which a wide range of scientific facilities are available in various departments along with an excellent Institute Library.

Objectives

The main objectives of VPCI have been to conduct research on basic and clinical aspects of chest medicine, to train post-graduates in Pulmonary Medicine and allied subjects, to develop new diagnostic technology and to disseminate it to other institutions in the country and to provide specialised clinical and investigative services to patients.

Administration

The VPCI is a maintained Institution of University of Delhi and is fully funded by the Grants-in-Aid received from the Ministry of Health and Family Welfare, Government of India. The Institute is governed and administered by its own Governing Body as Constituted under Ordinance XX (2) of the University of Delhi Act. The Director, who is appointed by the Executive Council of University of Delhi, is the Chief Executive of the Institute. The Director of the Institute also functions as Member-Secretary (Ex-Officio) to the Governing Body of the Institute. The Institute also has a Standing Finance Committee constituted by the Governing Body to make recommendations about its budgetary requirements.

Organisation and Management

The organisation and management of the Institute is through Departmentation of activities based on various areas of specialisation and functions. The Academic, Scientific and Clinical services are organised under the Departments of Anaesthesiology, Cardio-respiratory Physiology, Radiodiagnosis and Imaging, Respiratory Allergy and Applied Immunology, Pulmonary Medicine and Thoracic Surgery. These Departments along with Outdoor/ Indoor patient care services and Respiratory Emergency section are housed in the Viswanathan Chest Hospital. The other Departments of the Institute include Biochemistry, Clinical Biochemistry, Biostatistics, Medical Mycology, Microbiology, Pathology, Pharmacology, Physiology and Respiratory Virology. These Departments are headed by the Faculty Members in the respective fields. The General and Personnel Management including various maintenance activities required for the Institute are supported by administrative services of the Institute, controlled by the Deputy Registrar who reports to the Director.

Visit of Renowned Dignitiaries to VPCI

Mr. Mansukh Mandaviya, Hon'ble Minister of Health and Family Welfare, Govt. of India

Dr. Dharmendra Pradhan, Hon'ble Minister of Education, Govt. of India

Mr. Manoj Tiwari, Member of Parliament

GOVERNING BODY

CHAIRMAN The Vice-Chancellor, University of Delhi (Ex-Officio) or a person nominated by him	**Dr. Vijay Chauthaiwale**
MEMBERS Treasurer, University of Delhi (Ex-Officio)	**Shri Nawal Kishore**
Two members nominated by the Executive Council, University of Delhi	**Prof. Mahesh Verma** **Prof. Neeta Sehgal**
Dean, Faculty of Medical Sciences, University of Delhi	**Prof. A.N. Aggarwal**
Three members nominated by the Ministry of Health and Family Welfare, Government of India, New Delhi	**Shri Jaideep Kr. Mishra** Additional Secretary and Financial Advisor
	Smt. Vandana Jain Joint Secretary
	Prof. (Dr.) Atul Goel Director-General of Health Services
One member, not connected with the University, nominated by the Executive Council, University of Delhi	**Dr. Randeep Guleria**
One Professor of the Institute by rotation according to seniority for a period of one year	**Prof. Kavita Gulati** *(till 02.11.2022)* **Prof. Ritu Kulshrestha** *(03.11.2021 onwards)*
One Associate Professor or Assistant Professor of the Institute by rotation according to Seniority for a period of one year	**Dr. Jayeeta Bhadra** *(till 02.11.2022)* **Dr. Ravishankar N.** *(03.11.2022 onwards)*
Representative of Non-teaching Staff of the Institute by rotation (as Special Invitee) according to seniority for a period of one year	**Shri Vinay Kumar** *(till 28.02.2023)* **Shri L.N. Addanki** *(01.03.2023 onwards)*
MEMBER-SECRETARY	
Director, Vallabhbhai Patel Chest Institute, University of Delhi, Delhi (Ex-Officio)	**Prof. Raj Kumar** Director, VPCI

Standing Finance Committee

Additional Secretary and Financial Advisor — *Chairman*
Ministry of Health and Family Welfare
Government of India
Nirman Bhawan
New Delhi-110 001

Joint Secretary or Nominee — *Member*
Ministry of Health and Family Welfare
Government of India
Nirman Bhawan
New Delhi-110 001

Prof. Anuradha Chowdhary — *Member*
Department of Microbiology
V.P. Chest Institute
University of Delhi, Delhi -110 007

Deputy Registrar — *Member*
V.P. Chest Institute
University of Delhi,
Delhi-110 007

Director — *Member-Secretary*
V.P. Chest Institute
University of Delhi,
Delhi-110 007

Scientific Advisory Committee

Dr. D. Behera — *Chairman*
Department of Pulmonary Medicine
Post Graduate Institute of Medical Education and Research
Chandigarh - 160 012

Deputy Director–General (Medical) — *Member*
Ministry of Health and Family Welfare
Government of India
New Delhi-110001

Principal — *Member*
University College of Medical Sciences (UCMS)
Delhi-110095

Director — *Member*
National Institute of TB and Respiratory Diseases
Sri Aurobindo Marg, New Delhi-110030

Dean, Faculty of Science — *Member*
University of Delhi, Delhi-110007

Dean, Faculty of Medical Sciences — *Member*
University of Delhi, Delhi-110007

Prof. Madhu Khanna (Basic Science) — *Member (01.08.2022 to 31. 03.2023)*
Respiratory Virology Unit
Department of Microbiology
Vallabhbhai Patel Chest Institute
University of Delhi, Delhi-110007

Dr. Nitin Goel (Clinician) — *Member (01.08.2022 to 31.03.2023)*
Department of Pulmonary Medicine
Vallabhbhai Patel Chest Institute
University of Delhi, Delhi-110007

Prof. Anant Mohan — *Member*
Professor and Head
Department of Pulmonary Medicine,
Crtical Care and Sleep Medicine
3rd Floor, Near SBI Bank
All Indian Institute of Medical Sciences
Ansari Nagar,
New Delhi-110 029

Director — *Member-Secretary*
V.P. Chest Institute
University of Delhi, Delhi-110007

Human Ethics Committee

Dr. D. Behera — *Chairman*
Department of Pulmonary Medicine
Post Graduate Institute of Medical Education and Research
Chandigarh - 160 012

Prof. B.D. Banerjee — *Member (Basic Medical Scientist)*
Department of Biochemistry
University College of Medical Sciences (UCMS)
Dilshad Garden, Delhi-110 095

Dr. Kavita Gulati — *Member (Basic Medical Scientist)*
Department of Pharmacology
Vallabhbhai Patel Chest Institute
University of Delhi, Delhi-110 007

Dr. Anant Mohan — *Member (Clinician)*
Professor and Head
Department of Pulmonary Medicine
All Indian Institute of Medical Sciences
New Delhi - 110 029

Dr. Balakrishnan Menon — *Member (Clinician)*
Department of Pulmonary Medicine
Vallabhbhai Patel Chest Institute
University of Delhi, Delhi-110 007

Shri K Sunil — *Member (Legal)*
K Sunil and Associates, Advocate and Advisors
Chamber NO 69, C L. Josef Block, Tis Hazari Court
New Delhi-110 054

Shri Suman Kumar — *Member (Social Scientist, w.e.f. 26.03.2021)*
Advocate, Hight Court of Delhi
New Delhi

Dr. Udhay K. Sinha — *Member (Philosopher)*
Institute of Human Behaviour and
Allied Sciences (IHBAS), Dilshad Garden
Delhi-110 095

Director — *Member-Secretary*
V.P. Chest Institute
University of Delhi,
Delhi-110 007

Institutional Animal Ethics Committee

Chairman (Biological Scientist)	**Dr. Malini Shariff** Head, Department of Microbiology V.P. Chest Institute University of Delhi, Delhi-110 007
Member (Scientist from Different Discipline of the Institute)	**Dr. Mandira Varma-Basil** *(28.3.2018 onwards)* Department of Microbiology
Member (Scientist from Different Discipline of the Institute)	**Dr. Madhu Khanna** Department of Virology
Member (Scientist Incharge of Animal House Facility of the Institute)	**Dr. Kavita Gulati** *(28.03.2018 onwards)* Department of Pharmacology
Main Nominee of CPCSEA	**Dr. Harmeet Singh Rehan** *(28.03.2018 onwards)* Head, Department of Pharmacology Lady Hardinge Medical College New Delhi-110 001
Link Nominee of CPCSEA	**Dr. Bal Gangadhar Roy** *(28.03.2018 onwards)* EFA, Institute of Nuclear Medicine and Allied Sciences Delhi-110 054
Nominee of CPCSEA (Scientist from Outside the Institute)	**Dr. H.B. Singh** *(28.03.2018 onwards)* Ministry of Science and Technology, New Delhi-110 001
Nominee of CPCSEA (Non-Scientific Socially Aware Member)	**Dr. S. Gowri Shankar** *(22.07.2020 onwards)* A-702, Gayatri Apartments, Sector 10 Dwarka, New Delhi-110 075
Member-Secretary (Veterinarian of the Institute)	**Dr. Rajinder Bajaj**

ORGANISATIONAL STRUCTURE

DIRECTOR
Raj Kumar, MD (Pul. Med.), FAMS, MNASc, MNAMS, FICAAI, FICS, FNCCP(I), FIAMS

Biochemistry (including Clinical Biochemistry)
Vishwajeet Rohil, MD
Professor

Jayeeta Bhadra, MD
Assistant Professor

Biostatistics
Ravishankar N., PhD
Assistant Professor

Microbiology (including Medical Mycology and Respiratory Virology)

Malini Shariff, MD, PhD
Professor

Mandira Varma-Basil, MD, DNB
Professor

Anuradha Chowdhary, MD
Professor

Madhu Khanna, MSc, PhD
Professor

Pathology

Ritu Kulshrestha, MS (Biomedical Sciences), DNB (Pathology), PhD, MNAMS
Professor

Pharmacology

Kavita Gulati, MSc, PhD
Professor

Physiology

Vishal Bansal, MD, DNB, PhD, MNAMS, FCCP (USA)
Professor

Pulmonary Medicine

Raj Kumar, MD (Pul. Med.), FAMS, MNASc, MNAMS, FICAAI, FICS, FNCCP(I), FIAMS
Professor

Balakrishnan Menon, MD, DMRD
Professor

Nitin Goel, MD
Assistant Professor

Sonam Spalgais, DNB
Assistant Professor

Parul Mrigpuri, DNB
Assistant Professor

Siddharth Raj Yadav, MD
Assistant Professor

Viswanathan Chest Hospital
Officer-in-Charge

Raj Kumar
Professor

Library

Uma Tyagi, MPhil (Physics), MLib Sci, PhD
Librarian

Animal House

Rajinder Bajaj, BVSc and AH
Consultant (Animal House)

Administration

Omkar Nath Pandit, MA (History), MA (Pol. Sci.). PGDHR, DLL&LW, MBA (HRM)
Deputy Registrar

Viswanathan Chest Hospital

The Viswanathan Chest Hospital (VCH) attached to the Vallabhbhai Patel Chest Institute has the following Departments/Facilities to provide specialised investigations and treatment to patients referred to this Institute.

Clinical Facilities

The Viswanathan Chest Hospital (VCH), formerly known as Clinical Research Centre, is the hospital wing of the Institute with the following Departments:

- Pulmonary Medicine
- Radiodiagnosis and Imaging
- Clinical Laboratories of Biochemistry, Microbiology and Pathology
- Anaestheia
- Thoracic Surgery

Facilities available at Viswanathan Chest Hospital

- Out-patient Department
- In-patient Facility with 128 Beds
- 24 Hours Respiratory Emergency
- 8-bedded Respiratory Intensive Care Unit (with 6 Ventilators)
- Pulmonary Function Laboratory
- Cardio-pulmonary Rehabilitation Clinic
- Sleep Laboratory
- Allergy and Applied Immunology Laboratory
- Clinical Hematology and Pathology Laboratory
- Clinical Biochemistry Laboratory
- Microbiology Laboratory
- Radiology Unit with 64 Slice MDCT Scan Center
- Picture Archiving and Communication Systems (PACS)
- Tobacco Cessation Clinic
- Yoga Therapy and Research Centre

Specialized investigations available at VCH

- Fibreoptic bronchoscopy
- Guided FNAC/Biopsy
- Medical thoracoscopy
- Respiratory allergy skin tests
- Clinical immunology
- BACTEC system for tuberculosis

Detailed data of patients attending VCH and investigations conducted during the period are as follows:

Number of new patients attending OPD	11538
Number of follow up patients visiting OPD	48211
Total Outdoor Patients	**59749**
Number of indoor patients	
General Wards	14494
Emergency Wards	2154
Total Indoor Patients	**16648**
Emergency treatment provided	21792
Total number of patients treated in ICU	1840
Number of routine and specialised investigations done at VCH during the year	
Arterial blood gases	28238
Bronchoscopy	347
Bronchoalveolar lavage	254
Pulmonary function tests	7617
CT scans	1341
Ultrasounds	0
X-rays	30489
Electrocardiogram	5418
Polysomnograms	99
HIV testing	1103
Skin tests	14330
Serum IgE test performed	4684
ANA	0
c-ANCA	0
p-ANCA	0
SCL-70	0
HBsAg	1103
HCV	1103
Serum ACE	723
Vitamin D	0
Thyroid Profile	0
Biochemistry Tests (Blood and Pleural fluid): Patient care	
Blood glucose	1876
Liver function tests	44615
Kidney function tests	17644
Pleural fluid biochemistry	156
HbA1c	2472
Lipid profile	1200
Total Protein and Albumin	10370
Serum Electrolytes	8109
Serum Calcium	1409

Serum Phosphorus	1244
Serum Uric Acid	66
Total	**89161**

Microbiology

1. *Bacteriology Laboratory*

Clinical specimens processed for isolation and identification of aerobic pathogens

Nature of Specimen	
Sputum	4286
Urine	580
Bronchial aspirate/ lavage	205
Pleural fluid	54
Blood	349
Endotracheal aspirate	229
Pus/(FNAC/Tips)	67
Curtain swab	7
Total	**5777**

2. *Serology Laboratory*

Rheumatoid factor	756
C-reactive protein	1485
Widal	05
Total	**2246**
Hospital Surveillance Samples	**88**

3. *Anaerobic Culture*

4. *Mycobacteriology Laboratory*

Nature of Specimen	**LJ medium**	**MGIT**	**GeneXpert**
Sputum	7802	214	3880
Bronchial aspirate	236	31	234
Pleural fluid	113	14	112
ET aspirate	49	04	48
CSF	4	02	4
Pus/Biopsy	26	12	24
FNAC	20	06	18
Gastric aspirate	02	02	02
Total	**8252**	**187**	**4322**
Drug susceptibility test (DST) for *M. tuberculosis:*	150		
Line probe assay: Molecular DST for *M. tuberculosis*			
Line probe assay for firstline drugs: 20 Line probe assay for *Mycobacterium sp.* 25			
DST for NTM: 20			

Parasitology	
Test for filarial antigen: **10**	

5. Mycology (VPCI and other hospitals)

Nature of Specimen	
Sputa	4320
Blood specimens	1302
Bronchial lavage/aspirate/washings/endotracheal aspirate/pleural fluid	765
Blood culture	178
Tissue biopsies/ nasal polyps/skin scrapings/nail scrapings	35
CSF	42
Urine and Miscellaneous (swabs/nasal polyp/ FNAC/discharge/pus)	512
Total	**7154**

Besides, referral service for identification of clinical isolates of fungi was extended to other institutions on request.

Pathology

1. Hematology Laboratory

A total of 40,477 tests were done during the period as per details given below;

Hemogram (including Hb, TLC, DLC)	17542
Platelet count	17469
Absolute eosinophil count	3674
Peripheral smear	226
P/S for malarial parasite	07
ESR	1559
Total	**40,477**

2. Coagulation Laboratory

A total of 1977 tests were done during the period as per details given below;

Bleeding time, Clotting Time (BT, CT)	23
Prothrombin Time (PT)	869
Activated Partial Thromboplastin Time (APTT)	894
D-Dimer	190
FDP	01

3. Clinical Pathology Laboratory

Total of 930 Urine analysis were done during the period. The parameters evaluated included: Specific gravity, pH, Albumin, Sugar, Microscopic examination and Ketone Bodies etc.

4. Histopathology Laboratory

A total of 421 lung and pleural biopsies of patients and experimental lung specimen were processed during the period as per details given below. Each biopsy was stained with routine and histochemical stains for further categorisation.

Lung biopsy- TBLB and EBLB, Lung mass	277
CT guided Trucut Biopsy	32
Pleural biopsy	09

Cell block	41
Experimental lung Biopsy	52
Block for Review	08
Thoracoscopic lung Biopsy	02
Total	**421**

5. Cytopathology Laboratory

A total of 1479 samples of exfoliative and aspiration cytology were done during the period as per details given below. Each sample was stained with routine and histochemical stains for further categorisation. Cell block was prepared when required.

Sputum	819
BAL fluid	249
FNAB: Percutaneous	55
Transbronchial (TBNA)	79
Bronchial aspirate	55
Pleural fluid	193
Tracheal aspirate	14
Pus cytology	02
Bronchial Brush	13
Total	**1479**

6. Immunohistochemistry Laboratory:

A total of 634 immunohistochemistry tests were carried out on lung biopsies and cell blocks of patients and animal experimental lung specimen as per details given below.

Immunohistochemistry	No. of Cases
Panck	53
CEA	23
EMA	23
Calretenin	03
WT-1	01
TTF-1	29
SMA	01
ALK	52
PDL-1	37
P40	46
Synaptophysin	23
CGA	26
vimentin	27
CK-20	10
FGFR-1	24
FGFR2	16
CD8	09
CK-7	09

CD-45	19
KRAS	05
SPA	03
NSE	08
CD68	14
S-100	07
CD-133	08
NFK-b	01
CD-86	34
CD-4	09
CD-206	22
TGF-b	18
ROS-1	18
Napsin	26
p63	01
bFGF	24
CD-15	02
CD-30	02
FGF	01

7. Molecular Pathology Laboratory

Total 378 molecular tests of gene expression changes were performed on Lung cancer patients and experimental lung biopsies as per details given below:

qRT-PCR tests	Number
BRAF	19
TLR-2	63
TLR-4	52
TGF- β	54
FGFR-1	57
FGFR-2	33
VEGF	20
HIF-1ά	20
ARG	15
CD86	15
IRF-5	15
CD-206	15

8. Cell Culture Laboratory

The cell culture laboratory was continued during this period. Research work on the A549 human alveolar epithelial, THP-1 and U-937 cell line is presently being performed. The TGF-β, SMAD-1-7, MTT assay, cell scratch assay and migration assay are being studied by immunocytochemistry and real time PCR.

9. Nanoparticle Laboratory

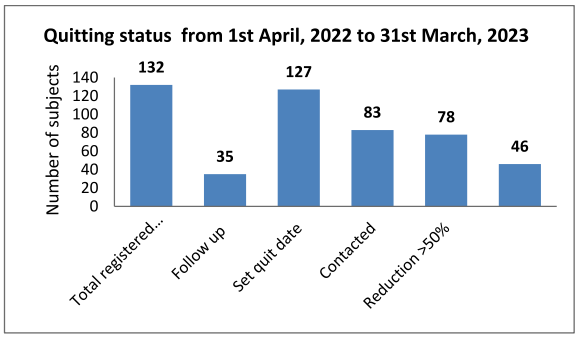
The polymeric nanoparticles are being synthesized followed by their surface modification and characterization using; transmission electron microscopy, DLS, Zeta potential, NMR, FTIR and HPLC techniques and studying their functionalization in the context of their surface modifications.

Tobacco Cessation Clinic

Tobacco cessation clinic (TCC) was established at Vallabhbhai Patel Chest Institute in November, 2001. The activities of TCC were expanded in the year 2002 with the financial support from the World Health Organization (WHO) and Ministry of Health and Family Welfare, Government of India to make it a more comprehensive programmed Centre. Further, the TCC was upgraded in the year 2009 as Resource Centre for Tobacco Control. The tobacco related deaths and suffering from disease caused by tobacco consumption had raised the question that what should be done to protect the people from the trap of vicious circle of tobacco addiction. The TCC is providing services since 2001 in outpatient department at hospital wing from Monday to Friday at 9 AM to 5 PM to the smokers and tobacco chewers who are willing to quit smoking and tobacco chewing. The services offered at the clinic in the form of Counseling, NRT (nicotine replacement therapy), non-NRT including registration, CoHb monitoring, quit date plan follow-up, telephonic follow-up and pulmonary function test are being performed here. The TCC is also trying to create awareness among the general public and OPD patients about the negative effects of tobacco and about tobacco cessation through power point presentation, booklets, pamphlets, and videos. Registered person is being called for regular follow-up at an interval of 2 weeks followed by 1 month, 2 months, 3 months, 6 months and 1 year. Moreover, Tobacco Cessation Clinic conducts workshops regularly in different parts of Delhi and NCR to train the physicians, counselors, volunteers and other stake holders involved in smoking cessation. Since its inception, the TCC conducted 57educational programmers for physicians, Para-medical professionals and general public. Since the inception of T.C.C to 31st March, 2023, **8841** new tobacco users and **3647** follow-up tobacco users availed the services. 132 new and 35 follow-up subjects' came for tobacco cessation in TCC, from 1st April, 2022 to 31st March, 2023.

Total new subjects registered for TCC from 1st April, 2022 to 31st March, 2023	132
Number of subjects set a quit date	**127 (96.21%)**
Number of subjects followed up	**35**
Telephonic routine follow up of registered subjects in the during	**400+**
Number of subjects medication prescribed	**1**
Number of subjects Quitted with medication	**None**
Subject contacted	**83 (62.88%)**
Reduction >50% (n=127)	**78 (61.41)**
Total Number of quitters (n-83)	**46 (55.42%)**

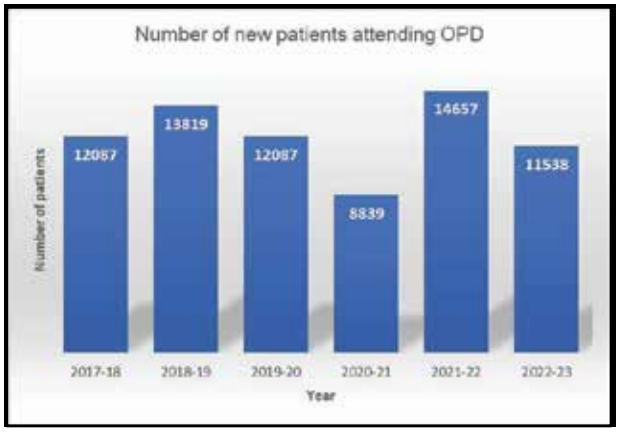
During the period 46 subjects quitted their tobacco habit for at least 2 weeks. Follow up calls were made to 132 subjects (Tobacco users) registered in this duration to access their present quitting status, out of these 83(62.88%) subjects were connected and rest 44 (34.65%) calls could not be contacted due to switch off, person not available, expired, call not answering, out of station, caller busy, number does not exist, phone dead, incoming facility not available, did not turn up for follow up. A total of 46 Subjects have quitted their tobacco habit with the sessions of Behavioral Counseling alone.

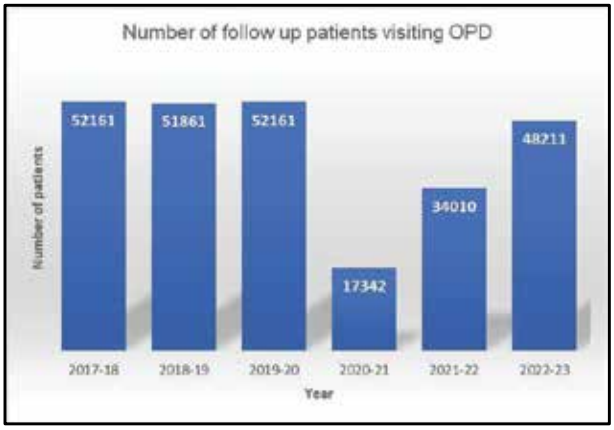


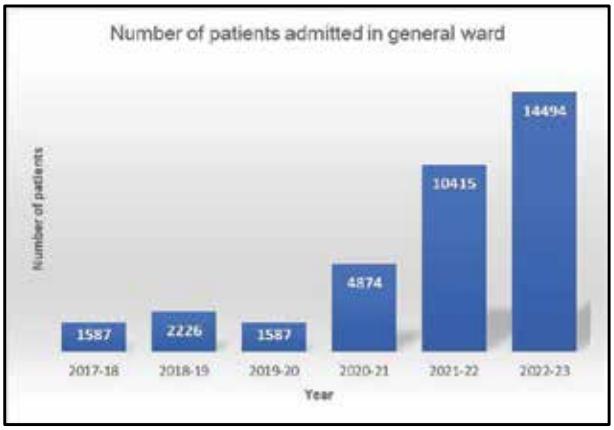
The continuous abstinence rates among the 46 subjects at, 2 weeks, 1 month, 3 months, 6 months, 9 months, and 12 months were 55.42%, 50.60%, 40.58%, 25.80%, 18.18%, and 15.38% respectively.

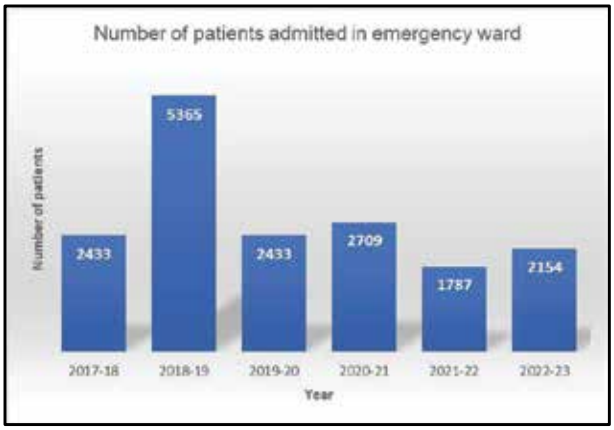
Abstinence Rate	Subjects	(%)
2 weeks abstinence rate (n=83)	**46**	**55.42%**
1 month abstinence rate (n=83)	**42**	**50.60%**
3 month abstinence rate (n=69)	**28**	**40.58%**
6 month abstinence rate (n=31)	**8**	**25.80%**
9 month abstinence rate (n=22)	**4**	**18.18%**
12 month abstinence rate (n=13)	**2**	**15.38%**

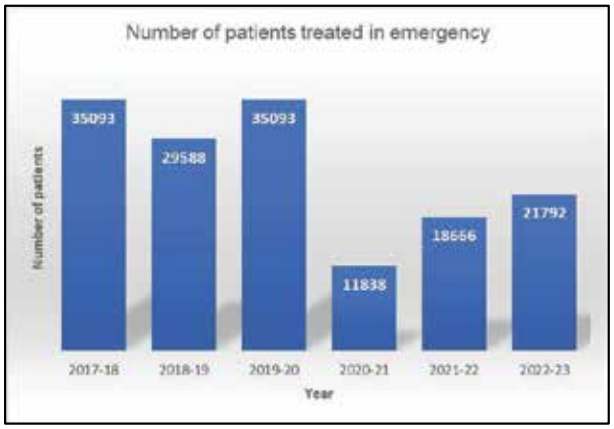
Number of Patients availing treatment from VCH over the past 5 years

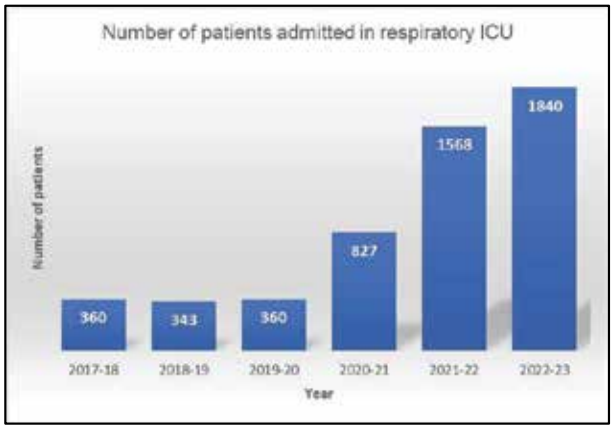












Yoga Therapy and Research Centre

The Yoga Therapy and Research centre conducts yoga classes in collaboration with the Morarji Desai National Institute of Yoga (MDNIY), New Delhi from Monday to Friday during 8 AM to 4 PM at VPCI.

Yoga training classes are conducted in different batches namely general group class from 8 AM to 9 AM, Therapy Class from 11 AM to 12 PM and VPCI. Staff class is conducted from 1 PM to 2 PM.

Yoga sessions are specially designed for the management and eradication of different health disorders like bronchial asthma, hypertension, stress, obesity etc. The patients first report to yoga OPD at VPCI during 9 AM to 3 PM, Monday to Friday. Doctors and Yoga staff record the case history of the patient and necessary counselling is given by the yoga ARO. Then the patient is advised to undergo yoga training and educational session according to individual health problems for a particular period till the healing of the disease. The patient is re-examined to note the improvement made by him/her by the yoga therapist. Then the patient is advised for a regular home programme with an advice to attend the training sessions once or twice a week at the Yoga Centre for better health and quality of life and to keep them healthy. Special Yoga sessions for staff of VPCI are also arranged on a regular basis.

During covid-19 pandemic, online classes were conducted and follow ups were done for patients telephonically. They were advised to report the improvements once in a week through phone.

Yoga Therapy and Research Centre, VPCI in collaboration with Morarji Desai National Institute of Yoga, New Delhi organized 8th International Day of Yoga programme on June 21, 2022 at Institute under the supervision of Prof. B.K Menon, Nodal Officer and Prof. Raj kumar, Director and Mr. Likhith Raj KN, Yoga Therapist in which Yoga team adopted the common yoga protocol and imparted training to all staff, students of VPCI, yoga students and children.

Vallabhbhai Patel Chest University of Delhi Conducted 2nd Workshop on Pulmonary Rehabilitation, in which Mr. Likhith Raj, Yoga Therapist delivered lecture on Integrated Approach of Yoga Therapy in Respiratory Diseases. Also Ms. Pushpanjali demonstrated the Yogasanas, Pranayama, for Respiratory Diseases.

8th International Day of Yoga programme on June 21, 2022 at VPCI

Mr. Likhith Raj, Yoga Therapist at 2nd Workshop on Pulmonary Rehabilitation

Cardio-Pulmonary Rehabilitation Clinic

Cardio-pulmonary Rehabilitation Clinic (Monday to Friday: 9.00 AM to 1.00 PM)

Cardio-Pulmonary Rehabilitation Clinic:

Cardio-Pulmonary Rehabilitation Clinic at Vishwanathan Chest Hospital, VPCI is involved in management of chronic respiratory patients who have disability in activities of daily living and exercise limitation due to shortness of breath despite being on optimal pharmacological treatment.

Clinic Timings: Monday to Friday: 9.00 A.M. to 1.00 P.M.

Numbers of patients attended Cardio-Pulmonary Rehabilitation Clinic: (1st April, 2022 - 31st March, 2023)

Breathing retraining & education : 140

Enrolled for Supervised Rehabilitation program : 27

(Intensive & Maintenance)

2nd Workshop on Pulmonary Rehabilitation, September 4-5, 2022, held at VPCI

Division of Sleep Medicine

Division of Sleep Medicine

Sleep Disorders and Sleep Therapy is a cross-disciplinary area concerned with the psychological and physical health conditions related to sleep disorders and conventional and advanced sleep therapies.

VPCI started the Division of Sleep Medicine in 1999. There has been dramatic growth in clinical activity. The number of patient visits has increased approximately five-fold from fiscal year 2002 to the present. It caters to the need of all in-patients & out-patients with three diagnostic machines functioning.

The Division is managed by experienced staff under the headship of Prof. Raj Kumar and it provides a broad range of studies: overnight sleep studies, split overnight sleep study, WatchPAT diagnostic sleep study, OSA screener and auto CPAP.

The mission at the Sleep Division is to provide comprehensive diagnostic evaluation to individuals having symptoms occurring during sleep or while awake and management to respiratory patients of age 18 yrs and above. Technical staff of the Sleep Medicine Division are fully equipped with knowledge required for sleep studies.

VPCI has trained technical staff dedicated to the diagnosis and treatment of sleep/wake disorders in adults and develop research to lead to a better understanding of normal and abnormal sleep.

The expanded Sleep Medicine Division, located on the first floor of the Vishwanathan Chest Hospital building is 338 square feet in size and has one bed, which is dedicated to research also. The Sleep Division is spacious enough for patients to spend the night and has attached private bathroom with shower. The Division is equipped with new, state-of-the-art equipment and it continues to cater to a wide variety of sleep complaints.

Past clinical research projects include "Prevalence of Obstructive sleep apnea syndrome in Delhi, India"; "A study of sleep-related breathing disorders in chronic obstructive pulmonary disease patients with or without cor-pulmonale"; "Obstructive sleep apnoea, oxidative stress and renal function"; "Obstructive sleep apnoea, oxidative stress and liver function"; "Role of some inflammatory markers in obstructive sleep apnoea: effects of grape seed extract".

Clinical care for the full spectrum of sleep disorders is provided by the outpatient practices.

The Division at present has the following aims and objectives: (1) to provide exceptional health care and support through quality service to all patients with sleep disorders and (2) to conduct high quality research related to sleep disorders (with emphasis on local disease and disorders).

Evaluation and Treatment Options

- CPAP/BiPAP, Mask fitting/Desensitization
- Sleep consultation/Evaluation/ Sleep Counseling
- Sleep studies
- Polysomnography (Includes: EEG, EOG, chin and leg EMG, respiratory monitoring, oxygen saturation, and EKG)
- CPAP titration
- WatchPAT sleep study.
- Split night polysomnography

Research in Sleep Medicine Division

Research activities continued to be a major part of the Institute from the year 2002 onwards. **Thirteen Scientific papers** were written and published in national and international medical meetings and journals from this Division.

Multidisciplinary Research Unit

The MRU at Vallabhbhai Patel Chest Institute, approved by Department of Health Research, Govt. of India is functional since 2015-16. The MRU at VPCI is actively involved in various research activities since its inception. The MRU is a part of the Government of India initiative for establishment of multi-disciplinary research units in Government medical colleges/research institutions during the 12th Plan period.

The VPCI-DHR-ICMR-Multi-disciplinary research unit (MRU) focusses on research in communicable & non-communicable diseases and other need-based research employing newer tools and promotes and encourage quality medical research in the institution.

The Multidisciplinary Research Unit (MRU) is actively involved in various research activities viz. participation in the workshop, meetings with Department of Health Research (DHR), approval of new research proposals, etc. to meet the goals of empowering medical research.

Following Nine Research Projects are ongoing in the MRU:

1. Synthesis of polymeric nanoformulation encapsulated with chemotherapeutic agents for lung cancer treatment : 2019-2022.
2. Exploring the potential of G-Quadraplex- Targeting nanoparticle (GQNP) conjugate in lung cancer : 2019-2022.
3. Pharmacological studies to evaluate the anti-inflammatory and immunomodulatory effects of *Hibiscus Rosa-Sinesis* and *piper nigrum* and their cellular and molecular mechanism of action in experimental models of bronchial asthma : 2019-2022.
4. Pharmacological studies to evaluate the anti-inflammatory and immunomodulatory effects of *Aerva lanata Linn.* in experimental models of bronchial Asthma and the cellular and molecular mechanism : 2019-2022.
5. Comparison of nutritional assessment and work productivity and quality of life in smokers and nonsmokers' cases of COPD : Nov, 2021- Mar, 2023.
6. Normal level of FENO in healthy adult population of Delhi NCR. Nov, 2021- Mar, 2023.
7. Effects of nitric oxide modulator on airway inflammation, bronchial hyper-responsiveness and oxidative stress in experimental model of bronchial asthma : 2021-2023.
8. Comparative evaluation of anti-oxidative potential and compositional analysis of extract from *Aerva lanata* (Linn.) withania somnifera and *Hibiscus Rosa-sinesis* : 2021-2022.
9. Experimental studies on the effect of UNIM-52, a polyherbal unani formulation, on pulmonary fibrosis and its mechanism : 2021-2024.

Rashtriya Ekta Diwas (National Unity Day) celebrations at MRU by taking oath

Adverse Drug Reaction Centre

The Adverse Drug Reaction Center (AMC) at Vallabhbhai Patel Chest Institute was approved under Pharmacovigilance Programme of India (PVPI), initiated by CDSCO, the Government of India in 2014. As a Coordinator of Adverse Drug Reaction Monitoring Centre (AMC) of Pharmacovigilance Program of India, MoH & FW, GOI, at V. P Chest Institute, the ADRs are reported to Indian Pharmacopeia Commission (IPC). During current financial year (April 2022- March 2023) we reported total 368 Individual Case Safety Reports (ICSRs), through online software (Vigiflow) to National Coordination Centre (NCC) at IPC. The Causality Assessment of the ICSRs was performed as per WHO scale. The Causal relationship of 190 ADR cases was of Possible category and 176 cases were of Probable category and 2 cases of Certain. The cases were submitted to Indian Pharmacopeia Commission (IPC) which are later submitted to Uppasala Monitoring Centre, Sweden. In addition, we reviewed and analysed 330 Marketing Authorization Holder (MAH)- (ICSRs) from IPC and prepared the score sheets. Processed 36 adverse drugs reaction voluntary reports by the Non- AMC to NCC-PvPI, IPC, Ghaziabad. Also processed 44 ICSRs received from Mobile app. Celebrated National Pharmacovigilance Week from September 17-23, 2022 by conducting various activities like E-Poster Competition on Topic- Role of Consumer Reporting in Pharmacovigilance or Active Pharmacovigilance of Respiratory Drugs on 17.09.2022, Hands on Training to Fill Suspected ADR Form for Nurses on 20.09.2022 and CME on topic "Pharmacovigilance- Encouraging Adverse Drug Reaction Reporting by Patients/ Release of Pamphlet of VPCI on 22.09.2022.

Release of VPCI-ADR Monitoring Center pamphlets for distribution among patients

CME on Pharmacovigilance- Encouraging Adverse Drug Reaction Reporting by Patients on September 22

National Centre of Respiratory Allergy, Asthma and Immunology

1. VPCI-Pollen Count Station

The pollens count station was established at the roof of the VPCI multi-storeyed building, in which we have installed two **"Burkard Air Samplers"** one is seven days' sampler and the other is one-day sampler. Both the samplers are running continuously and air samples are collected and studied on a daily basis. The details of the work done during the tenure is given below:

The total number of slides were mounted and analysed during the period **1st April 2022 to 31st March 2023** is **724** slides out which **359** seven days' slides and **365** one day slides. In addition to these slides, total number of slides mounted from establishment of pollen count station to till date is **6702** slides; out of these **3496**, seven day's slides and **3206** one-day slides were mounted.

Table 1. Month wise mean Pollen's Count/m3, Temperature & Humidity during 1st April 2022- 31st March 2023

	1day Pollen Count/m3	7day's Pollen Count/m3	Humidity (%)	Temperature (Max°C)
1st April 2022	64.333	38.133	64.267	40.003
May-22	275.419	264.677	73.645	39.710
Jun-22	91.800	87.800	60.633	40.600
Jul-22	283.839	276.903	81.097	35.242
Aug-22	222.968	215.290	81.516	34.889
Sep-22	223.267	221.600	84.367	34.157
Oct-22	114.548	108.548	88.935	31.310
Nov-22	83.000	73.700	87.900	27.790
Dec-22	27.581	25.452	87.871	22.606
Jan-23	7.645	5.452	89.613	18.552
Feb-23	351.964	341.357	83.143	27.204
01st-March-2023	432.032	429.032	83.645	29.865

*IARI Metrological Database System Division of Agricultural Physics, IARI, New Delhi IARI: Latitude 28°38'23"N, Longitude:77°09'27"E., Altitude:228.61m above were used to calculate the mean of the minimum and maximum temperatures (°C) for weather monitoring stations within IARI, New Delhi

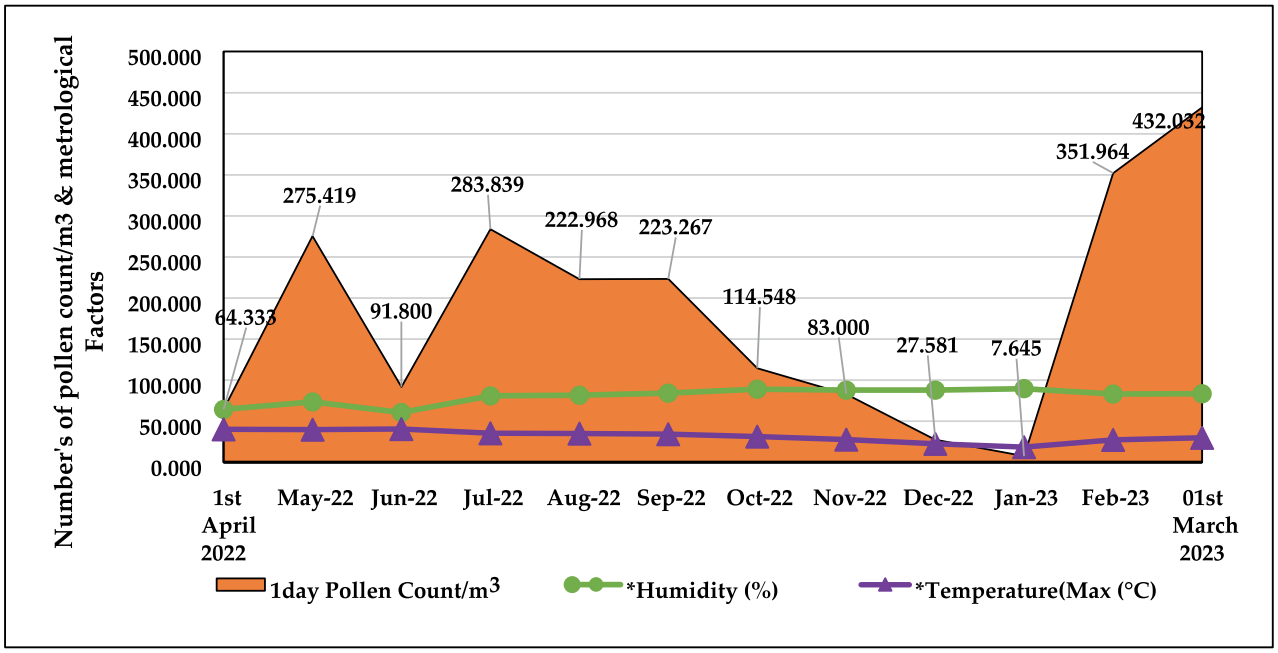


Fig. 1: 1-day pollen count/m^3 month wise mean from 1st APRIL 2022 to 31st MARCH 2023

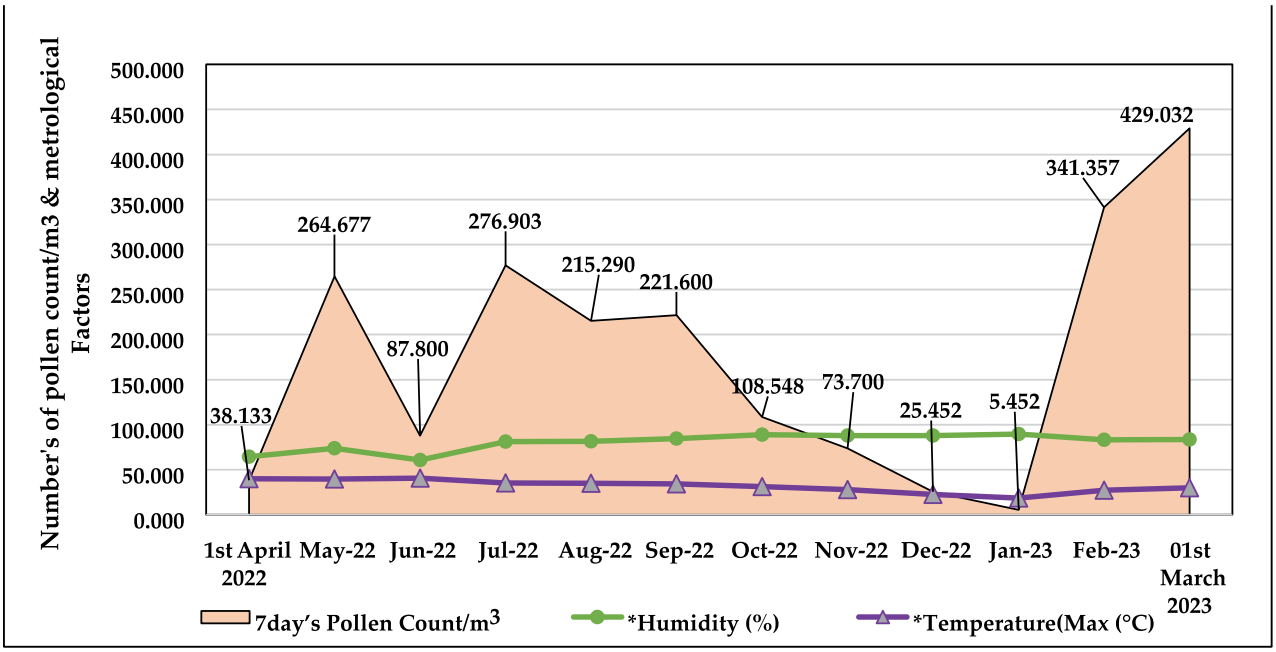


Fig. 2: 7 day's pollen count/m3 month wise mean from 1st APRIL 2022 to 31st MARCH 2023

National Tobacco Quitline Services

The NTQLS is India's first telephonic counseling-based service sponsored by the Ministry of Health & Family Welfare, Government of India. The department is working successfully since May 2016 at the Vallabhbhai Patel Chest Institute University of Delhi, under the supervision and guidance of Prof. Raj Kumar, Director, VPCI. The NTQLS was established with the aim of reaching out to the masses and provide confidential and quality counseling services all over India. This service can be easily accessed six days a week, through a toll-free number 1800112356 from 8 AM to 8 PM.

In the period of 1st April 2022 – 31st March 2023, the National Tobacco Quitline Service has reached its pioneer by making people quit the use of tobacco through telephonic counseling. From April 2021 till March 2022, the total number of calls landed on the Interactive Voice response (IVR) was **1501582**. The total number of inbound calls during this period was **366071** whereas, the total number of outbound calls was **915567**. In this period a total number of **113085** callers were registered who were provided counseling and **27831** were quitted. The success rate of National Tobacco Quitline Service during this period is 24.61%.

E-Hospital Services

Dr. Vishal Banbsal (Nodal Officer) and Mr. Sunil Kumar, Technical-in-Charge were responsible for implementing E-hospital and associated modules at the Institute as per directions of Ministry of Health and Family Welfare, Government of India.

These modules include:

1. E-hospital : Phase-I (Patient registration and Billing)
2. ORS : Online Registration System
3. Mera Aspataal : Patient feedback services
4. Digital Payment: Promotion of digital payment services

Implementing National Medical Council (NMC) DMMP (Digital Mode Mission Project) directives at VPCI.

It includes:

1. Installing Aadhaar Enabled Biometric Attendance System (AEBAS) for VPCI faculty.
2. Installing 25 IP based CCTV cameras for providing live feed to central command center of NMC.

E-hospital login page

Dashboard of E-hospital

Telemedicine Services

Telemedicine a term originated in the 1970s, which literally means "healing at a distance". It signifies the use of information communication technology (ICT) to improve patient outcomes by increasing access to care and medical information. Telemedicine is being run in VPCI from PEC room no. 26 in hospital block, from 2.30 PM – 5.00 PM. Doctors on duty use land line telephone, mobile phone and video call via whatsApp to communicate to patients who are unable to attend OPD due to various reasons such as old age, transportation issues and living in farflung areas.

Telemedicine services at VPCI

Animal House

The Animal House of the Institute is registered for breeding and experiment on animals with Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA), Animal Welfare Division, Government of India, for breeding and conducting experiment on small Laboratory Animals vide registration no. 170/GO/ReBi/S/99/CPCSEA. All experiments involving animals are approved by the Institutional Animal Ethics Committee (IAEC), constituted by CPCSEA. IAEC keeps a check to promote the humane approach of animal experimentation with the basic objective of providing specifications that will enhance animal care and quality in the pursuit of advancement of scientific knowledge that is relevant to humans and animals.

The Animal House of the Institute provides optimum environment for experimental animals, which is essential for obtaining reliable experimental research. The Animal House of the Institute is being maintained under controlled environment conditions as specified in CPCSEA guidelines with maintained temperature, relative humidity, timer controlled light dark cycle and air change per hour with 100% fresh air.

The Animal House is managed by a team of well qualified Veterinarian, Technical Assistant and Attendants who are experienced and trained in modern methods of animal care, breeding and husbandry.

Library

The VPCI Library is a vital part of the Institute's support services, providing patient care information support and catering to the academic needs of the faculty members, resident doctors, researchers, and students in the field of Biomedical Sciences, with specialization in pulmonary diseases and Allied Sciences. It was established in 1955 and has since acquired back volumes of several journals more than 100 years old, forming a comprehensive collection of serial publications, annual reviews, and recent advances. Most of the journals have complete sets of volumes originating right from their treatises of medicine which are readily available for basic and historical insights. The Institute has one of the best library in the field of Pulmonary Disease and Allied Sciences having 10136 Books, 25026 bound Journals, 178 CD's, 588 Thesis and 32 National and International Reports. A total 16 Journals (05 International and 11 National) are being received on exchange programme with the Institute's Journal and 01 Journal are received on complimentary basis. To cover the need for daily coverage of news related to the medical field, Library is also subscribing four English and four Hindi newspapers. This has encouraged the inculcation of reading habits of all alike.

The Library renders its services not only to the scientist's/research scholars of the Institute, but also to other Colleges and Institutes of the University of Delhi. Institute is a member of National Level ERMED Consortium (e-journals) for the since year 2018. ERMED Consortium subscribed 242+ e-journals from five publishers along with Access Medicine Database/e-books of McGraw Hill under NML-ERMED Consortium. All e-journals are configured on Static IP / IP's of our Institute. Library initiates appropriate efforts from time to time to create awareness among staff, research scholars, students, etc. to enhance maximum utilization of e-journals through customised e-journals gateway http://www.ermed.in and benefit of access/download of articles from the 'Cochrane Library'. This is an initiative by 'National Medical Library' which is a collection of six databases that contain different types of high-quality, independent evidence to inform healthcare decision-making, and a seventh database that provides information about Cochrane groups through single gateway http://www.cochranelibrary.com. Much emphasis is also laid on to provide abstracts, reference and specific information, if required. Apart from this, online searches are being carried out for providing instant access of Information Resources to the desktop of researchers through LAN (Local Area Network). The Internet services have been provided right on the desktop of each Faculty Member through DUCC network /LAN and a separate Leased line connectivity (VPCI) with 10 Mbps from MTNL. Library also provides inter-library loan facilities and reprographic services on demand.

The Library follows an open Access system. Library is equipped with modern information technology equipment's and continues to provide Internet/ e-mail services to the users to access CAS (Current Awareness Services) and SDI (Selective Dissemination of Information) services. These are provided to the users in the form of online/offline through e-mail and/or in print during the year. Library uses "LibSys 4.0" Library Management Software, which is an integrated multi-user library management system that supports all in-house operations of the Library. The 'LibSys' consists of modules on acquisition, cataloguing, circulation, serials, article indexing and OPAC.

The Library facilities are available to Members/Users of Delhi University from Monday to Friday from 8:30 AM to 5:30 PM & on Saturday's from 9.00 AM to 5:30 P.M.

Publication Division

The Publication Division is responsible for publishing the institute's journal "The Indian Journal of Chest Diseases and Allied Sciences (IJCDAS)" and Annual Report. The IJCDAS is published quarterly by the VPCI in association with the National College of Chest Physicians (India). The journal was founded in the year 1959 by (late) Prof. Raman Vishwanathan, Founder-Director of VPCI as an official publication of the VPCI and the Indian Association for Chest Diseases [renamed as National College of Chest Physicians (India) in 1976]. The journal was published as "Indian Journal of Chest Diseases" from 1959 to 1975 and it was renamed as "The Indian Journal of Chest Diseases and Allied Sciences" in 1976. Currently, Prof. Raj Kumar is the Editor-in-Chief of the IJCDAS.

The IJCDAS has a wide National and International circulation and it covers Clinical and Experimental work dealing with all aspects of Chest Diseases and Allied Sciences. It publishes Original Articles, Review Articles, Radiology Forum, Case Reports, Short Communications, Book Reviews. Many eminent scientists and clinicians have served as the Editors, Editorial Board Members and Reviewers of the journal and all of them have contributed immensely to the growth of the journal.

The hardcopy of the journal will be delivered to the subscribers across the globe by speed post. Full text articles published in the Journal (July-September 2003 onwards) can be also be accessed online at http://www.vpci.org.in. A contract was issued to Jaypee Brothers Medical Publishers for online management of IJCDAS. In this regard, the official website of IJCDAS, www.ijcdas.com was developed. The website was officially launched on July 13, 2022 by Dr. Vijay Chauthaiwale, Chairman, Governing Body, VPCI.



Inauguration of official website of IJCDAS, www.ijcdas.com by Dr. Vijay Chauthaiwale, Chairman Governing Body, VPCI

Home page of www.ijcdas.com

Dashboard of www.ijcdas.com

DEPARTMENTAL ACTIVITIES

Biochemistry

(Including Biochemistry and Clinical Biochemistry)

Summary of the work done:

To study the genetic polymorphisms of CHI3L1 gene and its association with the oxidative-antioxidative balance in Chronic Obstructive Pulmonary Disease in North Indian population

- Whole blood collection: Lavender top vacutainers (EDTA anticoagulant) are being used for whole blood collection. 3 ml whole blood samples for 24 patients and 2 controls have been collected from Viswanathan Chest Hospital. The collected whole blood will be used for extraction of DNA which will be further processed for downstream experiments including PCR and DNA sequencing.
- Serum collection: The blood in the red vacutainer (anticoagulant free) was allowed to clot by incubating at room temperature for 45 minutes and then centrifuged for 15 min at 2500 rpm. The supernatant (serum) was then carefully aspirated without disturbing the cell layer into pre-labelled cryo-vials and stored at -80^{0C} which will be used for various biochemical parameters viz. Glutathione, MDA, Vitamin C levels.

8-Hydroxy-2′-deoxyguanosine as oxidative DNA damage biomarker of severity in COPD patients among North Indian population in a Tertiary Care Hospital

- Protocol submitted by Dr. Mohammad Azharuddin Mulla, MD student for its approval by the Institute.

NABH entry level accreditation, VPCI:

1. Dr. Jayeeta Bhadra, Co-ordinator for NABH EL Accreditation facilitated requisite training programs, meetings and documentation and successfully completed the audit for NABH EL accreditation.
2. Dr. Jayeeta Bhadra was the joint organizing secretary of "Workshop on Data analysis" held at Vallabhbhai Patel Chest Institute on December 8, 2022.The workshop was attended by students and researchers of various institutes. It was designed to sensitize the participants on the use of a free statistical software and included hands-on session on basic data analysis.

Biostatistics

The Department of Biostatistics plays a vital role and forms a supportive department of the research activities of the Institute. It is entrusted to teach basic and advanced Bio-statistical techniques to MD, DM and PhD students of the institute, organize periodical training programs/ workshops related to Biostatistics, provide statistical guidance/support on identifying the correct study design, sample size computation, data entry & management, data analysis, interpretation and reporting of the results to faculty and students of the institute, preparation of reports (monthly, quarterly, half yearly and yearly) for the Ministry of Health & Family Welfare, Government of India and Directorate General Health Services, Government of Delhi, Data collection of number of patients attending OPD, ward admits, ICU admits, emergency admits, diagnostic tests, radiological tests done at VCH on a daily basis and Online registration of vital events (deaths). The Department has identifiable and collaborative research projects with other departments of the Institute.

The Department of Biostatistics, VPCI organised a "Workshop on Data Analysis" on December 8, 2022 at Paintal Memorial Golden Jubilee Auditorium, VPCI. Workshop sensitized the participants on the use of a statistical software for basic data analysis. Faculty, students and research scholars from VPCI and other institutions of Delhi participated in the workshop.

Glimpses of the Workshop on Data Analysis

Microbiology

(Including Microbiology, Medical Mycology and Respiratory Virology)

Research

1. Hospital Infection Control surveillance

Routine surveillance of the hospital was performed at regular intervals to screen for the presence of pathogens. Various samples from ICU and ward like suction ports, oxygen masks and ports, mattresses, airbed, bed railings, hand swabs from health professionals working in these units, environment samples including air and water etc were collected in the months May to August 2021 and January 2023. A total of 82 samples were tested. Pathogenic organisms like Acinetobacter, *Klebsiella pneumoniae, Escherichia coli, Staphylococcus aureus* and Pseudomonas were isolated from health care workers and hospital environment which were resistant to most antibiotics. The reports were submitted along with the recommendations.

2. In-silico analysis of secretory PE/PPE proteins of *Mycobacterium tuberculosis* complex: identification and subcellular localization

Understanding the protein's subcellular localization and secretory nature can greatly improve target identification for diagnostic assays and drug discovery, though their identification in laboratory experiments is a time-consuming and labor-intensive process. In order to identify proteins that could be targeted for therapeutic intervention or the development of diagnostic assays, variety of computational tools were used to predict the subcellular localization or secretory nature of mycobacterial PE/PPE proteins.

PSORTb v3.0.3, TBpred, and Gpos-mPLoc analyses were performed on 30 selected PE/PPE protein sequences, while, SignalP 6.0, SignalP 5.0, Phobius, PSORTb v3.0.3 and TBpred were used for signal sequence predictions.

Gpos-mPLoc and TBpred had the highest concordance for extracellular prediction, while PSORTb and TBpred had the highest concordance for prediction of membrane localization. The tools for predicting the secretory nature of proteins had little agreement. Hence, to provide an indication of the subcellular localization of PE/PPE proteins, multiple computational tools must be considered. Laboratory experiments should be used to confirm the findings of the tools.

3. Cell intrusion proteins of *Mycobacterium tuberculosis*

Mammalian cell entry *(mce)* operons play a vital role in cell invasion and survival of *M. tuberculosis*. Of the *mce* genes, the function of *Rv0590A* is still unknown. The present study was performed to investigate the function and immunogenic properties of the protein Rv0590A.

Human leukemia monocytic cell line (THP-1) derived macrophages were infected with *M. tuberculosis* H37Rv, at 3 hours, 6 hours and 24 hours of infection. The maximum colony forming units (CFU) were observed at 6 hours ($p<0.005$), followed by 3 hours after infection. *M. tuberculosis* H37Rv and clinical isolates representative of Delhi/CAS, EAI, Beijing, Haarlem and Euro-American-superlineage were included in the study for transcriptomic analysis of *mce1A, mce2A, mce3A, mce4A and Rv0590A* genes. Maximum upregulation of all *mce* genes was observed at 3 hours of infection. All the five clinical isolates and H37Rv upregulated *Rv0590A* at various time points. Macrophage infection with *M. tuberculosis* H37Rv overexpressing Rv0590A gene showed higher intracellular CFU as compared to that of wild type H37Rv. Further, purified Rv0590A protein stimulated the production of TNFα, IFNγ and IL-10 in macrophages. Thus, Rv0590A was found to be involved in cell invasion and showed good immunological response.

4. Role of efflux pumps in Ethambutol resistance in *M. tuberculosis*

Besides genomic mutations, efflux mechanisms may contribute to intrinsic drug resistance in *Mycobacterium tuberculosis*. In the present study, expression analysis of efflux genes was studied in clinical isolates of *M. tuberculosis* and correlated with the presence of mutations responsible for ethambutol (EMB) resistance. Well characterized 28 EMB resistant and 29 EMB susceptible clinical isolates of *M. tuberculosis* were subjected to MIC determination by Microplate Alamar Blue Assay (MABA). Real-time expression of efflux genes *drrA, drrB, drrC, iniA, jefA,1686c, Rv1687, Rv0194, Rv1458c, Rv0876c, Rv0842, Rv1877* was studied in three clinical isolates of *M. tuberculosis* without canonical mutations but with low level resistance (LLR) to EMB; four clinical isolates with mutations at *embB*306 or *embB*497 and with high level resistance (HLR) to EMB; and four EMB- susceptible

clinical isolates and H37Rv. The strains were exposed to sub-inhibitory concentration of EMB. sigA and rrs were used as internal controls. Genomic mutations were determined by Sanger sequencing and whole genome sequencing (WGS).

Efflux genes quantification showed that *drrABC*, *jefA, Rv1686c*, *Rv1687* and *Rv0842* were up-regulated only in EMB resistant isolates. Interestingly, all the HLR isolates exhibited expression of one or more efflux pump genes, whereas only 1/3 (33.33%) LLR isolate showed upregulation of efflux genes. WGS revealed unique mutations in *iniA* and *jefA* only in resistant isolates which need to be evaluated further. The strain with a unique 37bp nucleotide deletion in *jefA*, also showed upregulation of this gene. Our study suggests that EMB resistance in *M. tuberculosis* may be influenced by efflux mediated mechanisms in addition to mutations in the *embCAB* region.

5. Development and Validation of Artificial Intelligence Tool for Screening/detection of Pulmonary TB and other lung diseases using Chest X-rays.

Artificial Intelligence (AI) is an area of computer science that helps in development of tools that can mimic human like thought processing, reasoning and self-correction abilities. Artificial intelligence technologies include training of the tool being developed and deep learning. Deep learning is a particular kind of machine learning that achieves great power and flexibility by learning to represent the world as nested hierarchy of concepts, with each concept defined in relation to simpler concepts, and more abstract representations computed in terms of less abstract ones. Hence, development of an AI Tool is the need of hour to bridge this diagnostic gap and facilitate affected individuals reach the management centres at earnest therefore contributing to the national interest of combating tuberculosis by 2025.

The current project aims to use AI tool for diagnosis of pulmonary TB. Around 3510 X rays of pulmonary were collected annotated and correlated with Microbiological diagnosis. The sensitivity and specificity of the tool was 89% and 90% respectively.

6. Characterization of the phenotypic and genetic determinants of delamanid resistance in clinical isolates of *Mycobacterium tuberculosis* in Delhi

The study was performed on 80 bacteriologically confirmed new tuberculosis patients (Group A) and 80 previously treated pulmonary tuberculosis (Group B). Neither of the patients were on delamanid therapy. The sputum samples were processed on Lowenstein Jensen (LJ) medium. MIC for all isolates was evaluated using 7H11 agar proportion method. Polymorphisms in ddn, fbiA, fbiB, fbiC and fgd1 genes were identified by Sanger sequencing.

In Group A(n=35), MIC of all isolates were in the susceptible range (0.004 ug/ml to 0.03 ug/ml). In Group B(n=28), three isolates were resistant to DLM, of which two isolates had MIC of 0.06 ug/ml and one isolate had MIC of 0.12 ug/ml, rest of the isolates were in the susceptible range. Forty-eight isolates were sequenced for *ddn, fbiA, fbiB, fbiC* and *fgd1* genes. No mutations in the genes associated with DLM resistance were found in these isolates.

The presence of a high MIC is a matter for concern. This study highlights the importance of understanding the causal and associative relationships between genetic mutations and phenotypic resistance to novel TB drug in different geographical regions of the world; and the need for continuous monitoring of the resistance profile to newer anti TB drugs, so that prompt action can be taken if resistant isolates are discovered.

Medical Mycology Unit

7. Multimodal analysis of the COVID-19- associated mucormycosis outbreak in Delhi, India indicates the convergence of clinical and environmental risk factors

In May 2021, a massive number of mucormycosis (MCR) cases in patients with coronavirus disease 2019 (COVID-19) started being reported throughout India, a country with a high baseline MCR prevalence and overwhelmed the medical system. This mysterious syndemic captured the media's and public's attention and raised many questions on its origins. Though incompletely understood, myriad reports of COVID-19-associated mucormycosis (CAM) have attributed this outbreak to India's large diabetic population, inappropriate use of glucocorticosteroids, hospital environment, home remedies, the sub-tropical humid climate, zinc supplementation and elevated C-reactive protein. However, other factors, such as the phylogenetic analysis of Mucorales isolates from patients with CAM and aerobiological factors, were largely unmapped during

the outbreak. Therefore, a multi-faceted study of host, pathogen, indoor and outdoor environmental and healthcare-related factors which might have contributed to the CAM outbreak in the metropolitan New Delhi area and the adjoining National Capital Region was undertaken. In addition to reviewing host characteristics, whole genome sequencing and phylogenetic genomic analyses on Mucorales isolates was performed and investigation of the environmental spore counts in the air of the New Delhi area before and during the CAM outbreak was done and culturing of selected hospital fomites for Mucorales contamination was also performed. Medical records of all patients diagnosed with biopsy-proven CAM (n = 50) at 7 hospitals in the New Delhi, and NCR area in April–June 2021 were reviewed. Two multivariate logistic regression models were used to compare clinical characteristics of CAM cases with COVID-19-hospitalised contemporary patients as controls (n = 69). Additionally, meteorological parameters and mould spore concentrations in outdoor air were analysed. Selected hospital fomites were cultured. Mucorales isolates from CAM patients were analysed by ITS sequencing and whole-genome sequencing. Independent risk factors for CAM identified by multivariate analysis were previously or newly diagnosed diabetes mellitus, active cancer and severe COVID-19 infection. Supplemental oxygen, remdesivir therapy and ICU admission for COVID-19 were associated with reduced CAM risk. The CAM incidence peak was preceded by an uptick in environmental spore concentrations in the preceding 3–4 weeks that correlated with increasing temperature, high evaporation and decreasing relative humidity. Rhizopus was the most common genus isolated, but also identified were the two cases of the uncommon Mucorales, Lichtheimia ornata. WGS found no clonal population of patient isolates. An intersection of host and environmental factors contributed to the emergence of CAM. Surrogates of access to advanced COVID-19 treatment were associated with lower CAM risk.

8. *Candida auris* on apples: Diversity and clinical significance

Candida auris is a multidrug-resistant nosocomial fungal pathogen. In 2019, the U.S. Centers for Disease Control and Prevention classified the multidrug-resistant *Candida auris* as one of five pathogens posing the most urgent threats to public health. At present, the environment(s) that might have contributed to the development and spread of antifungal resistance in *C. auris* is unknown. Because stored fruits are often treated with fungicides to prevent postharvest spoilage, it was hypothesized that stored fruits could serve as a possible selective force for and a transmission reservoir of antifungal-resistant isolates of pathogenic yeasts, including *C. auris*. To test this hypothesis, fruits were screened to study the diversity of pathogenic yeasts and their antifungal susceptibility profiles. Among the 62 screened apples, the surfaces of 8 were positive for *C. auris*, and all were stored apples. Whole-genome sequencing showed that *C. auris* strains from apples were genetically diverse and exhibited broad phylogenetic distribution among the subclades within clade I. Interestingly, strains from apples had closely related strains from other sources in India, including from patients, hospitals, and marine environments, and from clinical strains from other parts of the world. A broad range of fungicides, including dimethyl inhibitors (DMIs), were detected in stored apples, and all *C. auris* isolates exhibited reduced sensitivity to DMIs. Interestingly, *C. auris* was not isolated from freshly picked apples. Together, the results suggest a potentially complex ecology for *C. auris* with agriculture fungicide application.

Virology Unit

The Virology Unit at the department of microbiology has a multifaceted mission. Primary objective of the virology unit is providing accurate diagnoses of respiratory viruses in clinical samples. Vallabhbhai Patel chest institute is the ICMR center for the molecular diagnostics of SARS-CoV-2 (COVID-19) the out- and in-patients visiting the Viswanathan Chest Hospital. It also conducts basic and translational research on multiple viruses, including influenza, chikungunya, and dengue. Virology Unit is actively engaged in the research and on viral pathogenesis, vaccines and antivirals against different viruses. One of the current projects involves the subunit vaccine candidate against dengue virus. This multivalent candidate is still in its preliminary phase. The virology unit is also studying the cellular response to viral infection. Specifically, the investigation of the activation of different branches of the UPR pathway during chikungunya infection and determining the effect of blocking individual branches on virus replication. We observed knockdown of chikungunya virus replication by inhibiting UPR pathways. The unit is also working on an ICMR-sponsored research project focused on the generation of engineered viruses to combat influenza infection. Replication by the proposed molecular elements. It involves working on advancing a liposome-based RNA vaccine delivery platform, clones expressing conserved viral sequence have been generated and its expression has been validated. Overall, the unit is dedicated to work on inhibition of viral infections and development of new therapeutic tools and strategies against viruses.

Pathology

Research

Lung Cancer

1. Identification of ROS1 gene rearrangement in Lung Cancer

The ROS1 gene is located at chromosome 6q22 and encodes for a receptor tyrosine kinase. It is a member of the subfamily of tyrosine-kinase insulin-receptor genes. Rearrangement of ROS1 gene is an oncogenic driver in lung adenocarcinomas (1-2%). These adenocarcinomas are clinicopathologically characterized by solid growth with signet-ring cells or a cribriform morphology with abundant extracellular mucus, and typically occurs in younger non-smoking females. Since the TKIs/ ROS1 inhibitors like crizotinib show clinical efficacy in Non small cell lung carcinoma (NSCLC) patients with confirmed ROS1 rearrangement, we are evaluating the occurrence of ROS1 rearrangements on NSCLC cases by immunohistochemistry(IHC). This was performed using the specific rabbit monoclonal antibody clone D4D6 as a screening tool. ROS-1 was tested in 14/125 lung cancer biopsies that were submitted to Dept of Pathology in 2022-23. The ROS1 immunoreactivity was either cytoplasmic or membranous in adenocarcinomas with the presence of intracellular mucin vacuole. This needed to be differentiated from the weak ROS1 immunostaining seen in benign hyperplastic pneumocytes and macrophages and the false-positivity seen in tumors of ever-smoking patients. Further, the ROS1-positivity identified on IHC needs to be confirmed by Fluorescent In Situ Hybridisation (FISH) test before treatment by TKIs or ROS1 inhibitors can be initiated and this is undergoing standardisation.

2. Coexisting mutations of BRAF and EGFR in non-small cell lung cancer patients

Epidermal growth factor receptor (EGFR) and BRAF (v-raf murine sarcoma viral oncogene homolog B1) are 2 driver genes of non-small cell lung cancer (NSCLC) which are normally mutually exclusive. It is important to identify the co-existence of BRAF mutation in EGFR-mutated NSCLC as it can cause resistance to EGFR tyrosine kinase inhibitors (TKIs). The BRAF V600E is one such co-existent mutation that has been identified to cause resistance to TKIs in EGFR-mutated NSCLC patients. However, the influence of other BRAF actionable mutations on resistance to EGFR-TKIs remains to be investigated. Understanding this coexistence in NSCLC patients may be essential for further treatment and prognostic prediction.

BRAF and EGFR coexistent mutation analysis were performed in a total of 75 cases of lung cancer between 2019-23, at Dept of Pathology, VPCI. The BRAF (75 cases) and EGFR (62/75 cases) mutations were estimated by Allele specific mutation testing using SRMS and qRT-PCR techniques. The patient samples evaluated included- Lung and pleural biopsies, pleural fluid, sputum, FNAB specimens. The frequency of BRAF positivity was (14/75, 18.67% cases) and for EGFR mutations (14/62 (22.58%) in this cohort. The commonest BRAF mutations identified were in Codons-{V600E (7/14, 50%), V600D (6/14, 42.86%)}, followed by V600K (5/14, 35.71%) and V600R (4/14, 28.57%). The coexisting EGFR mutation identified were- L858R (7/14, 50%), L861Q (4/14, 28.57%) followed by DEL 19 (2/14, 14.29%) and S768i (1/14, 7.14%). Significantly, EGFR T790M, the most TKI-resistant mutation, was not found in any patient with BRAF fusion/rearrangement, in our cases. This is similar to world literature. EGFR and BRAF mutations were mutually exclusive in 20/75, 26.67% cases. The majority of patients in our population were EGFR-ve/BRAF-ve (56/75, 74.67%).

The prevalence of coexistent BRAF and EGFR mutations in the cohort (4/75, 5.33% cases) was significantly higher when compared to Chinese (0.91%) and Western (0.97%) population. In the present study - (I) BRAF rearrangements on chromosome arm 7q.34 were identified as single mutation in codons-V600 E,D,K in 75% cases while in one case- mutations in multiple codons V600-E,D,K,R-1/4-25% were identified. The single mutations resulted from single amino-acid substitution of valine by glutamic acid (referred to as the V600E mutation). This substitution at codon V600 might also generate nonV600E changes, including V600D/E2/K and R. This results in strong activation of BRAF kinase activity. (II) EGFR mutations were identified on Chromosome 7p.11.q {exon19del (50% cases) and L861Q mutation in Exon 21 (50% cases)}. This significant occurrence of non-exon19del mutations in our study is unlike previous studies, which have observed EGFR exon19del patients to

be more associated with BRAF mutations when compared with non-exon19del patients. Further, in this study, the associations between somatic mutations and patient characteristics, including tumor stage and age, among others are being explored.

3. Expression of Napsin -A for characterisation of lung adenocarcinoma

A large majority of lung cancers (~70%) present in advanced stages and are unresectable. The diagnosis of these patients is based primarily on small biopsy and cytology specimens. Thus, necessitating the use Immunohistochemistry (IHC) for categorization and improving the diagnostic accuracy of lung cancers (WHO classification of lung cancer-2021,2015). In accordance, the Pathology department, VPCI has been performing a panel of IHC- Napsin A, p40, PanCK, TTF-1, SP-C etc using fully automated immunohistochemical analyser, Ventana Benchmark-GX for lung cancer diagnosis since October 2015.

Napsin A (Novel aspartic proteinase of the pepsin family A) is highly expressed in adenocarcinomas of the lung and is thus commonly used to affirm this diagnosis. Napsin A is a functional aspartic proteinase that cleaves proteins and peptides and is important in the maturation of prosurfactant protein B in type II pneumocytes and potentially in phagocytosis by alveolar macrophages. Napsin A is expressed in the cytoplasm of type II pneumocytes and intra-alveolar macrophages, however, recent studies have shown its expression in proximal and convoluted renal tubular cells and in other tumor types: Clear cell renal cell carcinomas [0%–52%], papillary renal cell carcinomas [72%–97%], thyroid tumors [0%–48%], clear cell carcinomas of the ovary [69%–100%] and cholangiocarcinomas [0%–9%]. For many other tumor types, Napsin A expression has never been analyzed. In lung adenocarcinoma cells, Napsin A is regulated by thyroid transcription factor 1 (TTF1) and the downregulation of Napsin A has shown to promote TGF-ß induced cancer cell proliferation and metastasis.

In present study involves evaluating the utility of Napsin A expression in bronchoscopic biopsies for the typing and prognostication of adenocarcinoma lung. Total 128 biopsies have been assessed since 2018-March 2023. Napsin A was found to be expressed in a high percentage of adenocarcinomas of the lung (>80%). Further we are evaluating the efficacy immunocytochemistry for Napsin A on cell block paraffin sections of centrifuged pleural fluid specimens. This can enable the differentiation of hyperplastic and malignant mesothelial cells and identification of metastatic adenocarcinomas to pleura leading to malignant effusions.

Lung Fibrosis

4. Molecular mechanisms of Pulmonary hypertension in diffuse parenchymal lung diseases and pulmonary fibrosis

Pulmonary hypertension (PH) variably complicates diffuse parenchymal lung diseases (DPLD) and lung fibrosis (PF) with high prevalence and higher morbidity and mortality. The patients of PF-PH are categorized as per World Health Organization in the subclass 3.2 of Group 3- PH secondary to lung disease (Simonneau, 2019, Ryan, 2012). The pathogenetic mechanisms of vascular remodeling (vascular smooth muscle cell hypertrophy and vasoconstriction) considered causative of PH in PF include: (I) Lung parenchymal inflammation and Nuclear factor-κB (NF-κB) signaling (II) tissue hypoxia and Hypoxia inducible factor (HIF-1α) signaling (III) Endothelial loss/dysfunction and caveolin-1 signaling. These may result in altered signaling in pulmonary vasculature. The altered relaxation responses and activation of proliferative and anti-apoptotic pathways can result in development and progression of pulmonary vascular remodeling and PH.

The time course of Caveolin-1, NF-kB, HIF-1α, VEGF expression were therefore assessed in a bleomycin induced model of lung fibrosis and correlated with the histopathological changes in lung parenchyma and vasculature. Male Wistar rats (n = 36) were exposed to; Saline (control); bleomycin (intratracheal 7 U/kg), and euthanized at 7, 14 & 28 days. In this ongoing study, we demonstrate the development of parenchymal inflammation and tissue remodeling in bleomycin model of lung injury that in turn upregulates NF-κB, HIF-1α and downregulates VEGF and Caveolin-1 signaling. The ensuing endothelial cell (EC) disruption/dysfunction result in vascular medial hypertrophy and widespread proliferative changes in the pulmonary arteries. Thus, suggesting the role of their therapeutic targeting for the treatment of both lung fibrosis and pulmonary hypertension.

5. Pathogenesis of Macrophage phenotype/activation syndrome in lung and cytokine storm

Cytokine storm is related with the induction and progression of acute respiratory distress syndrome (ARDS). Pathogenesis of cytokine storm includes the extreme activation of immune cells such as macrophages, T cells, B cells and dendritic cells (DCs) in the lung. The large amounts of cytokines released by these immune cells results in systemic hyperinflammation, multiple organ failure and a high mortality rate. The activated macrophages are divided into two distinct polarization states: classically activated phenotype (M1), and the alternatively activated phenotype (M2). The M1 phenotype is closely linked to pro-inflammatory responses and their significant activation may be associated with macrophage activation syndrome (MAS). The M2 macrophages play a key role in anti-inflammatory reactions, in lung repair and fibrosis. They consist of four subtypes; M2a, M2b, M2c, and M2d. Previously it was shown how the antifibrotic agent, Pirfenidone modulates the macrophage polarisation by downregulating M2 phenotype (TLR-4) in early phase and upregulating TLR-2 (M1) in late phase thereby shifting the M2 towards the M1 phenotype. These changes are brought about by change in TGF-Smad signaling

The present study aims to evaluate (A) the macrophage activation and polarization in response to bleomycin-induced lung injury in cellular and fibrotic phases by estimating the expression of M1 (CD 86, IRF-5), M2a (Arg1, CD 206), M2b (CD80), M2c (CD163, CD206) genes. (B) The transcription factors which regulate macrophage polarization- M1 macrophage regulators (STAT1 and IRF5) and M2 macrophages (STAT6, IRF4, PPARγ). (C) The transcriptional regulation of macrophages polarization by MicroRNAs (miR-19, 21, Let 7c, 93). (D) The cytokines released-proinflammatory cytokines - TNF-α, IFNs and profibrotic cytokines- TGF-β. (E) the potential benefits of targeting macrophage polarisation in alleviating epithelial mesenchymal transition in in vitro and in vivo models for treating lung diseases.

6. Molecular Classifiers of Progressive Pulmonary Fibrosis

The group of fibrosing interstitial lung diseases *(F-ILDs)* other than idiopathic pulmonary fibrosis (IPF), include F-ILDs that continue to progress despite initial management. These patients require: (i) An accurate initial diagnosis that is critical to understand the likelihood of progression despite management (e.g., scleroderma related ILD is more likely to progress than pulmonary sarcoidosis). (ii) Risk stratification based on identification of their clinical, biochemical, molecular, physiological, histological and/or radiological features that indicate risk of progression. (iii) Special guidelines for their management. The usefulness of a molecular classifier beyond histology is an unmet need and remains open to research. Present studies have identified surfactant proteins-SFTPA2, SFTPC, ELMO/CED-12 domain containing 2 (ELMOD2), mucin 5b (MUC5B), and two telomerase genes (hTERT and hTR) as risk factors for development of familial pulmonary fibrosis. However there is hardly any data on the Molecular mechanisms in progressive idiopathic pulmonary fibrosis. MicroRNAs (miRNAs) are one such potential biomarkers of PF-ILD that are gaining popularity as regulators for gene silencing. The miRNAs are 20-24 base pair non-coding RNA that regulate gene expression at post-transcriptional level by blocking the translation of target messenger RNA. In lung fibrosis, an overlap is seen in the miRNAs expressed in COVID-19 and IPF. The miR-199a-5p is one of the seven miRNAs showing upregulation (miR-19a-3p, miR-200c-3p, miR-21-5p, miR-145-5p, miR-199a-5p, miR-23b and miR-424) in COVID-19 and IPF. Their utility for disease progression remains to be elaborated.

A retrospective study of 60 cases of fibrosing- ILD diagnosed on bronchoscopic biopsy was performed. These included 39 Males and 34 Females with age ranging from 23 to 82 years. The patients included in the current study were classified on the basis of histopathology into NSIP (n=38 cases, 38/60 = 63.33%), DIP (n=8, 13.33%), Acute/subacute/organising pneumonitis (n=5 cases, 8.33%), Granulomatous pneumonitis (n=4 cases, 6.67%) and chronic bronchiolitis (n=5 cases, 8.33%). Controls were 13 samples of normal histologically healthy lung tissue obtained during bronchoscopic biopsy. The miRNA-199a expressed in bronchoscopic lung biopsies of patients and controls were estimated by using miRNA primer Hsa-199a-1 and miScript II RT kit assay. The Ct values of the miRNA-199a were normalized to RNU6B as an internal control. A significant upregulation of miR-199 was observed in lung biopsy tissues of ILD: NSIP (15/38 cases, 39.47% - mixed cellular and fibrotic), DIP (4/8 (50%), AIP (2/5 40%), Granulomatous IP (2/4, 50%). While, downregulation of miR-199 was seen in patients with mild chronic bronchiolitis, cellular NSIP and DIP.

The study describes the intense dysregulation of miRNA- 199a in the lungs in patients with F-ILD. Moreover, it elaborates the upregulation of miR-199 from inflammatory to fibrotic lung disease suggesting that the absence of miR-199 is protective for the lung fibrosis. This differential change in miRNA-199a gene expression is suggestive of its usefulness as a biomarker of progression in F-ILD especially when correlated with patient history, clinical features at presentation, histopathological diagnosis. Further the miR-199a-5p levels are being correlated with lung tissue caveolin-1 protein levels and their disease-specific expression patterns are being assessed for formulating a prognostic algorithm for patient progression.

7. FGF/FGFR1,2 targeting can attenuate lung parenchymal and vascular remodeling in diffuse lung disease including post COVID-19 sequelae

The fibroblast growth factor (bFGF) and receptors-FGFR1,2 regulate epithelial/endothelial cell survival and proliferation in diffuse lung parenchymal diseases (DPLD). Therefore, FGF/FGFR inhibitors need to be explored for their therapeutic potential in DPLDs including post COVID-19 sequelae. Wistar rats (n=90) were exposed to: intratracheal Saline, n=18, bleomycin 7 U/kg, n=18, Bleomycin+Sildenafil-P.O-50mg/kg/day, n=18, Bleomycin+Bosentan, P.O-100 mg/kg/day, n=18, Bleomycin+Sildenafil+Bosentan, n=18. The action of Sildenafil and Bosentan monotherapy and combined therapy in attenuating lung histopathology, bFGF, FGFR1,2 mRNA and protein levels was evaluated on day 7, 14 and 28. Bleomycin induced lung parenchymal and vascular remodeling is characterized by dysregulated bFGF/FGFR-1,2 pathway with upregulation of (i) bFGF/FGFR1, bFGF/FGFR2 mRNA (Day 7 and 14 onwards, respectively) (ii) bFGF/FGFR-1,2 protein expression by AECs, BECs, endothelial cells, perivascular inflammatory cells and fibroblasts. Sildenafil and Bosentan monotherapy and combined therapy significantly attenuated parenchymal fibrosis by reducing bFGF/FGFR-1,2 mRNA and protein levels from day 7-28. Sildenafil monotherapy maximally reduced VSMCH, bFGF, FGFR-1 protein levels as compared to bosentan monotherapy and combined therapy suggestive of its higher efficacy. The study elaborates the action of Sildenafil and bosentan monotherapy and combined therapy as efficient inhibitors of bFGF-FGFR-1,2 to attenuate lung parenchymal and vascular remodeling.

Nanotherapy

8. Innovative Drug delivery Strategies for Lung fibrosis

Idiopathic pulmonary fibrosis (IPF) is a debilitating and fatal condition that causes severe scarring of the lungs. While the pathogenesis of IPF continues to be extensively studied the exact cause has yet to be established. The existing treatment options are based on oral therapies with pirfenidone and nintedanib which slow disease progression, however are associated with severe side effects due to chronic doses and systemic deliveries of these drugs. Therefore, the Nanoparticle-based sustained drug delivery strategy has been designed and characterised to ensure targeted delivery for site-specific treatment as well as for long-acting therapy and for improving overall patient compliance. The results of this study are being processed for Patent application.

9. Targeting respiratory epithelial progenitor cells in fibrotic lung using Nanotherapy

The alveolar epithelial progenitor cells (EPCs) play a critical role in lung regeneration after post fibrotic injury. During lung regeneration the EPC population expands and the persistent EPCs express a distinct phenotype that is rare in intact alveoli. Understanding the characteristics and functions of these newly found, injury-induced EPCs and their downstream signaling pathway, can potentially point the way to unique therapeutic targets for fibrosing lung diseases. The effects of bleomycin injury, pirfenidone standard therapy and its polymeric nanoformulation were studied in Wistar rat model. The lung histopathological changes were correlated with changes in EPC- Prominin-1/CD133, EMT-TGF-β and bFGF/FGFR-1 pathways. Bleomycin injury initially up-regulates CD-133/EPCs (Day 7) and protects the bleomycin induced injury by preventing the recruitment of inflammatory cells. The downregulation of CD-133 seen on Day 14 and 28 correlates with progression of fibrosis. Pirfenidone and its nanoformulation significantly upregulate CD-133 expressed by EPC in bronchioles, endothelium and lung interstitium from day 7 up to day 28. This correlated with attenuation of lung inflammation in early phase and fibrosis in late phase. Pirfenidone and its polymeric nanoformulation act on epithelial progenitor cells and suppress lung inflammation, EMT and profibrotic pathways to attenuate bleomycin-induced fibrosis.

10. G-Quadruplex forming Aptamers in Lung cancer

G-Quadruplex are Guanine-rich oligonucleotides of DNA- or RNA- having various folding topologies that are formed in the human genome. They act as ligands and selectively bind to a specific cell-surface target molecule, including proteins, peptides, leading to their internalization. Some of the aptamers have been isolated to specifically target receptors on cancer cells, include; epithelial cell adhesion molecule (EpCAM), vascular endothelial growth factor (VEGF), platelet-derived growth factor (PDGF), programmed death-ligand -1(PDL1), nuclear factor-kB (NF-kB), prostate-specific membrane antigen (PSMA), nucleolin, PTK7 and mucin -1 (MUC1).

H-Aptamers regulate lung cancer at multiple levels of cancer progression, angiogenesis, and metastasis processes. Since the aptamers are ingested by endocytosis (EGFR aptamer, EpCAM aptamer etc) or macropinocytosis (AS1411 aptamer) they can provide for targeted drug delivery to tumor cells and cell imaging. Previously they have been used for delivery of paclitaxel, docetaxel, doxorubicin to tumor cells. In the present study, aptamer-based technology is being developed to identify cell membrane surface biomarkers that exist in patient's blood, body fluids, cells, or tissue cells. These biomarkers may be used for diagnosis, treatment, prognosis and risk prediction.

Pharmacology

Research

1. A clinical study to evaluate the effects of yogic intervention on pulmonary functions, inflammatory markers, oxidative stress and health status in patients of Chronic Obstructive Pulmonary Disease (COPD) (AYUSH, March 2018- Sept. 2022, approx.39.77 lakhs)

The study was a randomized, controlled clinical study as per ICH-GCP. A total of 220 patients were recruited from OPD of Vishwnathan Chest Hospital as per the inclusion/exclusion criteria. They were randomized in two groups- Group I was administered corticosteroids and bronchodilators; and Group II was given yogic intervention along with the above conventional drugs. The patients were physically examined and baseline parameters of PFT, BODE index, Quality of life, markers of inflammation (NLR, OPG, TNF-α, FeNO) and oxidative stress (8-isoprostane, SOD) were assessed and followed up at 1, 2 and 3 months. In the present study, the quality of life was measured by St. George's respiratory questionnaire for COPD patients (SGRQ-C) developed by Prof. Paul John, Department of respiratory medicine, St. George, University of London. SGRQ-C is designed to measure and quantify the quality of life in patients with COPD. The observed data showed that all the aspects of the SGRQ-C i.e. symptoms, activity, impact and total score were found to be improved in both the groups of patients after 3 months of respective treatment. However, the degree of improvement was found to be more in Group II where yogic intervention was given along with conventional pharmacotherapy as compared to that in Group I, which was on conventional pharmacotherapy only. Taken together, the results suggest that yogic intervention as an adjunct therapy might have worked to decrease symptoms and lead to efficient pulmonary functions and improved the quality of life by probably achieving resilience against environmental stimuli, improved emotional stability that provided psycho-physiological benefits.

2. Pharmacological studies to evaluate the anti-inflammatory and immunomodulatory effects of *Aerva Lanata Linn.* in experimental model of Bronchial Asthma and the cellular and molecular mechanism (ICMR, 2019-August, 2022, approx.14 lakh)

The study was conducted to evaluate the effects of *Aerva Lanata Linn.* extract in experimental models of airway inflammation, bronchial hyperreactivity and airway remodelling, in OVA sensitized and challenged rats and possible cellular and molecular mechanisms involved therein. The rats were immunized and challenged with ovalbumin to simulate model of bronchial asthma. The markers of inflammation and immunity viz. TGF-β, IL-13, pulmonary functions by whole body plethysmography, NOx, NF-kB, in Blood and BAL fluid of OVA sensitized and challenged rats were assessed. Bronchial hyperresponsivenesss was measured in-vivo in terms of enhanced pause (P-enh), in response to exposure to different doses of spasmogen using whole body plethysmography. P-enh is an index of bronchial hyperresponsiveness and airflow limitation in experimental animals. OVA sensitized and challenged rats showed significantly increased P-enh values as compared to that of normal control rats which is indicative of increased hyperresponsiveness and airway resistance. Administration of (25 mg/kg, 50 mg/kg, 100mg/kg) *Aerva Lanata Linn.* extract reduced P-enh values in a dose-related manner as compared to that of disease control rats - which indicated attenuation by the herbal agents of bronchial hypreresponisveness and airway resistance in response to spasmogens. Further, levels of TGF-β, IL-13 levels were increased in experiment control group in both blood and BAL fluid vs normal control group. The results of all above parameters in both blood and BAL fluid were comparable with prednisolone treated group, which was used as a positive control. The result suggested that *Aerva Lanata Linn.* has anti-inflammatory and immunomodulatory effects during ovalbumin induced asthma in rats.

3. Pharmacological studies on *Hedychium spicatum* on airway inflammation and remodeling in experimental model of bronchial asthma (ICMR, June 2021- ongoing, approx.25 lakhs)

The study was conducted to assess the anti-asthma activity of *Hedychium spicatum* (100, 200 and 400 mg/kg)

by assessing the markers of airway inflammation, hypersensitivity to methacholine, airway remodeling, and also oxidative and nitrosative stress to delineate the possible mechanisms involved in their therapeutic effects. Rat models of ovalbumin induced airway inflammation and airway remodeling were used to achieve these objectives. The rats were sensitized with OVA adsorbed onto aluminum hydroxide and challenged on 14th day to induce model of airway inflammation. In another model to induce airway remodeling, the rats were challenged with aerosolized OVA for 30 minutes daily from day 15 to 21 after sensitization (day 1). Results showed that administration of Hedychium spicatum for 14 days resulted in attenuation of IL-4 and IL-5 levels, in a dose-related manner, in both serum and BAL fluid as compared to that of disease control group. Treatment with Hedychium spicatum also resulted in reduction of TNF-α, a pro-inflammatory cytokine, in serum and BAL fluid. This was corroborated by reduction of NF-κB levels which is a gene transcription factor and mediates production of inflammatory and immunomodulatory cytokines, viz. IL- 4, IL-5 and TNF-α. Thus, the results suggested anti-inflammatory and immunomodulatory effects of the herbal agent in experimental model of bronchial asthma.

4. Effects of Nitric Oxide Modulators on Airway Inflammation, Bronchial Hyperresponsiveness and Oxidative Stress in Experimental Model of Asthma in Rats (April 2020- Sept. 2022)

This study evaluated the effects of NO modulators on airway inflammation, airway hyperresponsiveness and oxidative stress in an experimental model of bronchial asthma in rats. Asthma was induced by immunization with ovalbumin (40 mg/rat, i.p.) adsorbed to 2 mg of aluminium hydroxide. Fourteen days after the immunization, the rats were challenged with 1% ovalbumin (OVA) aerosol for 20 minutes/day for 8 consecutive days. All drugs and vehicles were administered 30 minutes prior to 1% ovalbumin aerosol challenge, daily for 8 days. Total leukocyte count and eosinophil count were raised in blood and BAL fluid of ovalbumin-challenged rats. These changes were attenuated by administration of ABH. Similar results were seen after pre-treatment with L-arginine. L-NAME decreased eosinophil count in the BAL fluid, but did not impact the total or differential cell count in blood. Ovalbumin-specific IgE levels in serum and BAL fluid increased after challenge with aerosolized ovalbumin. Treatment with L-arginine and ABH in separate group lowered levels of ovalbumin-specific IgE as compared to that seen in disease control rats, thus suggesting the immunomodulatory effect of these NO modulators. TNF-α levels in serum and BAL fluid were assessed as a marker of inflammation, and were found to be raised after ovalbumin challenge. Administration of L-arginine and ABH in separate groups reduced the levels of TNF-α in BAL fluid as compared to controls, thus suggesting that the drug has anti-inflammatory effects mediated through reduction of pro-inflammatory and enhancement of anti-inflammatory cytokines.

5. Effects of *Withania somnifera* extract on experimental model of type 2 diabetes mellitus induced Alzheimer`s disease and the possible mechanisms in rats (March, 2017-Oct. 2022)

The study was designed to investigate the effects of *Withania somnifera* (WS) root extract on cognition deficit in response to insulin resistance in SD rats. Insulin resistance was developed by feeding the animals with high-fat diet (HFD) for 8 weeks followed by low dose of streptozotocin (STZ; 35 mg/kg, i.p.) treatment. After 4 weeks of STZ administration, animals of all the groups were treated with root extract of WS at the dose of 300 mg/kg/day, for another 8 weeks. Neurobehavioral parameters were analyzed by Morris water maze (MWM) and passive avoidance (PA) tests. MWM test is universally accepted model to test spatial learning and PA test is the standard test to measure fear-based learning in rodents. In MWM, animals of DC group showed higher escape latency time (ELT) on day 4 of the acquisition trial and a lower time spent in the target quadrant (TSTQ) on day 5 (probe trial) as compared to NC group. Interestingly, after treatment with WS (100 and 300 mg/kg), the ELT (on day 4) was reduced and TSTQ was increased as compared to that of DC group. Hence, the results obtained indicated that WS showed positive effects on both learning and memory retention. Further, HFD-STZ treated diabetic rats showed reduced BDNF (neuroprotective marker) levels in both prefrontal cortex and hippocampus, as compared to NC rats which were reverted back towards normalcyby WS. The finding suggested that Withania somnifera may reduce neurodegenerative effects of type 2 diabetes and also possess neuroprotective effects.

6. Evaluation of nitric oxide signalling mechanisms during airway inflammation and remodelling in experimental model of bronchial asthma in rats (June, 2022- ongoing)

The present study aims to evaluate exact NOS pathways involved in modulating the specific biomarker of airway inflammation and remodelling by using selective pharmacological tools during airway inflammation and remodelling in experimental model of bronchial asthma in rats. Inbred Wistar rats of either sex are used for this study. Animals were kept in an environmentally controlled room (22 + 2°C, 12 hours light and dark cycles) and fed on standard laboratory food pellets and water ad libitum. All groups, except the normal group, were immunized with ovalbumin (40 mg/rat, i.p.) adsorbed to 2 mg of aluminium hydroxide on Day 1. Fourteen days after immunization, the animals were challenged with 1% ovalbumin aerosol in 0.9% saline, for 20 min./day for 8 consecutive days. All drugs and vehicles were administered from 15-22 days to respective groups. Rats of Control group were administered vehicle (isotonic saline). Rats in group A1 and A2 received L- Arginine; in group D1 and D2 received 7-NI in isotonic saline i.p. each, respectively. Rats in group C1 and C2 received L-NAME, and in group D1 and D2 received Aminoguanidine, on day 23, rats were anesthetized and blood was collected by cardiac puncture, centrifuged and the serum was separated and stored at -80°C. BALF was collected by conducting a bronchoalveolar lavage through a tracheal cannula with 0.9% Sodium Chloride solution and supernatant from the BALF was recovered and stored at -80°C for assay of various biochemical markers. The study can help in identifying nitrergic targets for new drug development for the management of bronchial asthma.

Physiology

Implementing Swachhtha Action Plan (SAP) as a Nodal Officer for VPCI:
It includes:

1) Observance of Swachhtha Pakhwada from April 1-15, 2022 in which various activities like cleanliness drive at VPCI and residential complexes were carried out. Staff and Public outreach programs were organized to generate awareness and sensitization on personal and environmental hygiene.

2) Observance of Special Campaign 2.0 from October 2-31, 2022 in which special drive for cleaning institute premises and residential complexes, weeding out of old file records was carried out.

Pulmonary Medicine

(Including Pulmonary Medicine, Cardo-respiratory Physiology and Respiratory Allergy and Applied Immunology)

Research

1. Initial COVID-19 Severity and Long-COVID Manifestations: An Observational Analysis

New-onset or persistent symptoms beyond after 4 weeks from COVID-19 are termed "long-COVID." Whether the initial severity of COVID-19 has a bearing on the clinicoradiological manifestations of long COVID is an area of interest. The study involved an observational analysis of the long-COVID patients after categorizing them based on their course of COVID-19 illness into mild, moderate, and severe groups. The clinical and radiological profile was compared across these groups. It was found that out of 150 long-COVID patients recruited in the study, about 79% (118), 14% (22), and 7% (10) had a history of mild, moderate, and severe COVID-19, respectively. Fatigue (P = .001), breathlessness (P = .001), tachycardia (P = .002), tachypnea (P < .001), raised blood pressure (P < .001), crepitations (P = .04), hypoxia at rest (P < .001), significant desaturation in 6-minute walk test (P = .27), type1 respiratory failure (P = .001), and type 2 respiratory failure (P = .001) were found to be significantly higher in the long-COVID patients with a history of severe COVID-19. These patients also had the highest prevalence of abnormal chest X-ray (60%) and honeycombing in computed tomography scan thorax (25%, P = .027). The course of long COVID bears a relationship with initial COVID-19 severity. Patients with severe COVID-19 are prone to develop more serious long-COVID manifestations.

2. Etiology, pathophysiology, and management of Allergic Asthma in Children's

Many young toddlers experience frequent chest discomfort, wheezing, and coughing. Before the age of six, one-third of preschoolers experience these symptoms, yet only 40% of these wheezing preschoolers go on to develop asthma. The majority of youngsters in older school-aged children suffer asthma. Controlling asthma affects quality of life. Only a small portion of patients who receive asthma therapy succeed in controlling their condition. Even if co-morbidities, an erroneous diagnosis, or subpar inhaling technique could be to blame, non-adherence is frequently the main factor in therapy failures. Non-pharmacological interventions focus on avoiding cigarette smoke and avoiding allergens when a child is allergic. The GINA and the British Guideline for the therapy of asthma are two international standards for pharmacological management.

3. One-year continuous abstinence rate for smoking cessation via telephonic counselling: The Indian scenario

Tobacco control methods differ by country, with telephonic counseling being one of them. The effectiveness of telephone counseling in smoking cessation has been discussed on several occasions. India's tobacco problem is more complex than that of any other country in the world. To begin with, tobacco is consumed in a variety of ways, and India is a large multilingual country with remarkable cultural diversity. In India, the National Tobacco Quitline Service (NTQLS) is a government-run program. Its data from May 2016 to May 2021 were analyzed retrospectively in this cross-sectional study to determine the prevalence and pattern of tobacco use in India, as well as the abstinence rate for smoking cessation. A total of 4,611,866 calls were received by the Interactive Voice Response system (IVR). The number of calls increased from 600 to 5400 per day after the toll-free number was printed on all tobacco products. Smokeless tobacco use was discovered to be more prevalent, with males significantly more likely to use both smoking and smokeless tobacco. At one month and one year after quitting, 33.42% and 21.9%, respectively, remained tobacco-free. The study emphasizes the efficacy of behavioral counseling in increasing abstinence rates. The printing of a toll-free number on tobacco products is an effective strategy for expanding the operation of quit lines. Despite the challenges of cultural diversity and complex tobacco use, India's quit line service has been able to provide counseling to callers with prolonged abstinence and quit rates comparable to the various quit lines around the world.

4. Quantification of Indoor Respirable Suspended Particulate Matters (RSPM) and Asthma in Rural Children of Delhi-NCR

The objective of the study was to assess the exposure of indoor respirable suspended particulate matters (PM10, PM2.5, and PM1) and their association with asthma in children in a rural area of Delhi-NCR. It was a cross-sectional study. Fifty children with asthma from both biomass fuel users in group A and liquefied petroleum gas (LPG) fuel users in group B households were enrolled along with 50 healthy control subjects. The diagnosis of asthma was done as per the Global Initiative for Asthma (GINA), 2014. The 24-h levels of PM from all three groups of households were measured and compared. The level of PM with confounding factors like smoking and room occupancy was also compared between the groups. The 24-h concentrations of PM10, PM2.5, and PM1 were found significantly higher in the households of group A and group B as opposed to group C ($p < 0.001$). The number of smokers with a mean pack year and a lack of an exhaust fan was highest in group A and lowest in group C, while diesel and kerosene machines were highest in group B. The PMs were highest in group A even with different confounding factor ($p < 0.001$). The level of all PM was higher in group B than in group C, despite the presence of both types of fuel in group C households. The level of all PM was highest during the cooking hour. The level of 24-h PM was highest in group-A households. However, the level of PM was higher in Group-B households than group C despite the presence of biomass fuel users in group C. This may be due to the higher number of smokers, poor room-occupancy and lack of exhaust fans.

5. Pulmonary adenocarcinoma mimicking rheumatoid lung and delaying diagnosis for 8 months

The clinical and radiological findings of adenocarcinoma and rheumatoid lung disease are non-specific and similar. The final diagnosis should be confirmed by histopathology. The study presents an adenocarcinoma of lung in known rheumatoid patient presenting as cough and breathlessness for 8 months. The CT chest revealed multiple consolidations, bronchectasis and honeycombing with two times bronchoscopic biopsy negative. All non-resolving lesions with non-specific symptoms should be investigated for all possible causes including malignancy. It was advised to do CT guided biopsy in such cases even after bronchial biopsy negative as it has higher yield and cost effective test.

6. Role of Pharmacovigilance in Drug Safety: An Overview of Activities at an Adverse Drug Reaction Monitoring Centre (AMC) of Delhi

Pharmacovigilance plays a vital role in the safety of drugs and rationalization of therapies. The main aim of this life science mission is to save and improve the quality of the lives of patients worldwide. The adverse drug reactions (ADRs) monitoring is essential for each drug starting from preclinical stages of drug development to all stages of clinical trials as well as after marketing of the drug. The WHO has developed International Drug Monitoring centre at Uppsala, Sweden which encourages and integrates Pharmacovigilance programs of various countries and provides access to Vigibase. At present more than 148 Countries are members of the International Drug Monitoring Program being run under WHO. The aim of the WHO Programme is to ensure that early signs of previously unknown medicines-related safety problems are identified; the information is shared globally so that action to protect patients may be taken by individual countries where necessary. A database of Individual Case Safety Reports (ICSR) submitted by member countries of the WHO's International drug Monitoring Program has been developed and named VigiBase, it is the single, largest repository to support that goal of drug safety in the world. In India, the pharmacovigilance program was initiated by Central Drugs Standard Control Organization (CDSCO) to monitor the safety of drugs in patients and was named as Pharmacovigilance Program of India - PvPI. Across the country PvPI has identified several teaching and corporate hospitals (Medical Council of India approved) as ADRs Monitoring Centres (AMCs). The AMCs report ICSR to National Coordinating Centre (NCC) which submit the reports to WHOUppsala Monitoring Centre through Vigiflow (a UMC software). This paper gives an overview of the pharmacovigilance activities of AMC at Vallabhbhai Patel Chest Institute, a tertiary health care centre of University of Delhi, Delhi, India.

7. Systemic corticosteroids for management of 'long-COVID': an evaluation after 3 months of treatment.

The present study explored the association between daily ambient air pollution and daily emergency room(ER) visits due to acute respiratory symptoms in children of Delhi. The daily counts of ER visits (ERV) of children (≤15 years) having acute respiratory symptoms were obtained from two hospitals of Delhi for 21 months. Simultaneously, data on daily concentrations of particulate matter (PM10 and PM2.5), nitrogen dioxide (NO2), sulfur dioxide (SO2), carbon monoxide (CO), and ozone (O3) and weather variables were provided by the Delhi Pollution Control Committee. K-means clustering with time-series approach and multipollutant generalized additive models with Poisson link function was used to estimate the 0–6-day lagged change in daily ER visits with the change in multiple pollutants levels. Out of 1,32,029 children screened, 19,120 eligible children having acute respiratory symptoms for ≤2 weeks and residing in Delhi for the past 4 weeks were enrolled. There was a 29% and 21% increase in ERVs among children on high and moderate level pollution cluster days, respectively, compared to low pollution cluster days on the same day and previous 1–6 days of exposure to air pollutants. There was percentage increase (95%CI) 1.50%(0.76, 2.25) in ERVs for acute respiratory symptoms for 10 μg/m3 increase of NO2 on previous day 1, 46.78%(21.01, 78.05) for 10 μg/m3 of CO on previous day 3, and 13.15% (9.95, 16.45) for 10 μg/m3 of SO2 on same day of exposure. An increase in the daily ER visits of children for acute respiratory symptoms was observed after increase in daily ambient air pollution levels in Delhi.

8. Pollen forecasting: A future necessity

Allergy is an immediate Type I hypersensitivity reaction to an allergen. It may affect different organs of the body, particularly the respiratory system. Allergic diseases area major health concern worldwide. Common respiratory allergic diseases are asthma and allergic rhinitis (AR). Overall, about 300 million people have been found to be suffering from asthma and about 200–250 million people suffer from food allergies. One tenth of the population suffers from drug allergies. Estimated prevalence of rhinitis in the general population is 10%–30% worldwide and 20%–30% of the Indian population. In 1964, a study carried in Delhi reported around 10% of the people are suffering from AR and 1% from asthma. [1] Recently, Indian study on epidemiology of asthma, respiratory symptoms, and chronic bronchitis has also been conducted and covered 12 centers comprising of both rural and urban areas of different parts of India.

9. Relevance of skin prick test, serum total immunoglobulin E, and absolute eosinophil counts in asthma patients

Asthma is a multifaceted condition defined by chronic airway inflammation. Skin prick test (SPT), serum total immunoglobulin E (tIgE), and absolute eosinophil counts (AEC) estimation are commonly available tools for evaluating allergen sensitization. The present study evaluates the sensitivity to common aeroallergens and also compares serum tIgE and AEC levels with spirometry in Indian individuals with a history of allergy symptoms. An observational prospective study was conducted in the Outpatient Department of Viswanathan Chest Hospital, VPCI, Delhi, between 2017 and 2019. Two hundred asthma patients diagnosed as per the Global Initiative for Asthma guidelines undergo SPT against a battery of common aeroallergens and measured serum tIgE and AEC. Out of 200 cases, the overall prevalence of common aeroallergens sensitization was found to be 57% (114) in asthmatic patients (atopic). SPT positivity to common aeroallergens was highest in people between the ages of 21 and 30 and lowest in people over 50. The most prevalent annoying aeroallergens were found to be weed pollens (14%), house dust mites (11%), fungi (10.5%), tree pollen (9.5%), dust (6%), kapok cotton (5.5%), grass pollen (3.5%), silk (1.5%), and wool (1%). The mean tIgE was higher in atopic asthmatic patients than in nonatopic asthmatic patients (553.25 ± 218.12 IU/ml and 489.1 ± 251.16 IU/ml; P = 0.056). In the present study, it was found that insects are the most common offending aeroallergens with higher SPT sensitivity and serum tIgE in atopic patients. Spirometry severity is not affected by allergens sensitivity in asthma patients.

10. Indian Guidelines for Diagnosis of Respiratory Allergy

Allergy is defined as an immediate type I hypersensitivity reaction to an allergen. It may affect various organs of the body, particularly respiratory system. Common respiratory allergic diseases are asthma and allergic

rhinitis. Estimated prevalence of rhinitis in general population is 10%-30% worldwide and 20%-30% of the Indian population suffers from allergic rhinitis. The allergic reaction is triggered by environmental allergens which are substances that cause allergic reaction. Allergens are mainly grouped into inhalant allergens, ingestant allergens, injectant allergens and contactant allergens. Airborne allergens are the main cause of respiratory allergy. The most common airborne allergens causing respiratory allergy are pollen grains, fungal spores, house dust mites, animal allergens and insect allergens. Allergic diseases have significant impact on the quality-of-life, social life, and economy. Limited diagnostic facilities and inadequate knowledge about allergic testing further add on to the burden of the disease. Patient history and clinical examination are primary modalities for identifying an allergic disease and its likely causative allergens.

11. A low-cost pulmonary function test laboratory setup for infection control during COVID-19

Ambient aeroallergens and organic or inorganic air pollutants are known to cause asthma exacerbation and subsequent asthma-related hospital admissions.This study was carried out to study the impact of meteorological factors, air pollution, pollens over hospital visits for respiratory illness in north Delhi region from July 2014 to June 2015. Daily monitoring of pollen grains was done on the roof of the multistorey building (height up to 20m) of the Vallabhbhai Patel Chest Institute. Meteorological factors including temperature, relative humidity, and precipitations were recorded daily. Daily concentrations of nitric dioxide (NO2), particulate matter (PM2.5) and sulphur dioxide (SO2) were also recorded. Number of hospital visits of patients with respiratory illness were assessed in relation to air pollutants (NO2, SO2 and PM2.5) and climate change (temperature, relative humidity and rain). During the study period, 113,462 pollen counts were recorded. Two highest peaks of mean pollen counts were observed in post-monsoon season (October-2014) and in the spring season (March 2015). The maximum and minimum pollen concentration was observed in the month of March 2015 (18818/m3) and August 2014 (4731/m3). The results showed that pollen numbers significantly correlated with respiratory emergency department patient visits (P=0.037, r=0.604), and temperature and humidity (P=0.711, r=-120, and (P=0.670, r=-0.137), respectively. NO2 significantly correlated with SO2, respiratory emergency department patient visits and new respiratory OPD patients (P=0.017, r=0.670, P=0.031, r=0.622 and P=0.016, r=0.675, respectively). A statistically significant correlation between rainfall and SO2 was observed (P=0.004, r=-0.757) in the present study. The study suggests that significant increase in pollen concentration and air pollutants in the ambient environment causes respiratory illness.

12. Chronic Respiratory Diseases Burden and Healthcare Facilities

The term chronic respiratory diseases (CRDs) refer to the airways and other structures of the lung and ignores the upper airway. The most common CRDs are chronic obstructive pulmonary disease (COPD), asthma, and occupational lung diseases. These diseases are among the leading causes of morbidity and mortality worldwide and are important contributors to the rising burden of non-communicable diseases (NCDs) globally. In addition to tobacco smoke, other risk factors for CRDs include air pollution, household smoke, and dampness (mold) exposure, occupational chemicals and dusts, and frequent lower respiratory infections during childhood. The most recent Global Burden of Diseases Study (GBD) 2017 reported that chronic respiratory diseases are the third leading cause of death globally in 2017, just behind cardiovascular diseases (31.8% of all deaths) and neoplasms (17.1%),1 In 2017, an estimated 544.9 million individuals worldwide had a chronic respiratory disease, equivalent to a 39.8% increase compared with the figures in 1990.

13. Qualitative analysis of protein antigen in bird exposed asthma patients by high performance liquid chromatography method

Asthma is a chronic disease that affects large number of people worldwide. In urban areas, asthmatic people are getting exposed to pigeon antigen (droppings and feathers) around the workplace and domestic areas. The present study was conducted to the determine the presence of MUC1 protein in the blood of pigeon exposed asthmatic patients by the high performance liquid chromatography (HPLC) method. This was a prospective study of 108 pigeons exposed asthma patients. In addition, 17 asthmatic patients were enrolled for detection of MUC1 expression in their serum sample who were atopic and skin prick testing positive for pigeon antigens

(droppings and feathers). The MUC1 analysis was done with HPLC method. A total of 17 asthmatic patients were enrolled on the basis of the history of pigeon exposure and positive skin prick test for pigeon's feather and dropping allergens including 9 males and 8 females, the average age of the study candidates was 28.8 ± 10.1 years. MUC1 concentration was raised in all of the asthmatic patients exposed to pigeons. The MUC1 was upregulated in 15 and downregulated in 2 patients. A higher concentration of MUC1 was seen in younger patients. Pigeon droppings and feathers allergen exposed and sensitivity showed the higher MUC1 expression in serum in asthma patients. The concentration of MUC1 was higher in the younger age group. The HPLC method was easier and economical for the detection of MUC1.

Postgraduate Training and Teaching

The Institute was initially started with a Diploma Course in Tuberculosis and Chest Diseases (DTCD). Later the MD, DM and PhD courses were started. The Institute continues to conduct the MD, DM and PhD courses in Pulmonary Medicine, Biochemistry, Microbiology, Pharmacology and Physiology. The details of the students currently enrolled in these courses are presented here.

DM Degrees (Ongoing)

(Session: 2021-2024)

S. No.	Name (Discipline)	Title of Theses	Supervisor
1.	Dr. Libin Mathew (Pulmonary Medicine)	Assessment of change in health-related quality of life in interstitial lung disease after three months of treatment.	Prof. Raj Kumar
2.	Dr. Subhankar Chakraborty (Pulmonary Medicine)	Comparison of predictive value of different scoring systems in Acute Exacerbation of Chronic Obstructive Pulmonary Disease (AECOPD) patients in Intensive Care Unit.	Prof. Raj Kumar

DM Degrees (1st Year)

(Session: 2022-2025)

S. No.	Name (Discipline)	Title of Theses	Supervisor
1.	Dr. Jedidiah Deva (Pulmonary Medicine))	Clinical characteristics, sputum microbiome and inflammatory profile in patients admitted` with acute exacerbation of Tobacco related COPD and Biomass fuel exposure related COPD: A prospective comparison study at a tertiary center in North India.	Prof. Raj Kumar
2.	Dr. Mridul Kumar Sarma (Pulmonary Medicine)	To study clinical profile, quality of life and avian antigen profile of non-occupational/environmental pigeon exposed hypersensitivity pneumonitis patients presenting to a tertiary care center in India.	Prof. Raj Kumar

MD Theses (Awarded)

(Session: 2019-2022)

Name	Discipline
Dr. Dhilnaz A.S	Pulmonary Medicine
Dr. Nitesh Goyal	Pulmonary Medicine
Dr. Vivek Kumar	Pulmonary Medicine
Dr. Pallavi S.R	Pulmonary Medicine
Dr. Kunal Ranjan	Pulmonary Medicine
Dr. Rohan Arora	Microbiology

MD Theses (Submitted)

(Session: 2020-2023)

S. No.	Name (Discipline)	Title of Theses	Supervisor
1.	Dr. Shyam Mohan K (Pulmonary Medicine)	Evaluation of dietary pattern and lifestyle in COPD and their Correlation with disease severity	Prof. Raj Kumar
2.	Dr. Irshad Ahmad (Pulmonary Medicine)	Evaluation of Residual Symptoms in Post COVID patients	Prof. B. K. Menon
3.	Dr. Pooja Narwal (Pulmonary Medicine)	Assessment of the Prevalence of Restless Leg Syndrome in Patients with COPD	Prof. BK Menon Prof. Raj Kumar Dr Vishal Bansal
4.	Dr. Saatvik Manchanda (Pulmonary Medicine)	Study on Radiological changes in Post COVID-19 patients	Prof. B. K. Menon
5.	Dr. Sharmistha Dutta (Pulmonary Medicine)	Prevalence of Frailty in Chronic Obstructive Pulmonary Disease and Its Correlation with disease severity and quality of life	Dr. Nitin Goel Prof. Raj Kumar
6.	Dr. Jyoti Choudhary (Microbiology)	Characterization of Virulence Properties and Molecular Typing of Clinical and Colonizing Isolates of *Acinetobacter baumannii*	Prof. Malini Shariff
7.	Dr. Anmol Guleria (Microbiology)	A study of phenotypic and Genetic determinants of Delamanid resistance in Clinical Isolates of *Mycobacterium Tuberculosis*	Prof. Mandira Varma-Basil Prof. BK Menon Dr. Nitin Goel
8.	Dr. Mihir Chauhan (Pharmacology)	Effects of Nitric Oxide Modulators on Airway Inflammation, Bronchial Hyper responsiveness and Oxidative stress in Experimental Model of Bronchial Asthma	Prof. Kavita Gulati

MD Theses (Ongoing)

(Session: 2021-2024)

S. No.	Name (Discipline)	Title of Theses	Supervisor
1.	Dr. Pranab Sarma (Pulmonary Medicine)	Evaluation of functional impairment, quality of life and work efficiency in patients of Pulmonary Tuberculosis at treatment completion.	Dr. Parul Mrigpuri
2.	Dr. Lehar Batra (Pulmonary Medicine)	Outcomes and Predictors of failure of Non-Invasive Ventilation in acute exacerbation of Chronic Obstructive Pulmonary Disease with Acute Hypercapnic Respiratory Failure.	Dr. Nitin Goel
3.	Dr. Anushree Kesarwani (Pulmonary Medicine)	Assessment Of Respiratory Sequelae, Sleep and Quality Of Life After COVID-19	Prof. B. K. Menon
4.	Dr. Katasani Giridhar Reddy (Pulmonary Medicine)	Study On Depression Anxiety And Quality Of Life in Newly Diagnosed Tuberculosis Patients.	Prof. B. K. Menon
5.	Dr. Arathy Jayakumar (Pulmonary Medicine)	Physical Activity, Exercise Tolerance, Fatigue and its relationship with cognitive impairment in patients on long term oxygen Therapy.	Prof. B. K. Menon
6.	Dr. Karishma Birde (Biochemistry)	To study the genetic polymorphisms of CHI3L1 gene and its association with the oxidative-antioxidative balance in chronic obstructive pulmonary disease in North Indian population.	Prof. Vishwajeet Rohill
7.	Dr. Navnika Kapoor (Pharmacology)	Evaluation of nitric oxide signalling mechanisms during airway inflammation and remodeling in experimental model of bronchial asthma in rats.	Prof. Kavita Gulati

MD – Ist Year

(Session: 2022-2025)

Name	Discipline
Dr. Milli Rawat	Pulmonary Medicine
Dr. Shweta Yadav	Pulmonary Medicine
Dr. Priyam Gupta	Pulmonary Medicine
Dr. Meera P Nair	Pulmonary Medicine
Dr. Sarika Sunil	Pulmonary Medicine
Dr. Protick Kumar Mondal	Microbiology
Dr. Arza Naseem	Microbiology
Dr. Rashmi Dhir	Pharmacology
Dr. Mohammad Azharuddin Mulla	Biochemistry

PhD Awarded/Submitted

S. No.	Name (Discipline)	Title of Theses	Supervisor(s)	Status
1.	Dr. Pankaj Verma (Pharmacology)	Experimental studies to evaluate the mode of action of traditional herbal agents in bronchial asthma	Prof. Kavita Gulati	Awarded
2.	Dr. Anshul Tanwar (Pharmacology)	Effect of *Withania Somnifera* extract on experimental model of type 2 diabetes mellitus induced Alzeimer's Disease and the possible mechanisms in rats	Prof. Kavita Gulati	Awarded
3.	Mr. Suresh K Thokchom (Pharmacology)	A clinical study to evaluate the effects of yogic intervention on pulmonary functions, inflammatory markers, oxidative stress and health status in patients of chronic obstructive pulmonary disease	Prof. Kavita Gulati Prof. BK Menon	Awarded
4.	Dr. Tanusri Nandi Microbiology (Virology)	Study of innate immune mechanism through small molecules against influenza A virus replication.	Prof. Madhu Khanna	Awarded
5.	Dr. Ashutosh Singh Microbiology (Mycology)	Multigene phylogeny and MALDI-TOF MS characterization of melanized fungi and determination of their antifungal susceptibility profiles.	Prof. Anuradha Chowdhary	Awarded

S. No.	Name (Discipline)	Title of Theses	Supervisor(s)	Status
6.	Dr. Kamal Singh (Allergy and Immunology)	Indoor Air Pollution Exposure and Asthma in Children.	Prof. Raj Kumar	Awarded
7.	Dr. Kamal Shrivastava (Microbiology)	Evaluation of an array of PE-PPE genes for potential use in diagnostic assay to identify *Mycobacterium Tuberculosis*	Prof. Mandira Varma-Basil	Submitted
8.	Dr. Chanchal Kumar (Microbiology)	Functional Analysis of cell intrusion proteins of *Mycobacterium Tuberculosis* as a potential target of vaccine development	Prof. Mandira Verma-Basil	Submitted

PhD (Ongoing)

S. No.	Name (Discipline)	Title of Theses	Supervisor(s)	Year of Registration
-	-	-	-	-

Faculty Members Associated as Co-supervisors for MD/PhD Theses of DU and Other Institutions

S. No.	Name (Discipline) and Institution's Name	Title of Theses	Supervisor(s)	Status
1.	Ms Smriti Gupta (PhD, Biochemistry) Department of Chemistry SRM University Delhi-NCR, Sonipat (Haryana)	Understanding chronic obstructive pulmonary disease by studying single nucleotide polymorphism in Delhi-NCR population	Dr. Ajit Kumar (Department of Chemistry, SRM University, Delhi-NCR, Sonepat, Haryana), Dr. Anju Bhatnagar, (Rajan Babu Institute for Pulmonary Medicine & Tuberculosis [RBIPMT], Delhi) and Prof. Viswajeet Rohil	Awarded
2.	Mr. Mohd. Rafi Reshi (PhD. Medical Pharmacology), HIMSR, Hamdard University, Delhi	Experimental studies on the hepatoprotective and immunomodulatory effects of Dawa-Ul-Kurkum, a polyherbal Unani preparation, and its cellular and molecular mechanisms, in rats	Prof. Arunabha Ray (HIMSR, Hamdard University, Delhi) and Prof. Kavita Gulati	Awarded

S. No.	Name (Discipline) and Institution's Name	Title of Theses	Supervisor(s)	Status
3.	Ms Varsha Chauhan (PhD, Microbiology) MDU, Rohtak	Efflux Pumps: Contribution to Drug Resistance in Various lineages of *Mycobacterium tuberculosis*	Dr. Sanjay Kumar (MDU, Rohtak) and Dr. Mandira Varma-Basil	Ongoing
4.	Ms. Nishtha Agarwal (PhD, Biomedical Sciences) Department of Biomedical Sciences, ANDC, University of Delhi, Delhi	UPR and Autophagy crosstalk: Potential Antiviral Strategy against Chikungunya Virus	Dr. Gagan Dhawan (Department of Biomedical Sciences, ANDC, University of Delhi, Delhi) and Prof. Madhu Khanna	Ongoing
5.	Mr. Nilanshu Manocha (PhD, Biomedical Sciences) Department of Biomedical Sciences, ANDC, University of Delhi, Delhi	Study on the generation of peptide immunogen against dengue virus	Dr. Prashant Kumar (Amity Institute of Virology and Immunology, Amity University, Noida (UP) and Prof. Madhu Khanna	Ongoing
6.	Mrs. Nitika C. Panakkal (PhD, Medical Imaging Technology), Manipal College of Health Professionals (MCHP), Manipal Academy of Higher Education (MAHE), Manipal	Influence of Low Kilo-Voltage Protocol on Image Quality, Radiation and Iodine Dose for Abdominopelvic Computed Tomography.	Dr. Rajagopal K V, Professor, Dept. of Radio-diagnosis & Imaging, Kasturba Medical College & Hospital, MAHE, Manipal and Dr. Ravishankar N	Ongoing
7.	Ms. Nafaa H. Ali (PhD. Medical Pharmacology), HIMSR, Hamdard University, Delhi	Studies on the Effects of *Withania somnifera* on Airway Inflammation and Airway Remodeling in Experimental Model of Bronchial Asthma	Prof. Arunabha Ray (HIMSR, Hamdard University, Delhi) Dr. Sana Rehman (HIMSR, Hamdard University, Delhi) and Prof. Kavita Gulati	Ongoing

Distinguished Visitors

Dr. Devesh Gupta, Chairman, Governing Body, Ramjas College, University of Delhi, Delhi & Dr. Manoj Khanna, Principal, Ramjas College, University of Delhi, Delhi visited VP Chest Institute on January 13, 2023

A team of DHR-ICMR constituted of Dr. Tanu Anand from ICMR, Dr. Madhuri Singh and Dr. Abhishweta Saxena from DHR visited the ICMR-MRU-VPCI on January 24, 2023

Mr. Ajay Tamta, Member of Parliament (MP) from Almora constituency on December 29, 2022

Shri S. GopalKrishnan, Additional Secretary (Dept. of Health & Family Welfare) visited VP Chest Institute on August 11, 2022

Mr. Mansukh Mandaviya, Minister of State for Chemicals and Fertilizers of India, visited NCRAAI Department, VPCI on August 12, 2022

Mr. Auke Wiebren de Jong, PhD scholar at Westerdijk Fungal Biodiversity Institute, Utrecht, The Netherlands visited Medical Mycology Unit, Department of Microbiology, VP Chest Institute, University of Delhi, India, as an observer during May 2-13, 2022 to observe various mycology techniques for mould and yeast identification.

Awards/Honours

Prof. Raj Kumar

- **Member,** National Programme for Prevention and Control on NCDs in Children in India, Directorate General of Health Services (NCD Section), Nirman Bhawan, New Delhi dt. 20.04.2022.
- **Member,** Selection Committee Interview for the post of Assistant Professor on contractual basis in various medical Institutions/Hospitals under Government of NCT of Delhi, Dean office, Administrative block, MAMC, New Delhi dt.22.04.2022.
- **Member,** Selection Committee for Walk-in-Interview for the posts of Senior Resident (OBC-2) & Junior Resident (Non-PG) (UR-4, SC-1, ST-2, OBC-1 & EWS-1) at VPCI dt.18.05.2022.
- **Member,** Established Institute of Nano Medical Science (INMS) under the Ordinance XX-x University of Delhi Maintained institute affliated to Faculty of Medical Sciences, Delhi dt.14.05.2022.
- Dr. NL Bordia Oration-2022 in the field of Respiratory Medicine, Department of Respiratory Medicine at MGM Medical College, Indore, MP on 12.06.2022.
- **External Examiner,** DTCD examination AT Patna Medical College, Patna dt. 13.06.2022.
- **Member,** menigine commitee of the Gandhi Bhavan, University of Delhi, Delhi dt. 12.07.2022.
- **Member,** National Steering Committee for National Tobacco Control Programme (NTCP), Ministry of Health & Family Welfare, Directorate General of Health Service, University of Delhi, Delhi dt. 20.07.2022.
- Eminent Medical and Health Education Teacher Award-2022 for outstanding contribution, hard work and dedication to medical education and education of public at large on health issues by Delhi Medical Association on 04.09.2022.
- **External Examiner,** DM (Pulmonary, Critical Care & Sleep Medicine) Practical examination of BP Koirala Institute of Health Sciences, Dharan, Nepal on September 8-9, 2022.
- **Member,** Selection Committee for Walk-in-Interview for the posts of Senior Resident & Junior Resident (Non-PG) at VPCI dt.30.09.2022.
- QCI Quality Champion Award - 2021-22 for significant and holistic contributions in the field of Quality by National Board for Quality Promotion Quality Council of India, New Delhi on 06.10.2022.
- Guest of Honour, 3rd World Enviornment Summit 2022, organised by Environment and Social Development Association (ESDA) Delhi, India at VPCI, Delhi from October 15-16, 2022.

Prof. Raj Kumar, Director, VPCI at 3rd World Enviornment Summit 2022

- **Member,** Anti Discrimination Officer for a period of three years, University of Delhi dt. 10.11.2022.
- **Member,** Planning Board of Atal Medical and Research University (AMRU), Mandi, HP dt. 21.03.2023.

Prof. Malini Shariff

- Received best poster award for M.D. Students in the Second Chapter Meet of Indian Association of Medical Microbiologists (IAMM) Delhi Chapter based on the theme Clinical controversies in Infectious diseases, held at Jaypee Siddhartha Hotel, Rajendra Place, New Delhi on 6th August, 2022 for the paper "Characterization of Carbapenem resistance and biofilm forming *Acinetobacter baumannii* isolates from clinical and surveillance samples".

Prof. Mandira Varma-Basil

- **Member,** Ethics Committee, Rajan Babu Institute of Pulmonary Medicine and Tuberculosis, Delhi.
- **Executive Member,** Indian Association of Mycoplasmologists.
- **Expert,** ICMR TB Diagnostic Committee.

Prof. Anuradha Chowdhary

- **Advisor,** The Clinical and Laboratory Standards Institute (CLSI) Antifungal Subcommittee, 2022.
- **Organizing Committee member,** Myco-clinics, The Medical Research Council Centre for Medical Mycology, University of Exeter, UK. 2022.

Prof. Madhu Khanna

- Vallabhbhai Patel Chest Institute, Delhi (Virology Unit) has been designated as centre for COVID-19 testing.

Prof. Kavita Gulati

- Received Best women scientist award, during 3rd International hybrid conference on "Traditional and Alternative Medicine", Panaji, Goa, November 17-18, 2022.
- Awarded Fellowship of Indian Pharmacological Society, on February 24, 2023.
- **General Secretary,** Society of Nitric oxide and Allied Radicals (SNOAR).
- **Treasurer,** Delhi Pharmacological Society.
- **Coordinator,** ADR Monitoring Centre (AMC) of Pharmacovigilance Program of India, Indian Pharmacopeia Commission, India (2017 – continued).
- **Nodal Officer,** Multidisciplinary Research Unit of Department of Health Research, ICMR at VPCI (From May 21, 2019 – continued).
- **Member Expert,** (Pharmacology) IHEC of PGIMER, RML Hospital during meetings on 13.04.2022, 19.05.2022, 09.6.2022, 13.07.2022, 18.08.2022, 07.11.2022, 13.12.2022, 11.02.23.
- **Member Expert,** (Pharmacology) IHEC of Dr. B.R. Ambedkar Center for Biomedical Research (ACBR), on 28.04.2022.
- **Member,** Board of studies in Pharmacology, HIMSR conducted meeting held on 14.07.2022.
- **Member,** Executive Body (Lady Representative of IPS), Indian Pharmacological society.

Prof. Vishwajeet Rohil

- **Secretary,** Biotechnology Society of India.
- **Convener,** symposium on "Recent advances: Pulmonary health & Laboratory medicine" organized by Association of Clinical Biochemists of India (ACBI), 48th ACBICON 2022, International Convention Centre, ICAR, New Delhi on November 25, 2022.

Prof. Ritu Kulshretha

- **Member,** Curriculum drafting committee for MSc and MSc-PhD -Nano Medical Sciences course of Institute of Nanomedical Sciences, University of Delhi.
- **Member,** Scientific Advisory Group for the Dept. of Health Research, MOHFW, GOI established Model Rural Health Research Unit (MRHRU) at Khotpura, Panipat, Haryana under mentorship of ICMR-NICPR, Noida.
- **External Expert/ Member** of committee for review of LSRB funded projects under "Soldier Health & Drug Development" Specialists Panel on Soldier Health and drug development (SH&DD), Inst. of Nuclear Med and Allied Sc (INMAS), DRDO, GOI, Delhi.
- **Member,** Board of Studies, Dept. of Paramedical sciences, Faculty of Allied Health Sciences, SGT University, Gurgaon.
- **Associate Member,** DBT – TDNBC – Deakin – Research Network across Continents for Learning and Innovation (DTD-RNA).
- **External Examiner,** PhD thesis of Ms. Laraib Uroog, Department of Biosciences, Jamia Millia Islamia, May 2022.

Dr. Parul Mrigpuri

Received Von-Pirquet young scientist award in December 2022 at the 56th annual convention of the Indian college of Allergy, Asthma and Applied Immunology.

Dr. Jayeeta Bhadra

Treasurer, Biotechnology Society of India.

Dr. Sonam Spalgias

- Participated in the Multi Super Speciality medical camp conducted at the district hospital (SNM hospital) Leh, Ladakh from 23.04.2022 to 30.04.2022 by Asoka Mission, Delhi in collaboration with Ladakh Autonomous Hill Development Council and served the highly remote Himalayan region. More than 300 patients of various pulmonary diseases attended for diagnosis and management including Bronchial Asthma, COPD, Tuberculosis, Silicosis, Pneumonia, Pleural effusion and Lung cancer. He also performed procedures like pleural fluid aspiration, FNAC of lymph nodes, Intercostal chest tube insertion etc, along with other patient care services.

Dr. Sonam Spalgias at the medical camp at Leh, Ladakh (UT)

- Participated in the super speciality medical camp organised by Asoka Mission trust, Delhi and district administration Kargilat District hospital Kargil from September 25 to October 1, 2022. He performed bronchoscopy for the first time at district hospital Kargil.

Dr. Sonam Spalgias at the medical camp at Kargil, Ladakh (UT)

Dr. Uma Tyagi

- **External Examiner,** Viva-Voce Examination in r/o BLIE-227 & BLIE-229 on Virtual Mode during June 4-5, 2022, Indira Gandhi National Open University (IGNOU), Regional Centre Delhi.
- **Expert Member,** selection of Senior Library and Information Officer and Senior Library and Information Officer at National Medical Libray, DGHS Nirman Bhawan, New Delhi on 17/02/2023.
- **Tanslator,** from English to Hindi for the BLI-222 Course (Information Sources and Services) of BLIS Programme: (Block 1: Documentary Sources, Unit 1 to Unit 4 & Block 2: Non-Documentary Sources, Unit 5 to Unit 7), School of Social Sciences: Indira Gandhi National Open University (IGNOU), dated December 22, 2022.

Dr. Ravishankar N

Member, Governing Body, VPCI for the year 2022-23.

Sponsored Research Projects

S. No.	Faculty Member (Department)	Title of Project	Funding Agency, Date of Sanction/ Implementation and Duration	Total Grant Received (₹)
1.	Prof. Raj Kumar, (Pulmonary Medicine)	National Tobacco Quit Line Services	Ministry of Health & Family Welfare March 12, 2015 (Three Years) [Extended upto 2023- 24]	1231.48 lakhs
2.	Prof. Kavita Gulati, (Pharmacology)	Multidisciplinary Research Unit (MRU)	DHR-ICMR, MoHFW January 01, 2014 (Five years) [Extended upto 31.03.2024]	434.50 lakhs
3.	Prof. Kavita Gulati (Pharmacology)	A clinical study to evaluate the effects of yogic intervention on Pulmonary functions, inflammatory markers, oxidative stress and health status in patients of Chronic Obstructive Pulmonary Disease (COPD)	AYUSH March 26, 2018 (Three years) [Extended upto 25.09.2022]	31.82 lakhs
4.	Prof. Mandira Varma-Basil (Microbiology)	Development of a rapid phenotypic assay to differentiate between *Mycobacterium Tuberculosis* and Non-Tuberculosis Mycobacteria	ICMR August 20, 2019 (Three years) [Extended upto 19.02.2023]	49.72 lakhs
5.	Prof. Ritu Kulshrestha (Pathology)	Designing of inhalational polymeric nanoparticle drug delivery systems for the treatment of lung fibrosis	ICMR November 29, 2019 (Three Years) [Extended upto 28.05.2023]	26.93 lakhs
6.	Prof. Anuradha Chowdhary (Medical Mycology)	Exploration of azole resistance in *Candida tropicalis:* Detection of ERG11 gene mutations and azole resistant genotypes	ICMR October 27, 2020 (Three Years)	40.67 lakhs
7.	Prof. Madhu Khanna (Respiratory Virology, Microbiology)	Triple targetting engineered virus : A tool to counter influenza infection	ICMR December 20, 2020 (Three Years)	21.74 lakhs
8.	Prof. Anuradha Chowdhary (Medical Mycology Unit, Microbiology)	Genomic insights of azole and terbinafine resistance in clonal Trichophyton mentagrophytes/ interdigitalis spp. Complex causing alarming difficult to treat dermatophytosis in North India	DST February 10, 2021 (Three Years)	29.03 lakhs
9.	Prof. Kavita Gulati (Pharmacology)	Pharmacological studies on *Hedychium spicatum* on airway inflammation and remodeling in experimental model of bronchial asthma	ICMR March 24, 2021 (Three Years)	08.70 lakhs

S. No.	Faculty Member (Department)	Title of Project	Funding Agency, Date of Sanction/ Implementation and Duration	Total Grant Received (₹)
10.	Prof. Anuradha Chowdhary (Medical Mycology Unit, Microbiology)	National Reference Laboratory for Antimicrobial Resistance in fungal pathogens	NCDC September 03, 2021 (Five Years, upto 31.03.2026)	178 lakhs
11.	Prof. Mandira Varma-Basil (Microbiology)	Development and Validation of Artificial Intelligence tool for screening/ detection of pulmonary TB and other lung disease using chest X-ray	ICMR May 15, 2022 (One year)	20.56 lakhs
12.	Dr. Sonam Spalgais (Pulmonary Medicine)	A research cum intervention multi-centric study to strengthen National TB Elimination programme (NTEP) by implementing programme guidelines for TB using novel strategies to address the various challenges faced by the programme in selected states and specific population/communities in India	ICMR August 01, 2022 (One and half years)	41.71 lakhs
13.	Prof. Mandira Varma-Basil (Microbiology)	Characterization of phenotypic and molecular determinants of bedaquiline and linezolid resistance in clinical isolates of *Mycobacterium tuberculosis.*	ICMR March 28, 2023 (Three years)	20.56 lakhs
14	Prof. Anuradha Chowdhary (Medical Mycology Unit, Microbiology)	Exploration of genetic and proteomic basis of Amphotericin B resistance in *Candida auris*	ICMR March 27, 2023 (Three years)	20.44 Lakhs

Fellowships

S. No.	Name of the Fellow (Department) and Name of Supervisor	Title of Fellowship	Funding Agency, Date of Sanction/ Implementation and Duration	Total Grants Received (₹)
1.	Mrs. Hemlata Sharma (Senior Reseach Fellow) (Pharmacology) *(Supervisor: Dr. Kavita Gulati)*	Pharmacological studies to evaluate the anti-inflammatory and immunomodulatory effects of *Aerva Lanata Linn.* in experimental models of Bronchial Asthma and the cellular and molecular mechanism	ICMR August 23, 2019 (Three years)	15.91 lakhs
2.	Dr. Kalpana Pawar (Women Scientist) (Medical Mycology Unit, Microbiology) *(Supervisor: Dr. Anuradha Chowdhary)*	Mechanism of Multidrug Resistance and Pathogenesis in *Candida glabrata*	DHR-MoHFW March 12, 2020 (Three years)	31.83 lakhs
3.	Mrs. Archana (Senior Reseach Fellow) (Virology unit, Microbiology) *(Supervisor: Dr. Madhu Khanna)*	Aptamer functionalized liposome: A way towards immune-targeted RNA based vaccine against influenza Virus	ICMR July 01, 2022 (Three years)	05.53 lakhs
5.	Ms. Varsha Chauhan (Senior Reseach Fellow) (Microbiology) *(Supervisor: Dr. Mandira Varma-Basil)*	Contribution of efflux pumps to delamanid resistance inclimied isolates of *Mycobacterium Tuberculosis*	ICMR August 23, 2019 (One and half years)	05.53 lakhs

Conferences/Symposia/Seminars/Workshops/CMEs

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
1.	Prof. Raj Kumar	Participated as a Faculty	Tuberculosis Association of India	Workshop on 'Smoking Cessation' during 76th National Conference of TB and Chest Diseases Mullana, Ambala April 11-13, 2022
2.	Prof. Raj Kumar	Chaired a session	The Union, New Delhi (online)	Webinar on 'Reaching the unreached millions-Accelerating tobacco cessation support in India' Virtual April 28, 2022
3.	Prof. Raj Kumar	Guest Lecture on; 1. Food allergy in clinical practice 2. Indian Guidelines for Diagnosis of Respiratory Allergy 3. Setting-up an Allergy Clinic	NCRAAI, VPCI, Delhi	45th workshop on Respiratory Allergy: Diagnosis & Management VPCI June 06 - 10, 2022
4.	Prof. Raj Kumar	Provided practical training on skin prick test	NCRAAI, VPCI, Delhi	45th workshop on Respiratory Allergy: Diagnosis & Management VPCI June 06 - 10, 2022
5	Prof. Raj Kumar	Panelist	NCRAAI, VPCI, Delhi	45th workshop on Respiratory Allergy: Diagnosis & Management VPCI June 06 - 10, 2022
6	Prof. Raj Kumar	Guest of Honor to BP Koirala Memorail Oration Award	BP Koirala Institute of Health Sciences, Dharan, Nepal	Annual Day of BP Koirala Institute of Health Sciences, Dharan, Nepal BP Koirala Institute of Health Sciences, Dharan, Nepal September 9, 2022
7	Prof. Raj Kumar	Guest Lecture, on 'Smoking and Tuberculosis'	Department of Respiratory Medicine, School of Media Sciences and Research, Sharda University, Greater Noida	National CME on Integrated Approach for Tuberculosis and MDR-TB Sharda University, Greater Noida October 19, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
8.	Prof. Raj Kumar	Guest Lecture on; 1. Introduction to Pulmonary Rehabilitation 2. Setting Up of a Pulmonary Rehabilitation Clinic in India 3. Setting up of Tobacco Cessation Clinic	Departments of Tuberculosis and Respiratory Medicine of Geetanjali Medical College and Rabindra Nath Tagore Medical College	Workshop on Pulmonary Rehabilitation and Smoking Cessation at 24th Joint National Conference on Pulmonary Diseases of the National College of Chest Physicians (India) and Indian Chest Society (NAPHCON 2022) Udaipur, Rajasthan November 11, 2022
9.	Prof. Raj Kumar	Guest lecture on Food Allergy	Departments of Tuberculosis and Respiratory Medicine of Geetanjali Medical College and Rabindra Nath Tagore Medical College	Workshop on Allergy & Immunotherapy at 24th Joint National Conference on Pulmonary Diseases of the National College of Chest Physicians (India) and Indian Chest Society (NAPCON 2022) Udaipur, Rajasthan November 11, 2022
10.	Prof. Raj Kumar	Guest lecture on; 1. Indian guidelines for diagnosis of Respiratory Allergy (2021) 2. Benefits of quitting smoking	Departments of Tuberculosis and Respiratory Medicine of Geetanjali Medical College and Rabindra Nath Tagore Medical College	24th Joint National Conference on Pulmonary Diseases of the National College of Chest Physicians (India) and Indian Chest Society (NAPCON 2022) Udaipur, Rajasthan November 11, 2022
11.	Prof. Raj Kumar	Case Scenarios and Demonstration	Departments of Tuberculosis and Respiratory Medicine of Geetanjali Medical College and Rabindra Nath Tagore Medical College	Workshop on Pulmonary Rehabilitation and Smoking Cessation at 24th Joint National Conference on Pulmonary Diseases of the National College of Chest Physicians (India) and Indian Chest Society (NAPCON 2022) Udaipur, Rajasthan November 11, 2022
12.	Prof. Raj Kumar	Chairperson, in session Symposium on Mycotic infections of the lungs	Departments of Tuberculosis and Respiratory Medicine of Geetanjali Medical College and Rabindra Nath Tagore Medical College	Workshop on Pulmonary Rehabilitation and Smoking Cessation at 24th Joint National Conference on Pulmonary Diseases of the National College of Chest Physicians (India) and Indian Chest Society (NAPCON 2022) Udaipur, Rajasthan November 11, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
13.	Prof. Raj Kumar	Guest Lecture on; 1. Allergy Diagnosis: in-vivo 2. Food allergy in Clinical Practice 3. Indian Guidelines for Diagnosis of Respiratory Allergy 4. Setting-up an Allergy Clinic	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
14.	Prof. Raj Kumar	Provided practical training on skin prick test	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
15.	Prof. Raj Kumar	Panelist	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
16.	Prof. Raj Kumar	Panelist	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023
17.	Prof. Raj Kumar	Moderator for the session on National Frame work for joint TB-Tobacco Collaborative Activities- way forward during Scientific Programme	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023
18.	Prof. Raj Kumar	Expert Panelist	Vital Strategies in Association with Mash foundation, India	Breathe Easy – India Takes on tobacco & TB a virtual round table on the occasion of World TB day Virtual March 24, 2023
19.	Prof. Malini Shariff	Participant	Indian Association of Medical Microbiologists (IAMM), Delhi Chapter	Symposium on Sepsis management- what has changed? on the World sepsis day Virtual September 13, 2021

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
20.	Prof. Anuradha Chowdhary	Speaker on the topic *Candida Auris* epidemiology and IPC: guidelines versus practice	International Society of Antimicrobial Chemotherapy	32nd International Congress of Antimicrobial Chemotherapy (ICC) Perth, Australia November 27-30, 2022
21.	Prof. Anuradha Chowdhary	Speaker on the topic Opportunistic Resistant Filamentous Fungi	International Society of Antimicrobial Chemotherapy	32nd International Congress of Antimicrobial Chemotherapy (ICC) Perth, Australia November 27-30, 2022
22.	Prof. Anuradha Chowdhary	Speaker on the topic *Candida auris:* what is new?	Indian Society of Medical Mycologists	14th National Conference of the Indian Society of Medical Mycologists (ISMM) Manipur, India March 22-25, 2023
23.	Prof. Mandira Varma-Basil	Guest Lecture on Unboxing the role of efflux pumps in drug resistance in *M. tuberculosis*	Translational Health Science and Technology Institute (THSTI), Faridabad	Towards End TB: Achievements, Challenges and future directions THSTI, Faridabad March 23-25, 2023
24.	Prof. Kavita Gulati	Delivered Invited lecture on "Drug safety during management of respiratory disorders: focus on methylxanthines"	Magnus group, USA	International Conference and Expo on Toxicology and Applied Pharmacology Virtual June 13-14, 2022
25.	Prof. Kavita Gulati	Delivered an invited lecture on "Role of NO modulators in airway inflammation, bronchial hyper-responsiveness and oxidative stress in bronchial asthma"	Indian Pharmacological Society	Indian Pharmacological Society Conference Mysuru, Karnataka February 20, 2023
26.	Prof. Kavita Gulati	Delivered an invited lecture on "Role of NO modulators in airway inflammation, bronchial hyper-responsiveness and oxidative stress in bronchial asthma"	Delhi Pharmacological Society	Delhi Pharmacological Society Conference Delhi March 1, 2023
27.	Prof. Kavita Gulati	Keynote speaker on "Integration of yogic interventions with modern medicine in the management of COPD"	Conference Mind	3rd International Hybrid Conference on Traditional and Alternative Medicine Panaji, Goa November 17-18, 2022
28.	Prof. Kavita Gulati	Participant	Uppsala Monitoring Centre (UMC)	WHO- Med DRA-UMC introductory workshop on Safety Monitoring of Medicines and Vaccines Virtual September 14, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
29.	Prof. Kavita Gulati	Participant	Indian Pharmacopoeia Commission (IPC)	Training Programme on Medication Error and its importance in Pharmacovigilance Virtual September 30, 2022
30.	Prof. Kavita Gulati	Participant	Indian Pharmacopoeia Commission (IPC)	Training Programme on Importance and strategy to involve patients directly into ADR reporting and how to screen ADRs from patients' records Virtual October 31, 2022
31.	Prof. Kavita Gulati	Participant	Indian Pharmacopoeia Commission (IPC)	9th Induction-cum-training program on "Materiovigilance Program of India" Virtual November 9-10, 2022
32.	Prof. Kavita Gulati	Chairperson	Department of Chemistry, University of Delhi, Delhi	International Conference on Nanomedicine: Chemistry, Medicine Interface (NCMI-2022) Delhi December 12, 2022
33.	Prof. Kavita Gulati	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022
34.	Prof. Kavita Gulati	Organizing Secretary	VPCI	CME on Pharmacovigilance-Encouraging Adverse Drug Reaction Reporting by Patients VPCI September 22, 2022
35.	Prof. Kavita Gulati	Participant	Jointly organized by Indian Pharmacopoeia Commission, Ghaziabad & National Health System Resource Centre	Workshop cum webinar on "Monitoring the safety of customized Implants" Virtual March 14, 2023
36.	Prof. Kavita Gulati	Participant	Indian Pharmacopoeia Commission (IPC)	Training Programme on Expectedness and Labelling of Adverse Events Virtual December 19, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
37.	Dr. Ankit Arora	Participant	Jointly organized by Indian Pharmacopoeia Commission, Ghaziabad & National Health System Resource Centre	Workshop cum webinar on "Monitoring the safety of customized Implants" Virtual March 14, 2023
38.	Dr. Ankit Arora	Participant	ICMR	Webinar on Public & Private sector utilization of ICMR labs as facilitator for Medical Research Virtual March 1, 2023
39.	Dr. Ankit Arora	Delegate	Delhi Pharmacological Society	Delhi Pharmacological Society Conference Delhi March 1, 2023
40.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	Indian Pharmacopoeia Commission (IPC)	Training session on Import and Processing of E2B XML file into VigiFlow Virtual August 5, 2022
41.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	Uppsala Monitoring Centre (UMC)	WHO- Med DRA-UMC introductory workshop on Safety Monitoring of Medicines and Vaccines Virtual September 14, 2022
42.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	Indian Pharmacopoeia Commission (IPC)	Training Programme on Medication Error and its importance in Pharmacovigilance Virtual September 30, 2022
43.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	Indian Pharmacopoeia Commission (IPC)	Training Programme on Importance and strategy to involve patients directly into ADR reporting and how to screen ADRs from patients' records Virtual October 31, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
44.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	Indian Pharmacopoeia Commission (IPC)	9th Induction-cum-training program on "Materiovigilance Program of India" Virtual November 9-10, 2022
45.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	Indian Pharmacopoeia Commission (IPC)	Training Programme on Introduction to Med DRA Coding Virtual November 21, 2022
46.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	Indian Pharmacopoeia Commission (IPC)	Training Programme on Expectedness and Labelling of Adverse Events Virtual December 19, 2022
47.	Dr. Neha Sharma, PsPvA, ADR Monitoring (Prof. Kavita Gulati)	Participant	National Institute of Pharmaceutical Education and Research (NIPER)	Webinar on Addressing challenges of regulating COVID-19 Medical products in South East Asia Virtual April 11-12, 2022
48.	Dr. Mihir Chauhan (Prof. Kavita Gulati)	Delegate	Delhi Pharmacological Society	Delhi Pharmacological Society Conference Delhi March 1, 2023
49.	Dr. Mihir Chauhan (Prof. Kavita Gulati)	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022
50.	Dr. Navnika Kapoor (Prof. Kavita Gulati)	Delegate	Delhi Pharmacological Society	Delhi Pharmacological Society Conference Delhi March 1, 2023
51.	Dr. Navnika Kapoor (Prof. Kavita Gulati)	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022
52.	Dr. Rashmi Dhir (Prof. Kavita Gulati)	Delegate	Delhi Pharmacological Society	Delhi Pharmacological Society Conference Delhi March 1, 2023
53.	Dr. Rashmi Dhir (Prof. Kavita Gulati)	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
54.	Prof. Ritu Kulshrestha	Participant	AIIMS, Delhi	The ExoTECH – 2022: Workshop & Hands-on-Training Delhi October 10-12, 2022
55.	Prof. Ritu Kulshrestha	Invited faculty and moderator in the session "Challenges for Women in Industrial/ Translational Research"	SERB and IIT Gandhinagar	National conclave on "Women in Science & Technology: Fostering Innovation" for women researchers, scientists, and engineers Gandhinagar September 29, 2022
56.	Prof. Ritu Kulshrestha	Participated as Member of Online Meeting	Registrar LHMC	Organization of Nationwide Voluntary Blood Donation Campaign; as part of Blood Donation Week Virtual September 10, 2022
57.	Prof. Ritu Kulshrestha	Invited faculty and speaker on, Empowering Women in Research and Leadership	Science and Engineering Research Board (SERB) and Institute of Advance study in Science and Technology (IASST), Guwahati	R&D Funding Opportunities by SERB-DST: Awareness Workshop for Researchers from North-East Institutions Guwahati July 14-15, 2022
58.	Prof. Ritu Kulshrestha	Invited faculty and speaker for, Nanoapproaches to Lung EMT	Institute of Nanomedicine, University of Delhi	Recent Advances in Nanomedical Sciences VPCI, Delhi June 22-23, 2022
59.	Prof. Ritu Kulshrestha	Invited faculty and Speaker for, Pathology of Interstitial lung Diseases- MDD Approach	TB association of India	NATCON 2021 Mullana, Haryana April 11-13, 2022
60.	Prof. Ritu Kulshrestha	Invited faculty and Speaker for, Laboratory Sanitisation Techniques	VPCI, Delhi	Swacchta Pakhwada-2022 VPCI, Delhi April 6, 2022
61.	Ms. Meenu Dolia Supervisor: Prof. Ritu Kulshrestha	Oral paper presentation titled Subtyping of advanced lung cancer based on PD-L1 expression, tumour histopathology and mutation burden (EGFR and KRAS): a study from North India	Dr. BR Ambedkar Center for Biomedical Research, University of Delhi	National Symposium in Frontiers in Biomedical Research Delhi November 2-4, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
62.	Prof. Vishwajeet Rohil	Participant	Technology Networks	Webinar on "Protein Biomarker models for oncology risk assessment and treatment monitoring" Virtual April 07, 2022
63.	Prof. Vishwajeet Rohil	Participant	Association of Clinical Biochemists of India (ACBI)	North Zone ACBICON 2022 Conference on "Biochemical & molecular basis of lifestyle diseases" Delhi April 22-23, 2022
64.	Prof. Vishwajeet Rohil	Participant	BCMCH, Thiruvalla under the aegis of ACBI	Cardiovascular Science and Laboratory Medicine Virtual May 04, 2022
65.	Prof. Vishwajeet Rohil	Participated as Faculty	Association of Clinical Biochemists of India (ACBI)	48th Annual Conference of the Association of Clinical Biochemists of India (ACBICON 2022) on "Harnessing Basic and Molecular Research to enhance patient care" International Convention Centre, ICAR, New Delhi November 24-26, 2022
66.	Prof. Vishwajeet Rohil	Convenor of Symposium	Association of Clinical Biochemists of India (ACBI)	48th ACBICON 2022 Symposium Title -"Recent advances: Pulmonary health & Laboratory medicine" International Convention Centre, ICAR, New Delhi November 25, 2022
67.	Prof. Vishwajeet Rohil	Speaker	Association of Clinical Biochemists of India (ACBI)	48th ACBICON 2022 "Polyphenolic acetates : Novel epigenome targeted drugs for lung carcinogenesis" International Convention Centre, ICAR, New Delhi November 25, 2022
68.	Prof. Vishwajeet Rohil	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022
69.	Prof. Vishwajeet Rohil	Participant	VPCI	Conference cum Training program on " Current trends in Nitric Oxide (NO) research: A translational approach" VPCI April 05, 2023

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
70.	Prof. Vishwajeet Rohil	Participated as delegate	Dr. Lal Pathlabs Ltd.	CME on "Empowering heart health: a focus on lipid profile" Park hotel, New Delhi April 09, 2023
71.	Dr. Jayeeta Bhadra	Participant	BCMCH, Thiruvalla under the aegis of ACBI	Cardiovascular Science and Laboratory Medicine Virtual May 04, 2022
72.	Dr. Jayeeta Bhadra	Participant	Beckman Coulter	The Role of Natriuretic Peptides in Diagnosis and Management of Heart Failure Virtual May 23, 2022.
73.	Dr. Jayeeta Bhadra	Participant	CSIR-IGIB	Computational workshop on Genomics, Proteomics and Metagenomics 2022 CSIR-IGIB, South Campus July 20 to 23, 2022
74.	Dr. Jayeeta Bhadra	Participant	Biostatistics consortium in collaboration with National Academy of Medical sciences and Epidemiology Foundation of India	National symposium on quality of medical research: From choosing the problem to publication. National Academy of Medical Sciences, Ansari Nagar New Delhi November 19, 2022
75.	Dr. Jayeeta Bhadra	Organiser	VPCI	Workshop on Data Analysis VPCI December 8, 2022
76.	Dr. Jayeeta Bhadra	Participated as Faculty	Association of Clinical Biochemists of India (ACBI)	48th National Conference of the Association of Clinical Biochemists of India (ACBICON 2022) on "Harnessing Basic and Molecular Research to enhance patient care" International Convention Centre, ICAR, New Delhi November 24-26, 2022
77.	Dr. Jayeeta Bhadra	Speaker	Association of Clinical Biochemists of India (ACBI)	48th ACBICON 2022 "Biomarkers in diagnosis and management of obstructive airway diseases" International Convention Centre, ICAR, New Delhi November 25, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
78.	Dr. Karishma Birde (Prof. Vishwajeet Rohil)	Participant	Aarupadai Veedu Medical College	e-Conference entitled "Role of basic medical sciences in academia, diagnosis & research advancement" Puducherry November 17-19, 2022
79.	Dr. Karishma Birde (Prof. Vishwajeet Rohil)	Participant	Association of Clinical Biochemists of India	Conference entitled "Harnessing basic & molecular research to enhance patient care" New Delhi November 24-26, 2022
80.	Dr. Karishma Birde (Prof. Vishwajeet Rohil)	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022
81.	Dr. Karishma Birde (Prof. Vishwajeet Rohil)	Participant	Department of Biochemistry, AIIMS, Jodhpur	Workshop entitled "Hands on workshop on basic molecular techniques" Jodhpur March 14-18, 2023
82.	Dr. Karishma Birde (Prof. Vishwajeet Rohil)	Participant	Department of Biochemistry, Sir Gangaram Hospital, New Delhi	CME on "Diagnostic & prognostic challenges in sepsis" New Delhi 22 March, 2023
83.	Dr. Karishma Birde (Prof. Vishwajeet Rohil)	Participant	Department of Biochemistry, Maulana Azad Medical College, New Delhi	CME on "Biochemistry Updates" New Delhi March 24, 2023
84.	Dr. Mohammad Azharuddin Mulla (Prof. Vishwajeet Rohil)	Participant	Department of Biochemistry, Sir Gangaram Hospital, New Delhi	CME on "Diagnostic & prognostic challenges in sepsis" New Delhi March 22, 2023
85.	Dr. Mohammad Azharuddin Mulla (Prof. Vishwajeet Rohil)	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022
86.	Prof. Vishal Bansal	Lecture on; 1. Components and Assessment of Outcome Parameters in Pulmonary Rehabilitation 2. Exercise Advice in Pulmonary Rehabilitation	Department of Tuberculosis & Respiratory Diseases, S.N. Medical College, Agra in association with UP TB Association & The Union, South East Asia Region under the aegis of Tuberculosis Association of India	Workshop on Pulmonary Rehabilitation & Smoking Cessation' in NATCON 2022. State TB Training and Demonstration Centre, near S.N. Medical College, Agra, UP February 27, 2023

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
87.	Prof. Vishal Bansal	Demonstration of Breathing Retraining / Arm & Leg Exercises / Inspiratory Muscle Training	Department of Tuberculosis & Respiratory Diseases, S.N. Medical College, Agra in association with UP TB Association & The Union, South East Asia Region under the aegis of Tuberculosis Association of India	Workshop on Pulmonary Rehabilitation & Smoking Cessation' in NATCON 2022. State TB Training and Demonstration Centre, near S.N. Medical College, Agra, UP February 27, 2023
88.	Prof. Vishal Bansal	Invited lecture on; 1.Components and Assessment of Outcome Parameters in Pulmonary Rehabilitation 2. Exercise Advises in Pulmonary Rehabilitation	Vallabhbhai Patel Chest Institute in association with Society for Tobacco Control	Webinar on Pulmonary Rehabilitation Program for Physiotherapists Virtual February 22-23, 2023
89.	Prof. Vishal Bansal	Video Demonstration of Six-Minute Walk Test, Exercises and Instruments used	Vallabhbhai Patel Chest Institute in association with Society for Tobacco Control	Webinar on Pulmonary Rehabilitation Program for Physiotherapists Virtual February 22-23, 2023
90.	Prof. Vishal Bansal	Lecture on; 1. Components and Assessment of Outcome Parameters in Pulmonary Rehabilitation 2. Exercise Advise in Pulmonary Rehabilitation	National College of Chest Physicians (India) and Indian Chest Society (ICS)	Workshop on Pulmonary Rehabilitation & Smoking Cessation' in NAPCON 2022 RNT Medical College, Udaipur, Rajasthan November 10, 2022
91.	Prof. Vishal Bansal	Demonstration of Breathing Retraining / Arm & Leg Exercises / Inspiratory Muscle Training	National College of Chest Physicians (India) and Indian Chest Society (ICS)	Workshop on Pulmonary Rehabilitation & Smoking Cessation' in NAPCON 2022 RNT Medical College, Udaipur, Rajasthan November 10, 2022
92.	Prof. Vishal Bansal	Invited lecture on Respiratory Fitness and Interventions to Improve Hypoxia Tolerance	Defense Institute of Physiology and Allied Sciences (DIPAS), DRDO	Continuous Education Programme (CEP) on Performance in Extreme Environment DIPAS, DRDO September 14-16, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
93.	Prof. Vishal Bansal	Invited speaker on the topic Role of Exercise Training in Management of Chronic Respiratory Diseases	Department of Physiology & Pharmacology ESIC Medical College & Hospital, Faridabad, Delhi NCR	Symposium on 'Practice of Clinical Cardiorespiratory Physiology' in 67th Annual Conference of Association of Physiologists and Pharmacologists of India (APPICON 2021-22): Confluence of Health Sciences ESIC Medical College and Hospital, Faridabad April 14-16, 2022
94.	Dr. Nitin Goel	Delegate	Indian College of Allergy Asthma and Applied Immunology	56th Annual Conference of Indian College of Allergy Asthma and Applied Immunology (ICAAICON) 2022 Pune December 16-18, 2022
95.	Dr. Nitin Goel	Delegate	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
96.	Dr. Nitin Goel	Faculty Lecture on "Analysis of the Effects of Humidified High Flow Nasal Oxygen Therapy Combined with Noninvasive Mechanical Ventilation on Treatment Outcomes"	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
97.	Dr. Nitin Goel	Chairperson in session "Symposium on Miscellaneous disorders related to Pulmonary Medicine"	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
98.	Dr. Nitin Goel	Faculty lecture on "Asthma Phenotypes"	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
99.	Dr. Nitin Goel	Faculty Lecture on "Oxygen therapy in Chronic lung diseases"	VPCI	2nd Workshop on Pulmonary Rehabilitation VPCI September 4-5, 2022
100.	Dr. Nitin Goel	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
101	Dr. Nitin Goel	Lecture on "Treatment of Asthma"	VPCI	Public lecture – Asthma causes, diagnosis, treatment and myths and facts VPCI February 21, 2023
102.	Dr. Nitin Goel	Chairperson in session "Year in Review"	AIIMS, Delhi	AIIMS-PULMOCRIT 2023 AIIMS, Delhi February 5, 2023
103.	Dr. Nitin Goel	Faculty Lecture on "Pulmonary Rehabilitation in ICU"	VPCI	Pulmonary Rehabilitation Workshop 2023 VPCI February 22-23, 2023
104.	Dr. Nitin Goel	Lecture on "Symptoms of Tuberculosis"	VPCI	Public lecture – Tuberculosis a disease since eternity – Causes, types, diagnosis, treatment and myths & facts VPCI March 27, 2023
105.	Dr. Sharmistha Dutta Supervisor: Dr. Nitin Goel Co-Supervisor: Prof. (Dr.) Raj Kumar	Oral paper presentation titled, "Assessment of Frailty and its Predictors in Chronic Obstructive Pulmonary Disease" **Awarded the National College of Chest Physicians' Prof. S.N. Gaur Young Scientist Award (3rd Prize).**	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
106.	Dr. Sharmistha Dutta Supervisor: Dr. Nitin Goel Co-Supervisor: Prof. (Dr.) Raj Kumar	Oral paper presentation titled, "Comparison of Frailty Phenotype and Short Physical Performance Battery for Frailty Assessment in Chronic Obstructive Pulmonary Disease"	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
107	Dr. Shyam Mohan K Supervisor: Prof. (Dr.) Raj Kumar Co-Supervisor: Dr. Nitin Goel	Oral presentation titled "Evaluation of dietary patterns and lifestyle in COPD patients and their co-relation with disease severity"	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
108.	Dr. Sonam Spalgais	Chairperson for Symposium: Early detection Expert view on topics	National College of Chest Physicians (India) and Indian Chest Society (ICS	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2021 Varanasi February 1-4, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
109.	Dr. Sonam Spalgais	Panel Discussion on Sleep Disorders Case Based Discussion	National College of Chest Physicians (India) and Indian Chest Society (ICS	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2021 Varanasi February 1-4, 2022
110.	Dr. Sonam Spalgais	Lecture on Health Hazard Tobacco use	TB association of India	NATCON 2021 Mullana, Haryana April 11, 2022
111.	Dr. Sonam Spalgais	Lecture on Anaphylaxis	NCRAAI, VPCI, Delhi	45th workshop on Respiratory Allergy: Diagnosis & Management VPCI June 06 - 10, 2022
112.	Dr. Sonam Spalgais	Panel Discussion on; 1. Clinical Cases Discussion History, Investigation and Interpretation 2. Clinical Cases Discussion - Optimal Selection of Allergen for Immunotherapy Case Discussion for Immunotherapy	NCRAAI, VPCI, Delhi	45th workshop on Respiratory Allergy: Diagnosis & Management VPCI June 06 - 10, 2022
113.	Dr. Sonam Spalgais	Lecture on Role of FENO in clinical practice	NCRAAI, VPCI, Delhi	45th workshop on Respiratory Allergy: Diagnosis & Management VPCI June 06 - 10, 2022
114.	Dr. Sonam Spalgais	Chairperson	Association of Physicians of India (API), Delhi State Chapter	Mid term CME Delhi API Delhi June 26, 2022
115.	Dr. Sonam Spalgais	Lecture on NIV in chronic stable Lung Diseases	VPCI	2nd Workshop on Pulmonary Rehabilitation VPCI September 4-5, 2022
116.	Dr. Sonam Spalgais	Panel Discussion on; 1. Clinical Cases Discussion History, Investigation and Interpretation 2. Clinical Cases Discussion - Optimal Selection of Allergen for Immunotherapy Case Discussion for Immunotherapy	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
117.	Dr. Sonam Spalgais	Lecture on; 1. Role of FENO in clinical practice 2. Anaphylaxis	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
118.	Dr. Sonam Spalgais	Lecture on; 1. Oxygen Therapy and Non-Invasive Ventilation in Stable Lung Diseases 2. Immunomodulatory Effects of Bacterial Lysates in Allergic Disorders 3. Health Hazard of Tobacco use	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
119.	Dr. Sonam Spalgais	Chairperson for Recent Trends in management of ILD	Association of Physicians of India (API), Delhi State Chapter	32nd Annual Conference of API Delhi December 17, 2022
120.	Dr. Sonam Spalgais	Chairperson and demonstrator	National College of Chest Physician, Indian Association for Bronchology and Pulmonary Foundation	Respicon 2022 Jaipur Golden hospital Delhi December 17, 2022
121.	Dr. Sonam Spalgais	Lecture on Recent Advances in Laboratory Diagnosis of ILD and its Management	Association of clinical biochemistry of India	ACBICON 2022 Delhi November 26, 2022
122.	Dr. Sonam Spalgais	Lecture on Indoor allergen	ICAAI and BAF	Allergy Asthma Chat Virtual January 1, 2023
123.	Dr. Sonam Spalgais	Lecture on Allergen immunotherapy	Prem Hospital Panipat Haryana	Workshop on Respiratory Allergy Panipat Haryana January 7, 2023
124.	Dr. Sonam Spalgais	Lecture on Advances in diagnosis of Fungal Pneumonia	Indian society of Lung Diseases and Max Healthcare	Clinical Pulmonary series 2023 Taj Surajkund NCR February 4, 2023
125.	Dr. Sonam Spalgais	Chairperson on Tuberculosis and other respiratory diseases	AIIMS, Delhi	AIIMS-PULMOCRIT 2023 AIIMS, Delhi February 5, 2023
126.	Dr. Sonam Spalgais	Lecture on; 1. Health Hazard of Tobacco use 2. LTOT and NIV in stable chronic lung diseases 3. Two are better than One pharmacotherapy and behavioural therapy for smoking cessation	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
127.	Dr. Sonal Dr. Sonam Spalgais and Prof. Raj Kumar	Isolated Pulmonary cryptoccus mimicking Tuberculosis	National College of Chest Physicians (India) and Indian Chest Society (ICS	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2021 Varanasi February 1-4, 2022
128.	Dr. Dhilnaz S Dr. Sonam Spalgais and Prof. Raj Kumar	Sarcomatoid carcimona: A rare case of massive pleural effusion	National College of Chest Physicians (India) and Indian Chest Society (ICS	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2021 Varanasi February 1-4, 2022
129.	Dr. Sonam Spalgais and Prof. Raj Kumar	Pulmonary Function Test of hypersensitivity Pneumonitis	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2021 Varanasi February 1-4, 2022
130.	Dr. Irshad Ahmed Prof BK Menon, Dr. Sonam Spalgais, Dr. Parul Mrigpuri and Prof. Raj Kumar	Residual symptoms in Post Covid patients	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
131.	Dr. Saatvik Manchanda Prof BK Menon, Dr. Sonam Spalgais, Dr. Parul Mrigpuri and Prof. Raj Kumar	Study of radiological changes in post Covid-19 Paitients	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
132.	Dr. Aby Abarham Dr. Sonam, Spalgais and Prof. Raj Kumar	Anthracosilicosis as Lung Mass	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023
133.	Dr. Parul Mrigpuri	Speaker on the topic Guidelines for practice of allergy in India	TB association of India	NATCON 2021 Mullana, Haryana April 11, 2022
134.	Dr. Parul Mrigpuri	Speaker and organizer for the Workshop on smoking cessation	TB association of India	NATCON 2021 Mullana Haryana April 11, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
135.	Dr. Parul Mrigpuri	Co-organizing secretary, Speaker and Panelist 1. Allergen vs Irritant – Which is Relevant? 2. Practical Training in SPT 3. Clinical Cases Discussion History, Investigation and Interpretation 4. Clinical Cases Discussion – Optimal Selection of Allergen for Immunotherapy Case Discussion for Immunotherapy	NCRAAI, VPCI, Delhi	45th workshop on Respiratory Allergy: Diagnosis & Management VPCI June 06 - 10, 2022
136.	Dr. Parul Mrigpuri	Speaker on the topic Nutrition in chronic lung diseases	VPCI	2nd Workshop on Pulmonary Rehabilitation VPCI September 4-5, 2022
137.	Dr. Parul Mrigpuri	Speaker on the topic The impact of climate change in the planetary environment on pollen season, allergy and asthma	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
138.	Dr. Parul Mrigpuri	Speaker during the Workshop on Pulmonary rehabilitation and smoking cessation	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
139.	Dr. Parul Mrigpuri	Chairperson for the session on Are asthma remedies not so useful of harmful?	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
140.	Dr. Parul Mrigpuri	Speaker on the topic Heath approach in addressing allergic health issues (Community and Health facility level)	National Program on Climate change and Human Heath	VC training of the State Program officials on Allergic Health Issues in the context of Climate Change Virtual November 17, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
141.	Dr. Parul Mrigpuri	Co-organizing secretary, Speaker and Panelist 1. Allergen vs Irritant - Which is Relevant? 2. Practical Training in SPT 3. Clinical Cases Discussion History, Investigation and Interpretation 4. Clinical Cases Discussion - Optimal Selection of Allergen for Immunotherapy Case Discussion for Immunotherapy	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
142.	Dr. Parul Mrigpuri	Speaker on the topic Effect of climate change on allergy	Indian College of Allergy Asthma and Applied Immunology	56th Annual Conference of Indian College of Allergy Asthma and Applied Immunology (ICAAICON) 2022 Pune December 16-18, 2022
143.	Dr. Parul Mrigpuri	Speaker on the topic Climate change and allergy	ICAAI and BAF	Allergy Asthma Chat Virtual January 1, 2023
144.	Dr. Parul Mrigpuri	Chairperson for the Symposium on lung cancer	AIIMS, Delhi	AIIMS-PULMOCRIT 2023 AIIMS, Delhi February 5, 2023
145.	Dr. Parul Mrigpuri	Speaker during the Workshop on Pulmonary rehabilitation and smoking cessation	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023
146.	Dr. Parul Mrigpuri	Chairperson for the Panel discussion on difficult asthma	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023
147.	Dr. Parul Mrigpuri	Speaker on; 1. Nutritional considerations in chronic lung diseases 2. Home-based and Tele rehabilitation	Vallabhbhai Patel Chest Institute in association with Society for Tobacco Control	Webinar on Pulmonary Rehabilitation Program for Physiotherapists Virtual February 22-23, 2023
148.	Dr. Irshad Ahmed Prof. BK Menon, Dr. Sonam Spalgais, Dr. Parul Mrigpuri and Prof. Raj Kumar	Residual symptoms in Post Covid patients	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
149.	Dr. Saatvik Manchanda Prof. BK Menon, Dr. Sonam Spalgais, Dr. Parul Mrigpuri and Prof. Raj Kumar	Study of radiological changes in post Covid-19 Patients	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
150.	Dr. Rakesh Maurya Prof. Raj Kumar, Dr. Parul Mrigpuri and Dr. Balakrishnan Menon	Clinical Profile and outcome of patients in respiratory ICU	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023
151.	Dr. Siddharth Raj Yadav	Lecture Role of Biologicals in Asthma Management	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
152.	Dr. Siddharth Raj Yadav	Practical Training in SPT	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
153.	Dr. Siddharth Raj Yadav	Panel discussion on; 1. Clinical Cases Discussion History, Investigation and Interpretation 2. Clinical Cases Discussion – Optimal Selection of Allergen for Immunotherapy Case Discussion for Immunotherapy	NCRAAI, VPCI, Delhi	46th workshop on Respiratory Allergy: Diagnosis & Management VPCI November 28 – December 2, 2022
154.	Dr. Siddharth Raj Yadav	Lecture on; 1. National tobacco control programme 2. Psychological Aspects Of Chronic Lung Disease	National College of Chest Physicians (India) and Indian Chest Society (ICS)	24th Joint Annual Conference of National College of Chest Physicians (India) and Indian Chest Society, NAPCON-2022 RNT Medical College, Udaipur, Rajasthan November 10-13, 2022
155.	Dr. Siddharth Raj Yadav	Biologicals in asthma management	ICAAI and BAF	Allergy Asthma Chat Virtual January 1, 2023

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
156.	Dr. Siddharth Raj Yadav	Moderator – A case of young male with mediastinal mass	VMMC and Safdarjung Hospital, New Delhi	3rd pulmonary, critical care and sleep medicine- case-based discussion VMMC and Safdarjung Hospital, New Delhi July 31, 2022
157.	Dr. Siddharth Raj Yadav	Lecture on Psychological Aspects Of Chronic Lung Disease	VPCI	2nd Workshop on Pulmonary Rehabilitation VPCI September 4-5, 2022
158.	Dr. Siddharth Raj Yadav	Organiser	VPCI	Workshop on Data Analysis VPCI December 8, 2022
159.	Dr. Siddharth Raj Yadav	Lecture on Myths and Facts – Bronchial asthma	VPCI	Public lecture – Asthma causes, diagnosis, treatment and myths and facts VPCI February 21, 2023
160.	Dr. Siddharth Raj Yadav	Lecture on Tuberculosis a disease since eternity- cause ,types, diagnosis, treatment and myth and facts	VPCI	Public lecture – Tuberculosis a disease since eternity – Causes, types, diagnosis, treatment and myths & facts VPCI March 27, 2023
161.	Dr. Siddharth Raj Yadav	Lecture on; 1. Tobacco Cessation Non-Pharmacological 2. National tobacco control Programme 3. Psychological Aspects Of Chronic Lung Disease	Department of Tuberculosis & Respiratory Diseases, SN Medical College, Agra	NATCON – 2022 SN Medical College, Agra February 27 – March 1, 2023
162.	Dr. Uma Tyagi	Participant	Central Government Library Association.	Pre-Conference Workshop and International Conference of Central Government Library Association on Re-invention and Re-engineering of Government Libraries: Trends, Issues and Challenges (RRGL-TIC 2022) Virtual April 21-23, 2022
163.	Dr. Uma Tyagi	Participant	DELNET-Developing Library Network.	Panel Discussion on Citizen Empowerment through Digital Transformation in Government Virtual May 26, 2022
164.	Dr. Uma Tyagi	Participant	Oxford University Press	User Awareness of Oxford Medical Journals Virtual May 17, 2022

S. No.	Faculty Member	Role/Topic	Organiser(s)	Conference, Place and Date
165.	Dr. Uma Tyagi	Participant	DELNET-Developing Library Network.	Online Programme DELNET@30-Forging Ahead in Empowering Libraries & Inspiring LIS Professionals Virtual June 30, 2022
166.	Dr. Uma Tyagi	Participant	VPCI	Workshop on Data Analysis VPCI December 8, 2022
167.	Dr. Ravishankar N	Invited lecture on Meta-analysis	Cochrane India Affiliate and Institute of Dental Sciences, Siksha O Anusandhan	Webinar on Meta-analysis Virtual August 5-6, 2022
168.	Dr. Ravishankar N	Invited lecture on use of RevMan	Manipal college of Nursing (MCON), Manipal	Faculty Development Program Virtual July 28, 2022
169.	Dr. Ravishankar N	Participant	Biostatistics Consortium in collaboration with National Academy of Medical Sciences and Epidemiological Foundation of India	National Symposium on "Quality of Medical Research" National Academy of Medical Sciences, Ansari Nagar, New Delhi November 19, 2022
170.	Dr. Ravishankar N	Guest lecture on Sampling: Techniques and size estimation	Clinical Nursing Research Society – North Zone	Short-Term Course in Research Methodology Virtual January 5-16, 2023
171.	Dr. Ravishankar N	Faculty	Kasturba Medical College (KMC), Mangalore	Industry-Academia Collaboration Workshop on Methodological Approach to Evidence Synthesis (MAES) Virtual January 27-28, 2023
172.	Dr. Ravishankar N	Organizer	VPCI	Workshop on Data Analysis VPCI December 8, 2022

Participation in Advanced and Specialised Training Programme by Faculty Members

S. No.	Participant (Department)	Course Title/ Topic	Training Duration	Host
	-	-	-	-

Short-term Specialised Training Imparted by Faculty Members

S. No.	Name, Subject and University/ Institute/College	Course Title/ Topic	Faculty Member (Department)	Period
1.	Ms Deeksha Gautam, MSc (Biotechnology) Gautam Buddha University, Greater Noida (Uttar Pradesh)	Cloning of the cell invasion gene VPCICK of *Mycobacterium tuberculosis*	Prof. Mandira Varma-Basil (Microbiology)	January 24 to June 30, 2023
2.	Ms Sakshi Rai, MSc (Biotechnology) Graphic Era University (Dehradun)	Role of efflux pump gene VPVC II in Ethambutol Resistance in *Mycobacterium tuberculosis*	Prof. Mandira Varma-Basil (Microbiology)	February 1 to July 1, 2023
3.	Ms Anjali Goswami, MSc (Microbiology) Galgotias University, Greater Noida (Uttar Pradesh)	Identification of *Mycobacterium tuberculosis* in the sputum samples obtained from patients of pulmonary TB and determination of phenotypic Linezolid resistance	Prof. Mandira Varma-Basil (Microbiology)	January 2 to May 15, 2023
4.	Ms Dharini Kathuria, BSc. (H) (Biotechnology) Amity University, Noida (Uttar Pradesh)	Detection of *Mycobacterium tuberculosis* by Duplex PCR in Clinical Samples	Prof. Mandira Varma-Basil (Microbiology)	June 1 to July 15, 2022
5.	Mr. Satyam Bathla, BSc. (H) (Biotechnology) Institute of Management Studies, Ghaziabad, (Uttar Pradesh)	Student of BSc. (H) Biotechnology	Prof. Vishwajeet Rohil (Biochemistry)	March 14 to April 13, 2022
6.	Mr. Pushpraj Srivastava, BSc. (H) (Biotechnology) Amity Institute of Biotechnology, Gautam Budh Nagar, (Uttar Pradesh)	Student of BSc. (H) Biotechnology	Prof. Vishwajeet Rohil (Biochemistry)	June 6 to July 15, 2022
7.	Mr. Eshika Jadon, BSc. (H) (Biotechnology) Amity Institute of Biotechnology, Gautam Budh Nagar, (Uttar Pradesh)	Student of BSc. (H) Biotechnology	Prof. Vishwajeet Rohil (Biochemistry)	June 6 to July 15, 2022
8.	Ms. Priya, MSc. (Biotechnology) Deenbandhu Chhotu Ram University of Science & Technology, Murthal, (Haryana)	Student of MSc Biotechnology	Prof. Vishwajeet Rohil (Biochemistry)	August 10 to September 9, 2022

S. No.	Name, Subject and University/ Institute/College	Course Title/ Topic	Faculty Member (Department)	Period
9.	Ms. Megha Sharma, BSc. (H) (Biotechnology) Institute of Management Studies, Ghaziabad, (Uttar Pradesh)	Student of BSc. (H) Biotechnology	Dr. Jayeeta Bhadra (Biochemistry)	April 18 to May 17, 2022
10.	Ms. Anushri Chatterji, BSc. (H) (Microbiology) Institute of Management Studies, Ghaziabad, (Uttar Pradesh)	Student of BSc. (H) Microbiology	Dr. Jayeeta Bhadra (Biochemistry)	April 18 to May 17, 2022
11.	Ms. Shruti, MSc (Biotechnology) Amity Institute of Biotechnology, Gautam Budh Nagar, (Uttar Pradesh)	Student of MSc Biotechnology	Dr. Jayeeta Bhadra (Biochemistry)	June 6 to July 15, 2022
12.	Ms. Anjali, MSc. (Biotechnology) Deenbandhu Chhotu Ram University of Science & Technology, Murthal, (Haryana)	Student of MSc Biotechnology	Prof. Vishwajeet Rohil (Biochemistry)	August 10 to September 9, 2022
13.	Ms. Pragya Jindal, MSc. (Biotechnology) Deenbandhu Chhotu Ram University of Science & Technology, Murthal, (Haryana)	Student of MSc Biotechnology	Prof. Vishwajeet Rohil (Biochemistry)	August 10 to September 9, 2022
14.	Ms. Snehil Yadav, Ms. Ankita Yadav, Ms. Khushi Verma, BSc. (Biotechnology) Institute of Management Studies, Ghaziabad, (Uttar Pradesh)	Student of BSc Biotechnology	Prof. Ritu Kulshrestha (Pathology)	July 1 to August 30, 2022
15.	Mr. Prince Kumar, Mr. Sharique Khushid, Mr. Shahrukh Khan, Mr. Asad Ali, BSc. (MLT) Galgotias University, Noida, (Uttar Pradesh)	Student of BSc MLT	Prof. Ritu Kulshrestha (Pathology)	June 15 to December 14, 2022
16.	Ms. Prabha Choudhary	Short Term Certificate Course in Clinical Pathology	Prof. Ritu Kulshrestha (Pathology)	September 15 to December 15, 2022
17.	Ms. Ankita Pandey, Ms Raksha Tamrakar, Ms Richa Patel, Ms Jyoti Singh, Ms Saloni Gowan MPT (Cardiothoracic) MGM Allied Health Sciences Institute (MAHSI), Indore (Madhya Pradesh)	Training Program on Pulmonary Rehabilitation at VPCI	Prof. Vishal Bansal (Physiology)	March 1-31, 2023
18.	DM/MD/DNB (Pulmonary Medicine), DTCD, MD (Internal Medicine) students/ specialists	2nd Workshop on Pulmonary Rehabilitation' at VPCI	Prof. Vishal Bansal (Physiology)	September 4-5, 2022

Glimpses of the Events held at VPCI

1. SWACHHTA PAKHWADA (April 1-15, 2022)

i. SWACHHTA PAKHWADA Day 1 (April 1, 2022): Carrying out cleaning & washing inside and outside of all departments/sections, open areas and periphery of the Institute premises.

ii. SWACHHTA PAKHWADA Day 2 (April 2, 2022): Cleaning Work at Residential Flats

iii. **SWACHHTA PAKHWADA Day 3 (April 3, 2022):** Cleaning of Residential Flats, Maurice Nagar, E Type

iv. **SWACHHTA PAKHWADA Day 4 (April 4, 2022):** Undertaking Swachhta Pledge

Swachhta pledge taken by Director, Faculty, Staff, Students of Vallabhbhai Patel Chest Institute.

v. **SWACHHTA PAKHWADA Day 5 (April 5, 2022):** disposal of old and unused items

vi. **SWACHHTA PAKHWADA Day 6 (April 6, 2022):** Training on Hand Wash Hygiene for Nursing and Technical staff

Dr. Anita Kotwani, Director Professor Dept. of Pharmacology, VPCI delivered a lecture on Hand Washing Hygiene, Dr. Mandira Varma-Basil, Director Professor, Dept. of Microbiology, VPCI delivered a lecture on Biomedical Waste Management and Dr. Ritu Kulshrestha, Professor, Dept. of Pathology, VPCI delivered lecture on Laboratory Sanitization Techniques. The session was moderated by Dr. Vishal Bansal, Professor, Department of Physiology, VPCI.

vii. **SWACHHTA PAKHWADA Day 7 (April 7, 2022):** lectures for Nursing and Technical Staff

Dr. Parul Mrigpuri, Assistant Professor, Dept. of Pulmonary Medicine, VPCI delivered a lecture on *Cough Etiquettes* and Proper use of Face Mask, Ms. Anjali Malik, Physiotherapist, VPCI delivered a lecture on *Bronchial Hygiene Techniques*, Dr. Siddharth Raj Yadav, Assistant Professor, Dept. of Pulmonary Medicine, VPCI delivered a lecture on *Sleep Hygiene* and Dr. Tanuja Trivedi, Assistant Professor, Dept. of Anaethesiology, VPCI delivered lecture on *Donning & Doffing of PPE*. The session was moderated by Dr. Vishal Bansal, Professor, Department of Physiology, VPCI.

viii. SWACHHTA PAKHWADA Day 8 (April 8, 2022): Poster Making competition

Vallabhbhai Patel Chest Institute conducted Painting/ Drawing competition for the staff and their family on the theme of "Swacchta Pakhwada: Poster making competition" as a part of activities / initiatives to be undertaken in connection with Swachhta Pakhwada Celebrations – 2022 on April 8, 2022 from 2:00 PM to 5:00 PM in the Paintal Memorial Golden Jubilee Auditorium, VPCI. The Staff Members of VPCI and their family members participated in the competition. Prof. Raj Kumar, Director, VPCI, inaugurated the event.

ix. **SWACHHTA PAKHWADA Day 9 (April 9, 2022):** Community Outreach Programme in Dhaka Residential Complex

x. **SWACHHTA PAKHWADA Day 10 (April 10, 2022):** prize distribution ceremony

xi. **SWACHHTA PAKHWADA Day 11 (April 11, 2022):** undertaking renovation works of premises of the Institute


xii. **SWACHHTA PAKHWADA Day 12 (April 8, 2022):** Community Outreach Programme: Organization of Swachhta Rally in and around VPCI


xiii. **SWACHHTA PAKHWADA Day 13 (April 13, 2022):** Visit to VCH, VPCI





xiv. SWACHHTA PAKHWADA Day 14 (April 14, 2022): Community Outreach Programme in Maurice Nagar Residential Complex


xv. SWACHHTA PAKHWADA Day 15 (April 15, 2022): Community Outreach Programme conducted by an NGO: Green Waste Utilization – GARBAGE TO GARDEN

2. Felicitation Ceremony for NTQLS Counsellors (April 28, 2022)

National Tobacco Quit Line Services awarded best three counselors (Mr. Bhairav Dutt Sharma, Ms. Savitri, Ms. Sakshi Singh, Ms. Gulfshan) for their outstanding performance, hard Work & dedication at workplace for the Months of January to March, 2022. The award was distributed by Dr. Vijay Chauthaiwala, Chairman, Governing Body, VP Chest Institute, University of Delhi & Prof. Raj Kumar, Director, VP Chest Institute, Delhi.

NTQLS Staff Felicitation

3. Observance of World No Tobacco Day (May 31, 2022)

Vallabhbhai Patel Chest Institute celebrated the world no Tobacco Day on May 31, 2022, on the eve of "World No Tobacco Day", at the Paintal Memorial Golden Jubilee Auditorium, VPCI. Mr. Manoj Tiwari, Member of Parliament was the Chief Guest of this Programe. Prof. Balaram Pani, Dean of Colleges, University of Delhi, was the Guest of Honour for the Programme.



Observance of No Tobacco Day at VPCI

4. 45th Workshop on Respiratory Allergy: Diagnosis and Management (June 6-10, 2022)

45th workshop on respiratory allergy: Diagnosis & Management was organised by Vallabhbhai Patel Chest Institute supported by Society for Tobacco Control and Indian College of Allergy Asthma & Applied Immunology during June 6-10, 2022. Prof. Raj Kumar, the Chairman of the Organizing committee, Prof. Rakesh Bhatnagar, Vice Chancellor of Amity University Rajasthan was the chief Guest and Prof. Payal Mago, Director, Campus of Open Learning, University of Delhi was the Guest of Honour. Training manual was launched during the inauguration ceremony.







45th workshop on respiratory allergy: Diagnosis & Management held at VPCI

5. 8th International Day of Yoga (June 21, 2022)

Vallabhbhai Patel Chest Institute celebrated "8th International Day of Yoga" in collaboration with Morarji Desai National Institute of Yoga on June 21, 2022. The Students, Faculty members & Staff performed yoga for building Immunity and relief from stress and also took the pledge "I Pledge to make Yoga an internal part of my daily life".

Observance of 8th International Day of Yoga at VPCI

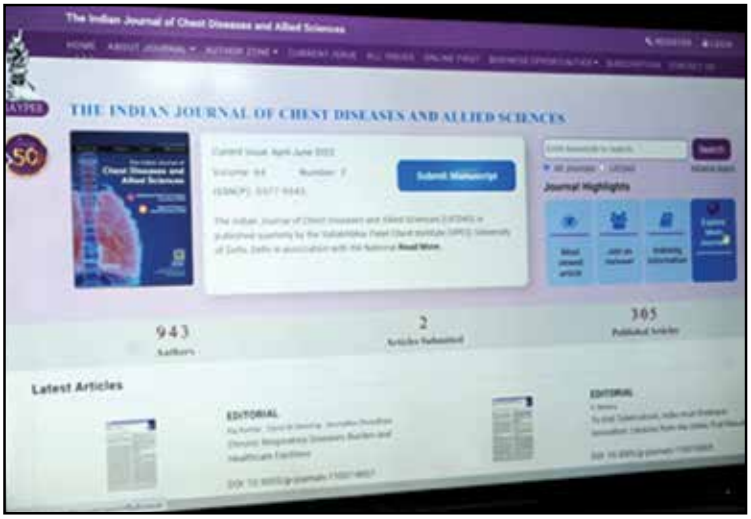
6. Inauguration of "Short Term Certificate Course in Clinical Pathology" (July 4, 2022)

Inauguration ceremony of "Short Term Certificate Course in Clinical Pathology" was held on July 4, 2022. Prof. Tanuja Manoj Nesari, Director, All India Institute of Ayurveda (AIIA), New Delhi who was the Chief guest, inaugurated the short Term Course in Clinical Pathology in presence of Prof. Raj Kumar, Director, VPCI & Dr. Ritu Kulshrestha, Professor, Department of Pathology, VPCI.

Inauguration of Short-Term Certificate Course in Clinical Pathology

7. Inauguration of IJCDAS Online (July13,2022)

The Indian Journal of Chest Disease and Allied Sciences (IJCDAS) is published quarterly by VPCI in association with NCCP(I) since 1959. New official website of IJCDAS www.ijcdas.com was inaugurated on July 13, 2022 by Dr. Vijay Chauthaiwale, Chairman Governing Body, VPCI in presence of Prof. Raj Kumar, Director VPCI. Staff & Faculty Members of the Institute were present during the programme.




Official launch of www.ijcdas.com

8. Demonstration of Bronchial Thermoplasty (July 14, 2022)




Demonstration of Bronchial Thermoplasty

9. E- Sanjeevani OPD

Vallabhbhai Patel Chest Institute started E – Sanjeevani OPD (Tele Medicine Consultation). Consultations will be provided to patients on Monday, Tuesday and Friday from 10:00 AM to 12:00 PM.

E- Sanjeevani OPD

10. 76th Independence Day Celebration (August 15 ,2022)

76th Independence Day was celebrated on August 15, 2022, at VCH Lawn, VPCI as per the traditions of the Institute. In Prabhat Pheris, Faculty, Staff, Students & General Public with tricolours, marched in rows, raised the slogans "Bharat Mata ki Jai", "Vande Mataram" and "Har Ghar Tiranga". Prof. Raj Kumar, Director of the Institute hoisted the flag followed by National Anthem after the parade by the security guards. Shri Omkar Nath Pandit, Deputy Registrar, VPCI also graced this auspicious event. The program ended with the distributions of sweets and vote of thanks.

Celebration of 76th Independence Day at VPCI

11. 2nd Workshop on Pulmonary Rehabilitation (September 4-5, 2022)

Vallabhbhai Patel Chest organized 2nd Workshop on Pulmonary rehabilitation on September 4-5, 2022 at Paintal Memorial Golden Jubillee Auditorium, VPCI. Prof. Raj Kumar was the organizing chairman, Dr. Vishal Bansal was the Organizing Secretary & Dr. Sonam Spalgais was the Co-organizing secretary of the program. Faculty, Students and Research Scholars of VPCI and other Institutions participated in the program.

2nd Workshop on Pulmonary Rehabilitation

12. World Physiotherapy Day (September 8, 2022)

Vallabhbhai Patel Chest organized a Programme on the occasion of World Physiotherapy Day on September 8, 2022 at Paintal Memorial Golden Jubilee, VPCI. During the programme, lectures were delivered by Dr. Vishal Bansal, Professor, Department of Physiology, VPCI and Ms. Anjali Malik, Physiotherapist, VPCI. Staff, Students & Faculty Members of the Institute were present during the programme.

Observance of World Physiotherapy Day

13. Felicitation Ceremony for NTQLS Counselors (September 20, 2022)

National Tobacco Quit Line Services awarded the best three counselors (Mr. Naveen, Ms. Neetu, Mr. Deepak Kumar, Ms. Khushi, Ms. Tanya, Ms. Pooja Solanki, Ms. Manisha, Mr. Bhairav Dutt Sharma) for their outstanding performance, hard Work & dedication at workplace for the Months of April to June, 2022. The awards were presented by Chief Guest Dr. Ranbir Singh, IAS, Chief Electoral Officer, Govt. of NCT of Delhi and Shri Nawal Kishore, Treasurer, University of Delhi who was the Guest of Honour of the Programme. Prof. Raj Kumar, Director, VPCI, accompanied the dignitaries on the dias.




NTQLS Staff Felicitation

14. Felicitation Ceremony for NTQLS Counselors (July to September, 2022)

National Tobacco Quit Line Services awarded best three counselors (Mr. Bhairav Dutt Sharma, Ms. Manisha, Ms. Sakshi, Ms. Khushi Singh, Ms. Smritika Saggi,) for their outstanding performance, hard Work & dedication at workplace for the Months of July to September, 2022. The awards were presented by Chief Guest Shree Bhante D. Sumedho, Chairman, Buddhist Culture Foundation & Dr. Arun Yadav, Director, (Hosp. Ad.) MCD, who was the Guest of Honour of the Programme. Prof. Raj Kumar, Director, VPCI, accompanied the dignitaries on the dias.


NTQLS Staff Felicitation

15. CME on Pharmacovigilance (September 22, 2022)

The Adverse Drug Reaction Monitoring Center (AMC) of the Institute organized a CME on "Pharmacovigilance – Encouraging Reporting of Adverse Drug Reaction by Patients " on September 22, 2022 at 03:00 PM in the Seminar Hall of the Paintal Memorial Golden Jubilee Auditorium, VPCI on the occasion of observance of National Pharmaco Vigilance Week under the aegis of Indian Pharmacopoeia Commission, NCC Pharmacovigilance Program of India, Ministry of Health & Family Welfare, Government of India during September 17-23, 2022. Staff, Students & Faculty Members of the Institute were present during the programme.

CME on Pharmacovigilance

16. 16th Prof. Autar Singh Paintal Memorial Oration (September 26, 2022)

Vallabhbhai Patel Chest Institute organized 16th Prof. Autar Singh Paintal Memorial Oration on September 26, 2022 at Paintal Memorial Golden Jubilee Auditorium, VPCI. The oration was delivered by Prof. Anil Gurtoo, Director Professor, Department of Medicine, Lady Hardinge Medical College, Delhi. The topic of the oration was "Breathless Lung and Foggy Minds at High Altitude: Physiology and its Clinical Correlates. Prof. Rakesh Bhatnagar, VC, Amity University, Rajasthan was the Chief Guest of the Programme. Prof. Shri Prakash Singh, Director, South Campus, University of Delhi, Delhi and Prof. BL Sherwal, Medical Superintendent, VMMC & Safdarjung Hospital, Delhi were the Guests of honour for the program. The programme was attended by all the Faculty, Staff and Students of VPCI.

16th Prof. Autar Singh Paintal Memorial Oration

17. Dr. VK Vijayan Oration (October 26, 2022)

Vallabhbhai Patel Chest Institute organized 6th Dr. VK Vijayan Oration on October 26, 2022 at Paintal Memorial Golden Jubilee Auditorium, VPCI. Shri Gopalkrishnan, Special Secretary (Health), Ministry of Health & Family Welfare, Govt. of India was the Chief Guest and Prof. (Dr.) Saudan Singh was the Guest of Honour for the Programme. Prof. (Dr.) Surender Kashyap delivered lecture on the topic of "Changing Face of Medical Education in India". The programme was attended by all the Faculty, Staff and Students of VPCI.

Dr. VK Vijayan Oration

18. Observance of Vigilance Awareness Week 2022 (October 31–November 6, 2022)

The Institute observed "Vigilance Awareness Week - 2022" from October 31–November 6, 2022 on the theme "Corruption Free India for a developing Nation". The Observance of the Vigilance Awareness Week commenced with all Faculty, Staff and Students of the Institute taking a pledge.

Observance of Vigilance Awareness Week 2022

19. Observance of Rastirya Ekta Diwas (October 31, 2022)

Dr. Dharmendra Pradhan, Hon'ble Education Minister visited VPCI on October 31, 2022 on the occasion of Rastriya Ekta Diwas.

Observance of Rastirya Ekta Diwas

20. 46th Workshop on Respiratory Allergy: Diagnosis & Management (November 28 – December 2, 2022)

46th workshop on Respiratory Allergy: Diagnosis & Management was organised by Vallabhbhai Patel Chest Institute, which was supported by Society for Tobacco Control during November 28 – December 2, 2022. Prof. Raj Kumar the Organizing Chairman of the workshop accompanied by the Chief Guest Dr. Randeep Guleria, Ex Director, All India Institute of Medical Sciences, Delhi and Guests of Honour Dr. Ashwini Dalmiya, President, Delhi Medical Association & Dr. Vikas Gupta, Registrar, University of Delhi inaugurated the workshop and launched the Training manual.

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46th Workshop on Respiratory Allergy: Diagnosis & Management

21. 70th Institute Day Celebration (January 12, 2023)

Vallabhbhai Patel Chest Institute (VPCI) celebrated its 70th Institute Day on January 12, 2023 at the Paintal Memorial Golden Jubilee Auditorium, VPCI, Delhi. Prof. Yogesh Singh, Vice Chancellor, University of Delhi, Delhi, was the Chief Guest, Prof. (Dr.) Atul Goel, Director, General of Health Services, Ministry of Health & Family Welfare, GOI, New Delhi was the Guest of Honour, Dr. Vijay Chauthaiwale, Chairman, Governing Body, VPCI, presided over the function. Prof. Raj Kumar, Director, VPCI, gave brief report on the activities of the Institute in the previous year. Prof. Yogesh Singh & Dr. Vijay Chauthaiwale, appreciated the efforts VPCI in the sphere of medical education, research and patient care. On this day Bio - Medical Waste Room & Renovated Respiratory Virology Unit were inaugurated and former faculty, staff and students of the Institute were felicitated.

70th Institute Day Celebration

22. 74th Republic Day Celebration (January 26, 2023)

Vallabhbhai Patel Chest Institute celebrated the 74th Republic Day on January 26, 2023. Prof. Raj Kumar, Director, VPCI hoisted the flag. After the program sweets and refreshments were served to public, staff and patients of the Institute.


Celebration of 74th Republic Day at VPCI

23. Public lecture on Asthma-Causes, Diagnosis, Treatment and Myths and Facts (February 21, 2023)

Vallabhbhai Patel Chest Institute (VPCI) organized a Public Lecture on "Asthma-Causes, Diagnosis, Treatment and Myths and Facts" at Paintal Memorial Golden Jubilee Auditorium, VPCI on February 21, 2023. Prof. Raj Kumar, Director, VPCI and other Faculty of Department of Pulmonary Medicine, VPCI; Prof. B.K. Menon, Dr. Nitin Goel, Dr. Parul Mrigpuri and Dr. Siddharth Raj Yadav delivered a series of lectures on Asthma-Causes, Diagnosis, Treatment and Myths and Facts. Question-Answer session was kept at the end of the programme.




Public lecture on Asthma-Causes, Diagnosis, Treatment and Myths and Facts

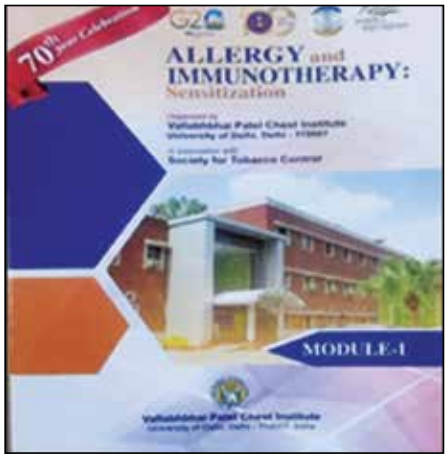
24. Training Programme for Non-teaching staffs (March 1-8, 2023)

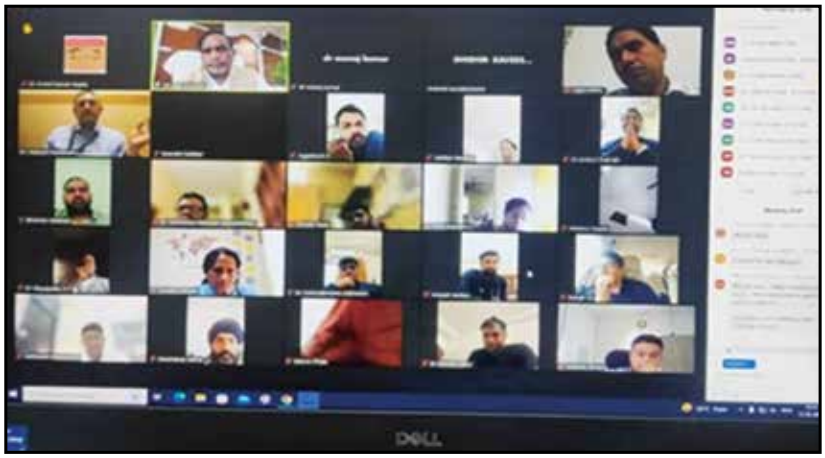
VPCI organized one-week training programme for non – teaching staff on the various aspects of Administration / Financial / Skill enhancement from March 1-8, 2023 at Paintal Memorial Golden Jubilee Auditorium.

Training Programme for Non-teaching staffs

25. Allergy and Immunotherapy Sensitization – Module 1 (March 15, 2023)

Prof. Raj Kumar, Director, VPCI and all the faculty of Department of Pulmonary Medicine participated in the Allergy and Immunotherapy sensitization – Module 1 that was held on a virtual platform on March 15 & 29, 2023.





Allergy and Immunotherapy Sensitization

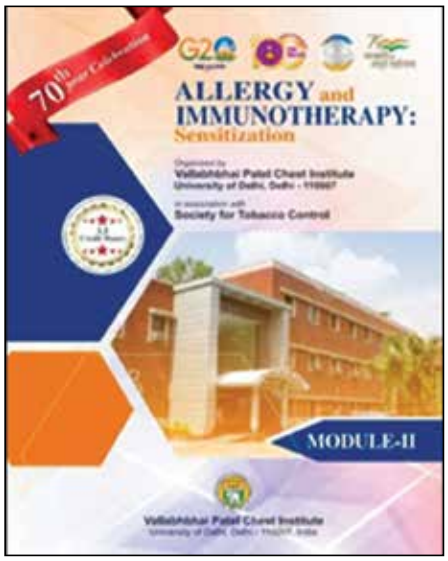
26. Public Lecture on Tuberculosis a Disease Since Eternity: Cause, Types, Symptoms, Diagnosis, Treatment & Myths & Facts (March 27, 2023)

Vallabhbhai Patel Chest Institute (VPCI) organized a Public Lecture on "Tuberculosis a Disease since Eternity: Cause, Types, Symptoms, Diagnosis, Treatment & Myths & Facts" at Paintal Memorial Golden Jubilee Auditorium, VPCI on March 27, 2023. Prof. Raj Kumar, Prof. Mandira Verma-Basil, Prof. B.K. Menon, Dr. Nitin Goel, Dr. Parul Mrigpuri, Dr. Sonam Spalgias and Dr. Siddharth Raj Yadav delivered a series of lectures on Cause, Types, Symptoms, Diagnosis, Treatment & Myths & Facts of Tuberculosis. Question-Answer session was held towards end of the programme, where clarifications were provided for the queries raised by the Public.

Public Lecture on Tuberculosis a Disease Since Eternity: Cause, Types, Symptoms, Diagnosis, Treatment & Myths & Facts

27. Allergy and Immunotherapy Sensitization (Module – 2)

Prof. Raj Kumar, Director, VPCI and all the faculty of Department of Pulmonary Medicine participated in the Allergy and Immunotherapy sensitization – Module 2 that was held on a virtual platform on April 4 & 9, 2023.



List of Publications

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Media Recognition

NEWS PAPER CUTTING

NBT
नवभारत टाइम्स

जस्ट जिंदगी

बाबू समझो इशारे

बुखार जब लगातार 2 या 3 हफ्तों से ज्यादा रहे

भूख कम या ज्यादा लगना

सांस फूलना और खांसी होना

दिल की धड़कनें अचानक घट या बढ़ जाए

वजन अचानक कम या ज्यादा होना

गांठ या छाले

यूरिन, स्टूल और उल्टी के इशारे

सिर दर्द या चक्कर आए

खून की कमी और कमजोरी

Navbharat Times
(April 03, 2022)

NEWS PAPER CUTTING


NBT
नवभारत टाइम्स

जस्ट जिंदगी

घबराएं नहीं
आम वायरल जैसा ही है इस बार का कोरोना

कोरोना और प्लस, माइनस की बातें

RT-PCR टेस्ट और आइसोलेशन

बुखार और बदन दर्द कर दे बेहाल तो...

कोरोना से पेट में दिक्कत

गले में इंफेक्शन की जब हो परेशानी...

Navbharat Times
(April 24, 2022)

NEWS PAPER CUTTING

दिल्ली साप्ताहिक
RNI NO. DELHIN/2008/25318
देश की धड़कन
मुख्य संवाददाता: चंद्र शेखर राष्ट्रीय राजधानी क्षेत्र दिल्ली से प्रकाशित।

इस आयोजन में दिल्ली विश्वविद्यालय के डीन प्रोफेसर बालाराम पानी और मेंबर ऑफ पार्लियामेंट लोकसभा मनोज तिवारी ने कार्यक्रम में शिरकत की

"वर्ल्ड नो टोबैको डे" पर एक कार्यक्रम का आयोजन

नई दिल्ली, (चंद्र शेखर)। 31 मई 2022 को विश्व भर में वर्ल्ड नो टोबैको डे के रूप में मनाया जाता है। इसी संदर्भ में संस्थान में आज एक कार्यक्रम आयोजित किया गया जिसमें दिल्ली विश्वविद्यालय के डीन प्रोफेसर बालाराम पानी और मेंबर ऑफ पार्लियामेंट लोकसभा मनोज तिवारी ने कार्यक्रम में शिरकत की। सबसे पहले अतिथियों का स्वागत फूलों के गुलदस्ते से किया गया और उसके बाद दीप प्रज्वलित कर कार्यक्रम का शुभारंभ किया गया। उसके बाद मनोज तिवारी द्वारा नेशनल टोबैको क्विट लाइन सर्विस पर बनी अवेयरनेस फिल्म "क्विट लाइन" की स्क्रीनिंग की गई। जिसमें बताया गया कि कैसे क्विट लाइन सर्विस की मदद से आप सिगरेट और तम्बाकू को छोड़ा जा सकता है। इस फिल्म का निर्माण वर्ल्ड नाउसी डिजिटल एक्सान फिल्म प्रोडक्शन हाउस ने किया है और यह फिल्म गोवा फिल्म फेस्टिवल में भी पार्टिसिपेट कर रही जिसका रिजल्ट आना अभी बाकी है।

इसके बाद नेशनल टोबैको क्विट लाइन सर्विस की वेबसाइट को लांच किया गया और अंत में 2016 से स्थापित नेशनल टोबैको क्विट लाइन सर्विस की 6 साल की अपडेट रिपोर्ट सांझा की गई। इस रिपोर्ट के मुताबिक संस्थान ने अब तक नेशनल टोबैको क्विट लाइन के कॉल सेंटर जिसका टोल फ्री नंबर 18011 2356 है। भारत सरकार का यह कॉल सेंटर इनबॉउंड और आउट बॉन्ड दोनों तरह की सेवा प्रदान करता है। जो व्यक्ति सिगरेट व तंबाकू छोड़ना चाहते हैं वे इसके टोल फ्री नंबर पर कॉल करते हैं और कॉल सेंटर काउंसलर्स उनकी इस आदत को छुड़ाने में सुबह 8.00 बजे से शाम 8.00 बजे तक उनकी मदद करते हैं। यह सुविधा पूरी तरह से निशुल्क है। जिसमें काउंसलर उनकी एक क्विट डेट डिसाइड करते हैं और उसके बाद रेगुलर उनका साल भर तक फॉलोअप लेते रहते हैं। जब तक कि व्यक्ति पूर्णत सिगरेट व तंबाकू छोड़ नहीं देता और यह सब निर्भर करता है व्यक्ति की विल पावर पर।

संस्थान के निदेशक ने वर्ल्ड नो टोबैको डे पर कहा 2016 से स्थापित इस कॉल सेंटर में अब तक कुल 5873312 कॉल आईडीआर में रिसीव हुई हैं। जिसमें इनबॉउंड कॉल 680601 है और आउटबांउ कॉल 1910543 व रजिस्टर्ड क्विट डेट सेट कॉल 249344 हैं। इसमें ज्यादातर स्मोकर कॉलर हैं जिनकी आयु 25 से 64 वर्ष के बीच हैं। अब तक की रिपोर्ट के मुताबिक लगभग 50.95 परसेंटी जिसमें पुरुषों की संख्या 98.82 परसेंटी है जिसमें ज्यादातर कॉल उत्तर प्रदेश व राजस्थान से है। संस्थान के बताया उत्तर प्रदेश के आंकड़े 31.09 परसेंटी और राजस्थान के 23.17 परसेंटी है।

इसमें ज्यादातर देखा गया है कि 72.40 परसेंटी कॉलर्स की पॉसिबली हिस्ट्री तम्बाकू सेवन की नहीं है। सबसे बड़ा डाटा उन लोगों का है जिन्होंने पिछले 1 से 10 वर्षों में इसका सेवन शुरू किया है जोकि लगभग 78.65 परसेंटी है क्विट लाइन सर्विस को पिछले 6 वर्षों में सराब पीने वालों की संख्या पर भी काम किया है जिसका आंकड़ा 23.76 परसेंटी है इस पर पचवटी से बात करते हुए बताया गया।

Desh Ki Dhadkan
(May 31, 2022)

NEWS PAPER CUTTING

NSP NEWS

RNI NO. DELHIN/2004/13530

सच्चाई भी, अच्छाई भी

नवीनतम समाचार प्रहरी

राष्ट्रीय राजधानी क्षेत्र दिल्ली से प्रकाशित हि.दै. समाचार पत्र।

संपादकः चंदन पाण्डेय

E-mail: naveentamsamacharprahri@gmail.com

"वर्ल्ड नो टोबैको डे" पर एक कार्यक्रम का आयोजन

इस आयोजन में दिल्ली विश्वविद्यालय के डीन प्रोफेसर बालाराम पानी और मेंबर ऑफ पार्लियामेंट लोकसभा मनोज तिवारी ने कार्यक्रम में शिरकत की

नई दिल्ली
मनोज राज
वरिष्ठ संवाददाता।

31 मई 2022 को विश्व भर में वर्ल्ड नो टोबैको डे के रूप में मनाया जाता है। इसी संदर्भ में संस्थान में आज एक कार्यक्रम आयोजित किया गया जिसमें दिल्ली विश्वविद्यालय के डीन प्रोफेसर बालाराम पानी और मेंबर ऑफ पार्लियामेंट लोकसभा मनोज तिवारी ने कार्यक्रम में शिरकत की। सबसे पहले अतिथियों का स्वागत फूलों के गुलदस्ते से किया गया और उसके बाद दीप प्रज्वलित कर कार्यक्रम का शुभारंभ किया गया। उसके बाद मनोज तिवारी द्वारा नेशनल टोबैको क्विट लाइन सर्विस पर बनी अवेयरनेस फिल्म "द क्विट लाइन" की स्क्रीनिंग की गई। जिसमें बताया गया कि कैसे क्विट लाइन सर्विस की मदद से आप सिगरेट और तम्बाकू को छोड़ा जा सकता है। इस फिल्म का निर्माण कार्य नारसी डिजिटल एक्शन फिल्म प्रोडक्शन हाउस ने किया है और यह फिल्म शोषा फिल्म फेस्टिवल में भी पार्टिसिपेट कर रही जिसका रिजल्ट आना अभी बाकी है।

इसके बाद नेशनल टोबैको क्विट लाइन सर्विस की वेबसाइट को लांच किया गया और अंत में 2016 से स्थापित नेशनल टोबैको क्विट लाइन सर्विस की 6 साल की अपडेट रिपोर्ट सांझा की गई। इस रिपोर्ट के मुताबिक संस्थान ने अब तक नेशनल टोबैको क्विट लाइन के कॉल सेंटर जिसका टोल फ्री नंबर 18011 2356 है। भारत सरकार का यह कॉल सेंटर इनबॉउंड और आउट बॉन्ड दोनों तरह की सेवा प्रदान करता है।

जो व्यक्ति सिगरेट व तंबाकू छोड़ना चाहते हैं वे इसके टोल फ्री नंबर पर कॉल करते हैं और कॉल सेंटर काउंसलर्स उनकी इस आदत को छुड़ाने में सुबह 8.00 बजे से शाम 8.00 बजे तक उनकी मदद करते हैं। यह सुविधा पूरी तरह से निशुल्क है। जिसमें कॉउंसलर उनकी एक क्विट डेट डिसाइड करते हैं और उसके बाद रेगुलर उनका साल भर तक फॉलोअप लेते रहते हैं। जब तक कि व्यक्ति पूर्णता सिगरेट व तंबाकू छोड़ नहीं देता और यह सब निर्भर करता है व्यक्ति की विल पावर पर।

संस्थान के निदेशक ने वर्ल्ड नो टोबैको डे पर कहा 2016 से स्थापित इस कॉल सेंटर में अब तक कुल 5873312 कॉल आईवीआर में रिसीव हुई है। जिसमें इनबॉउंड कॉल 680601 है और ऑउटबॉउंड कॉल्स 1910543 व रजिस्टर्ड क्विट डेट सेट कॉल 249344 है। इसमें ज्यादातर व्यस्क कॉलर हैं जिनकी आयु 25 से 64 वर्ष के बीच है। अब तक की रिपोर्ट के मुताबिक लगभग 50.95 फीसदी जिसमें पुरुषों की संख्या 98.82 फीसदी है जिसमें ज्यादातर कॉल उत्तर प्रदेश व राजस्थान से है। संस्थान के बताया उत्तर प्रदेश के आंकड़े 31.09 फीसदी और राजस्थान के 23.17 फीसदी है।

इसमें ज्यादातर देखा गया है कि 72.40 फीसदी कॉलर्स की वीडियो बीड़ी तम्बाकू सेवन की नहीं है। सबसे बड़ा डाटा उन लोगों का है जिन्होंने पिछले 1 से 10 वर्षों में इसका सेवन शुरू किया है जोकि लगभग 78.65 फीसदी है क्विट लाइन सर्विस के पिछले 6 वर्षों में शराब पीने वालों की संख्या पर भी काम किया है जिसका आंकड़ा 23.76 फीसदी है इस पर पत्रकारों से बात करते हुए बताया गया।

NSP News
(May 31, 2022)

NEWS PAPER CUTTING

R.N.I. NO. DELHIN/2013/52867
MOB. NO.-90131 14481

भारत सरकार पंजीयक कार्यालय अतएव भारत में रजि.

हिन्द की डिस्कवरी

राष्ट्रीय राजधानी क्षेत्र दिल्ली से प्रकाशित राष्ट्रीय हिन्दी समाचार पत्र

आज वर्ल्ड नो टोबैको डे पर एक कार्यक्रम का आयोजन

इस आयोजन में दिल्ली विश्वविद्यालय के डीन प्रोफेसर बालाराम पानी और मेंबर ऑफ पार्लियामेंट लोकसभा मनोज तिवारी ने कार्यक्रम में शिरकत की

नेपाल में विमान के मलबे से ब्लैक बाक्स मिला, हादसे के कारण का सही से चल सकेगा पता

भारत और चीन के बीच पूर्वी लद्दाख समेत अन्य मामलों पर हुई वार्ताएं: विदेश मंत्रालय

Hind Ki Discovery
(May 31, 2022)

NEWS PAPER CUTTING

दैनिक भास्कर नई दिल्ली 02-06-2022

नशे की आदत छोड़ने के लिए 6 साल में 5873312 ने ली सहायता

नई दिल्ली | दिल्ली विश्वविद्यालय के बल्लभ भाई पटेल इंस्टीट्यूट द्वारा 'विश्व नो टोबैको दिवस' पर डीयू में एक कार्यक्रम आयोजित किया गया। कार्यक्रम में अतिथि के रुप में डीयू के डीन प्रो. बलराम पाणि और मुख्य अतिथि सांसद मनोज तिवारी रहे। इस अवसर पर नेशनल टोबैको क्विट लाइन सर्विस पर बनी अवेयरनेस फिल्म 'द क्विट लाइन' की स्क्रीनिंग की गई। जिसमें बताया गया कि कैसे क्विट लाइन सर्विस की मदद से आप सिगरेट और तम्बाकू को छोड़ा जा सकता है। वहीं नेशनल टोबैको क्विट लाइन सर्विस की वेबसाइट को लांच की। नेशनल टोबैको क्विट लाइन का टोल फ्री नंबर 18011 2356 है। पटेल चेस्ट इंस्टीट्यूट के निदेशक प्रो. राजकुमार ने बताया कि जो व्यक्ति सिगरेट व तंबाकू छोड़ना चाहते हैं, वे इसके टोल फ्री नंबर पर कॉल करते हैं। यह सुविधा पूरी तरह से निशुल्क है।

Dainik Bhaskar
(June 2, 2022)

NEWS PAPER CUTTING

NBT
नवभारत टाइम्स

जस्ट जिंदगी

मेडिसिन गाइड

100 बात की 7 बात

आपके खाने और दवा का संबंध

इनहेलर

आंख-कान

दवाएं स्टोर करते समय सावधानियां

Navbharat Times
(July 03, 2022)

NEWS PAPER CUTTING

9

हिन्द की डिस्कवरी

वल्लभभाई पटेल चेस्ट इंस्टीट्यूट द्वारा धूमधाम से वार्षिकोत्सव मनाया गया

Hind Ki Discovery
(October 13, 2022)

NEWS PAPER CUTTING

डीयू के पटेल चेस्ट इंस्टीट्यूट में 5 दिवसीय वर्कशॉप आयोजित

भास्कर न्यूज | नई दिल्ली

दिल्ली विश्वविद्यालय (डीयू) में पटेल चेस्ट इंस्टीट्यूट द्वारा प्रदूषण और चेस्ट की बीमारियों को लेकर पांच दिवसीय वर्कशॉप का आयोजन किया गया। जिसमें देश-विदेश के अस्पतालों से तकरीबन 35 डॉक्टरों ने रजिस्ट्रेशन कराया था। जिनको पांच दिनों तक प्रशिक्षण दिया गया। डाक्टरों ने लोगों को चेस्ट की बीमारी, ट्यूबरक्लोसिस व प्रदूषण से होने वाली बीमारियों की रोकथाम के बारे में बताया गया। वर्कशॉप में ट्रेनिंग भी दी गई, जिसमें लोगों को जागरुक कर बीमारियों से बचाव के बारे में बताया गया। पटेल चेस्ट इंस्टीट्यूट के डायरेक्टर डॉ राजकुमार का कहना है कि टीबी की बीमारी के प्रति लोगों में जागरुकता और उसे खत्म करने के लिए इंस्टीटयूट समय-समय पर जागरुकता कार्यक्रम आयोजित करता है। डॉ राजकुमार ने पांच दिन का प्रशिक्षण पूरा होने पर बधाई दी और सभी को प्रमाणपत्र वितरीत किए।

Dainik Bhaskar
(December 03, 2022)

NEWS PAPER CUTTING

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हिन्द की डिस्कवरी

नई दिल्ली, 05 दिसम्बर 2022 (राष्ट्रीय हिन्दी समाचार-पत्र, नई दिल्ली)

वल्लभभाई पटेल चेस्ट इंस्टीट्यूट में 46वां वर्कशॉप का आयोजन

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अर्जुन कुमार
वरिष्ठ संवाददाता।
हिन्द की डिस्कवरी

वल्लभभाई पटेल चेस्ट इंस्टीट्यूट में 46वां वर्कशॉप का इनॉग्रेशन का आयोजन किया गया जिसमें ऑल इंडिया मेडिकल इंस्टिट्यूट के एक्स डायरेक्टर डॉक्टर रणदीप गुलेरिया और रजिस्ट्रार विवस्त गुप्ता डॉ. वीके सिंह और पटेल चेस्ट इंस्टीट्यूट के डायरेक्टर डॉक्टर राजकुमार ने दीया जलाकर कार्यक्रम की शुरुआत की। इस कार्यक्रम में देश विदेश से तकरीबन 35 डॉक्टरों ने पार्टिसिपेट रजिस्ट्रेशन किया है। जिनकी ट्रेनिंग आने वाले 5 दिनों तक लगातार चलेगी। इसमें उन्हें इस कार्यक्रम में उन्हें theoritical के साथ-साथ प्रैक्टिकल प्रशिक्षण भी दिया जाएगा। इस कार्यक्रम में शुरुआती दौर से जुड़े हुए और वल्लभभाई पटेल चेस्ट इंस्टीट्यूट के एक्स डायरेक्टर डॉक्टर एसएन सेठ को लाइफ टाइम अचीवमेंट से अवार्ड से नवाजा गया।

5 दिन से चल रही 46वां वर्कशॉप रेस्पिरेटरी एलर्जी डायग्नोसिस एंड मैनेजमेंट का आज अंतिम दिन वल्लभभाई पटेल चेस्ट इंस्टीट्यूट के औतार सिंह पैटल ऑडिटोरियम पूरा हुआ, जिसमें कई देश के जाने माने हॉस्पिटल जैसे पर्त जलि, लेडी हार्डिंग, एलाईआईएमएस, बीएसए मेडिकल कॉलेज, आईसीआईसी, सफदरजंग हॉस्पिटल, एमआईआरसीपी को फैकल्टीज ने देश भर से आए 35 पार्टिसिपेंट्स को प्रशिक्षण दिया और साथ ही वल्लभभाई पटेल चेस्ट इंस्टीट्यूट के डायरेक्टर और ऑर्गेनाइजिंग चेयरमैन डाक्टर राजकुमार ने शपथ दिलाई एवं एथिकल मेडिकल की प्रैक्टिस करेंगे। अंत में सभी को पांच दिन की ट्रेनिंग पूरी होने पर बधाई दी और सर्टिफिकेट डिस्ट्रीब्यूट किए।

देश में फैल रहे पोलूशन और और चेस्ट की बीमारी को लेकर दिल्ली विश्वविद्यालय में पटेल चेस्ट इंस्टीट्यूट द्वारा एक सेमिनार का आयोजन किया गया जो 5 दिनों तक चला। जिसके अंदर तमाम हॉस्पिटल के डॉक्टर्स ने आकर इस वर्कशॉप को अटेंड किया। लोगों को किस तरह से चेस्ट से रिलेटेड बीमारी जिस तरह से पोलूशन ब्रोंकाइटिस आदि बीमारियों की रोकथाम के बारे में बताया गया। उन सब को एक ट्रेनिंग दी गई जिसमें यह बताया गया कि किस तरह से लोगों को अवेयर करना है। जानकारी दी गई कि इस बीमारी से बचाना है डॉ. राजकुमार जो पटेल चेस्ट के डायरेक्टर हैं वह पब्लिक हित में कार्य करते हैं। इस तरह का वर्कशॉप समय-समय पर जानकारी के लिए चलते रहते हैं जिससे देश में बीमारियां कम हो और लोगों को अवेयर किया जा सके कि किस तरह से उनको इन बीमारियों से बचना है। डॉ. राजकुमार जो एक डॉक्टर होने साथ ही एक अच्छे सोशल वर्कर हैं और समय-समय पर मरीजों की इस तरह से सहायता करते रहते हैं। इसके लिए सरकार ने कुछ से अवार्ड से भी सम्मानित किया है। हमारे देश में ऐसे ही डॉक्टरों की आवश्यकता है जो मरीजों और देश दिली के बारे में सोचकर चलें। अगर ऐसे ही डॉक्टर इसी तरह से काम करते रहे तो आने वाले समय में हमारे देश में बीमारियां जड़ से खत्म हो जाएंगे।

वल्लभभाई पटेल चेस्ट इंस्टीट्यूट (वीपीसीआई) छाती रोगों के क्षेत्र में अनुसंधान, शिक्षण और रोगी देखभाल के लिए समर्पित एक अद्वितीय स्नातकोत्तर चिकित्सा संस्थान है। यह दिल्ली विश्वविद्यालय द्वारा अनुमोदित संस्था है और पूरी तरह से स्वास्थ्य और परिवार कल्याण मंत्रालय, भारत सरकार द्वारा वित्त पोषित है। संस्थान आदर्श रूप से दिल्ली विश्वविद्यालय के मुख्य परिसर के केंद्र में स्थित है, जो अपेक्षित सैद्धांतिक वातावरण प्रदान करता है।

संस्थान छाती रोगों से पीड़ित समुदाय में बड़ी संख्या में रोगियों को राहत प्रदान करने की राष्ट्रीय आवश्यकता को पूरा करता है। इसने अपनी भूमिका का बखूबी निर्वहन किया है और चेस्ट मेडिसिन के क्षेत्र में विशिष्ट स्थान अर्जित किया है।

Hind Ki Discovery
(December 05, 2022)

NEWS PAPER CUTTING

दैनिक जागरण

दैनिक जागरण

सप्तरंग

सेहत भरे जीवन का

बुधवार, 28 दिसंबर, 2022

परिदृश्य 2022

उम्मीदों भरा रहा साल

इट्रा - नेजल कोविड - 19 वैक्सीन इंकोवैक

कैंसर के उपचार की नई उम्मीद

आरएसवी वैक्सीन में बढ़ी सफलता

एआइ से नये एंटीबायोटिक्स की खोज

इन दिनों

कोरोना से डरें नहीं बचाव के प्रति रहें गंभीर

कोरोना के नए वैरिएंट बीए.2.7 ने पूरी दुनिया की चिंता बढ़ा दी है। इसके संक्रमण से चीन के हालात खराब हैं तो कई अन्य देशों में संक्रमण का प्रसार तेज हो रहा है। विशेषज्ञों के अनुसार भारतीयों में प्राकृतिक प्रतिरक्षा विकसित हो चुकी है। इसलिए घबराएं नहीं, लेकिन कोविड प्रोटोकाल का पालन गंभीरता से करें और रोग प्रतिरोधक क्षमता मजबूत बनाए रखें...

लक्षणों को नजरअंदाज न करें

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अनियंत्रित ब्लडप्रेशर व हृदय रोगी विशेष ध्यान दें

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संडे नवभारत टाइम्स ।
नई दिल्ली/एनसीआर । 8 जनवरी 2023

आखिर, इतनी खांसी क्यों?

आजकल खांसते लोग कुछ ज्यादा ही नजर आने लगे हैं। उन्हें जिद्दी खांसी ने परेशान कर रखा है। तरह-तरह के उपाय के बाद भी नहीं जा रही। यह भी डर लगता है कि कहीं कोरोना कनेक्शन तो नहीं। सच क्या है? एक्सपर्ट लोगों से बात करके पूरी जानकारी दे रहे हैं लोकेश के. भारती

कैसे फैल रहा है वायरस

कब एक्स-रे या सीटी स्कैन

कभी सूखी तो कभी गीली खांसी क्यों?

सभी तरह की खांसी में ऐसे रखत

कब बढ़ जाती है निमोनिया में खांसी?

एक्सपर्ट बोले

बेहद काम के हैं ये उपाय

खांसी रोकने में किसने फायदेमंद

स्टीम कब और कितनी लें

गुनगुना पानी किसी जरूरी और कब

गुनगुना पानी कितने लिए

शिरप कब करें इस्तेमाल

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Navbharat Times
(January 08, 2022)

2nd Workshop on Pulmonary Rehabilitation held at VPCI during September 4-5, 2022

46th Workshop on Respiratory Allergy: Diagnosis & Management held at VPCI during November 28 – December 2, 2022

Public Lectures organized in VPCI

Public lecture on Asthma-Causes, Diagnosis, Treatment and Myths and Facts held at VPCI on February 21, 2023

Public Lecture on Tuberculosis a Disease Since Eternity: Cause, Types, Symptoms, Diagnosis, Treatment & Myths & Facts held at VPCI on March 27, 2023

Vallabhbhai Patel Chest Institute

University of Delhi, Delhi-110007, India

Phone: 91-011-27667102, 27667441, 27667667, 27666182

Fax: 91-011-27667420, Website: www.vpci.org.in