



## 7<sup>th</sup> International Leh Symposium 2024

Theme: *Molecular Mechanisms and Therapeutics of Hypoxic Lung*

Venue: Mahabodhi International Meditation Center, Saboo, Leh, Ladakh, INDIA

August 04 – 09, 2024



### SCIENTIFIC PROGRAM

#### Day 1: Sunday, August 4, 2024

Time	Activity
16:00 - 17:00	Registration
16:00 - 17:00	HHS-General Body Meeting
17:00-17:15	Welcome address by Qadar Pasha, Founder & Director, Institute of Hypoxia Research & Hypobaric Hypoxia Society (HHS)

#### Inaugural Session 1 (Online)

Chairs: Qadar Pasha and Brian Graham

Time	Speaker	Title of Talk
17:15-18:00	Sir Peter J Ratcliffe <i>Nobel Laureate</i> <i>University of Oxford, UK</i>	Oxygen sensing mechanism that regulates gene expression in response to decreases in cellular oxygenation
18:00-18:20	Damian Bailey <i>University of South Wales, UK</i>	Radical' insights into oxygen-sensing by the human brain: Pushing the bioenergetic limits!
18:20-18:25	Discussion	
18:25-18:45	Andrew Murray <i>University of Cambridge, UK</i>	Human Metabolic Adaptation to High-Altitude Hypoxia
18:45-18:50	Discussion	
18:50-19:10	Soni S. Pulamsetti <i>Max Planck, Germany</i>	Hypoxia-Mediated Translational Dynamics: New Discoveries and Perspectives
19:10-19:15	Discussion	
19:15-19:35	Josef Prchal & Jihyun Song <i>University of Utah, USA</i>	Alternatively spliced NFKB1 causes elevated hemoglobin levels in Andean Aymaras
19:35-19:40	Discussion	
19:40-20:00	Tim Lahm <i>National Jewish Health,</i> <i>Denver, Colorado, USA</i>	Crosstalk between hypoxia and estrogen signaling in the pulmonary vasculature and right ventricle
20:00-20:05	Discussion	
20:05	DINNER AND INTERACTIONS AMONG DELEGATES	

## Day 2: Monday, August 05, 2024

Time	Event
08:00	Welcome Note

### Session – 2

#### Human Response to High Altitude

Chair: Forhad A Zaman, Tashi Motup, G L Sharma

Time	Speaker	Title of Talk
08:30-08:50	<b>Corinna Schön</b> <i>UMass Chan Medical School – Baystate, Switzerland</i>	Beyond the peaks: Fatalities in the Swiss Mountains and the Vital Role of Psychological Support for Rescuers”
08:50-08:55	Discussion	
08:55-09:15	<b>Niraj Rai</b> <i>Birbal Sahni Institute of Palaeosciences, Lucknow, India</i>	Genetic architecture and adaptation of Ladakh highlanders of trans-Himalayas
09:15-09:20	Discussion	
09:20-09:40	<b>Spalchen Gonbo</b> <i>SNM Hospital, Leh, India</i>	Anemia at high altitude - Real or a calculation error?
09:40-09:45	Discussion	
09:45-10:05	<b>Tashi Motup</b> <i>SNM Hospital, Leh, India</i>	Gall Bladder Stone disease Ladakh. Incidence, disease trend and future prospects
10:05-10:10	Discussion	
10:10-10:30	<b>Peter Hackett</b>	Vision on HA physiological responses and the way forward
10:30	<b>Tea / Coffee</b>	

### Session – 3

#### Cardiovascular Health and High Altitude

Chair: Mahesh K, Tashi Thinlas, Kumaravelu R

Time	Speaker	Title of Talk
10:50-11:10	<b>Ajay Bahl</b> <i>Postgraduate Institute of Medical Education and Research, Chandigarh, India</i>	Profile of cardiomyopathies from Jammu and Kashmir and Ladakh
11:10-11:15	Discussion	
11:15-11:35	<b>Rakesh C. Kukreja</b> <i>University of Virginia, USA</i>	Hypoxic preconditioning of the heart
11:35-11:40	Discussion	
11:40-12:00	<b>Lotos Rabgais</b> <i>SNM Hospital, Leh, India</i>	TBA
12:00-12:05	Discussion	
12:05-12:25	<b>Kumaravelu Jagavelu</b> <i>CSIR-Central Drug Research Institute, Lucknow, India</i>	Dual role of Damage associated molecular pattern HMGB3 in myocardial ischemia
12:25-12:30	Discussion	
12:55-13:05	<b>GROUP PHOTOGRAPH</b>	
13:05-14:00	<b>LUNCH</b>	

### Session – 4

#### Immunological response under hypoxic condition

Chair: Kashif Hanif and Prashant Bobhate

Time	Speaker	Title of Talk
14:00-14:20	<b>Brian Graham</b> <i>University of California, San Francisco, USA</i>	Immune Cascade In Inflammatory Pulmonary Vascular Disease Including Schistosoma And Hypoxic Pulmonary Hypertension
14:20-14:25	Discussion	
14:25-14:45	<b>Nirupama Trehanpati</b> <i>Institute of Liver and Biliary Sciences, Delhi, India</i>	Altered Cellular Energetics of immune cells in the hypoxic niche of Hepatocellular Carcinoma
14:45-14:50	Discussion	
14:50-15:10	<b>Rajkumar Savai</b> <i>Max Planck Institute for Heart and Lung Research, Germany</i>	Inflammatory Lung Microenvironment in Lung Cancer-Associated Pulmonary Hypertension
15:10-15:15	Discussion	
15:15-15:35	<b>Rahul Kumar</b> <i>University of California, San Francisco, USA</i>	Role of the immune response in hypoxic pulmonary hypertension
15:35-15:40	Discussion	
15:40	<b>Tea/Coffee</b>	

### Session – 5

#### Posters Session

Chair: Brian Graham, Raj Kumar Savai, Arpana Vibhuti

16:30-18:30	Posters Presentation
18:30-19:30	CULTURAL PROGRAM
20:00	DINNER AND EXPLORATION OF SCIENTIFIC COLLABORATIONS

## Day 3: Tuesday, August 06, 2024

### Yoga and Meditation

08:00-09:00

Dhamma Laddha Vipassana session by revered Guruji

#### Session – 6

Panel discussion - Evidence-based traditional medicine for wellness.

**Chair: Akshay Anand, Raghvendra Rao, Corinna Schön**

Time	Speaker	Title of Talk
09:30-10:30	<p><b>Akshay Anand</b> <i>PGIMER, Chandigarh, India</i></p> <p><b>Neelam Dahiya</b> <i>PGIMER, Chandigarh, India</i></p> <p><b>Pramod Avti</b> <i>PGIMER, Chandigarh, India</i></p> <p><b>Neerja Bharti</b> <i>PGIMER, Chandigarh, India</i></p> <p><b>Krishan Kumar</b> <i>PGIMER, Chandigarh, India</i></p> <p><b>Pooja Ojha</b> <i>All India Institute of Medical Sciences, Jodhpur, India</i></p> <p><b>Anumeha Bhagat</b> <i>Government Medical College &amp; Hospital, Chandigarh, India</i></p> <p><b>Monika Pathania</b> <i>All India Institute of Medical Sciences, Rishikesh, India</i></p> <p><b>Hemant Bhargav</b> <i>NIMHANS, Bengaluru, India</i></p> <p><b>Ganashree</b> <i>All India Institute of Medical Sciences, Patna, India</i></p> <p><b>Manjulata</b> <i>All India Institute of Medical Sciences, Patna, India</i></p>	Evidence-based Traditional medicine for Wellness
10:30	<b>Tea/Coffee</b>	
11:00-11:20	<p><b>Raghvendra Rao</b> <i>Central Council for Research in Yoga &amp; Naturopathy (CCRYN), New Delhi, India</i></p>	Role of yoga in high altitude acclimatization: findings from a pilot study
11:20-11:25	<b>Discussion</b>	
11:25-11:45	<p><b>Varun Malhotra</b> <i>AIIMS Bhopal</i></p>	Examining the Influence of Yoga on Pulse Rate, Oxygen Saturation, and Hypoxic Effects: Analysis of Psychophysiological Parameters and Anaerobic Metabolism Shift
11:45-11:50	<b>Discussion</b>	

#### Session – 7

**Environmental Influences in Pulmonary Pathophysiology**

**Chair: Sunil Munshi, Padma Deskit**

Time	Speaker	Title of Talk
11:50-12:10	<p><b>Parvaiz A. Koul</b> <i>Sher-i-Kashmir Inst. of Med. Sciences, Srinagar, India</i></p>	Chronic obstructive pulmonary disease in Kashmir, a moderately high altitude area

12:10-12:15	Discussion	
12:15-12:35	Aastha Mishra CSIR-IGIB, Delhi, India	Molecular mechanisms underlying High Altitude Pulmonary Edema
12:35-12:40	Discussion	
12:40-13:00	Stanzen Rabyang Sonam Norboo Memorial, Leh, India	Consequences of pulmonary hypertension in native highland population
12:00-13:05	Discussion	
13:05-14:00	<b>LUNCH</b>	

### Session – 8

#### Management and therapeutic interventions for Pulmonary Disorders

Chair: Anurag Agrawal, Rabyang Tenzin, TN Sathyaprabha

Time	Speaker	Title of Talk
14:00-14:20	Prashant Bobhate Kokilaben Dhirubhai Ambani Hospital, Mumbai, India	Heart rate variability: prognostic marker in Pediatric PAH
14:20-14:25	Discussion	
14:25-14:45	Shine Kumar Amrita University, Kochi, India	Pregnancy and Pulmonary Arterial Hypertension - N terminal pro Brain Natriuretic Peptide Trends and Outcomes
14:45-14:50	Discussion	
14:50-15:10	Kashif Hanif CDRI, Lucknow	Selective Estrogen Receptor Modulation Protects Against Pulmonary Hypertension
15:10-15:15	Discussion	
15:15-15:35	Sonam Spalgais Vallabhai Patel Chest Institute, Delhi, India	Non-occupational Anthracofibrosis/Anthracosilicosis in Ladakh
15:35-15:40	Discussion	
15:40	<b>Tea/Coffee</b>	

### Session – 9

#### Neurological Response at High Altitude

Chair: Parvaiz A. Koul, Aastha Mishra, Shine Kumar

Time	Speaker	Title of Talk
16:00-16:20	Sunil Munshi Queens Medical Centre. Nottingham, UK	Stroke at High Altitude
16:20-16:25	Discussion	
16:25-16:45	Akshay Anand PGIMER, Chandigarh, India	Can Sudarshan Kriya Yoga and advance meditation techniques facilitate acclimatization at high altitude?
16:45-16:50	Discussion	
16:50-17:10	Vishnu Swarup AIIMS Delhi, India	Options for neuroprotection from hypoxic brain injury after cardiac arrest?
17:10-17:15	Discussion	
17:15-17:30	Buddha Basnyat Patan Academy of Health Sciences, Kathmandu, Nepal	Interactions on neurological health status at HA and the way forward
18:00-20:00	<b>CULTURAL PROGRAM</b>	
20:00	<b>DINNER AND EXPLORATION OF SCIENTIFIC COLLABORATIONS</b>	

**Day 4: Wednesday, August 07, 2024**

**Session – 10**

**High altitude Pathophysiological response**  
**Chair: Manasi Bhattacharjee, Anjali Agrawal**

Time	Speaker	Title of Talk
08:30-08:50 08:50-08:55	<b>Linda E Keyes</b> <i>Highland Hospital in Oakland, CA, USA</i> Discussion	Does Blood Pressure Matter for Travelers to High Altitude?
08:55-09:15 09:15-09:20	<b>Arpana Vibhuti</b> <i>SRM University, Delhi-NCR Sonapat, India</i> Discussion	Telomere Dynamics in hypobaric hypoxia pathophysiology
09:20-09:40 09:40-09:45	<b>Sudipta Ghosh</b> <i>North-Eastern Hill University, Shillong, India</i> Discussion	High Prevalence of Hypertension among the Indigenous Populations of North-East India: An Evolutionary Perspective
09:45-10:05 10:05-10:10	<b>Padma Deskit</b> <i>SNM Hospital, Leh, India</i> Discussion	High altitude maladies: Experiences and observations of a local surgeon
10:10	<b>Tea/Coffee</b>	

**Session – 11**

**Medical Technologies in Mapping Diseases**  
**Chair: Ajay Bahl and Linda E Keyes**

Time	Speakers	Titles of Talks
11:00-11:20 11:20-11:25	<b>Anjali Agrawal</b> <i>Senior Consultant and Delhi Head, Teleradiology Solutions, India</i> Discussion	Diagnostic imaging at high altitude--overcoming stratospheric challenges with plausible solutions
11:25-11:45 11:45-11:50	<b>Mahesh Kappanayil</b> <i>Amrita Inst. of Med. Sciences and Res. Centre, Kochi, India</i> Discussion	Role of magnetic resonance imaging in understanding the pathobiology of pulmonary arterial hypertension
11:50-12:10 12:10-12:15	<b>Vishal Bansal</b> <i>Vallabhai Patel Chest Institute, Delhi, India</i> Discussion	Interventions to Improve Hypoxia Tolerance
12:15-12:35 12:35-12:45	<b>Anurag Agrawal</b> <i>Ashoka University, Sonipat district, Haryana, India</i> Discussion	From Bots to Robots: How AI is changing Health and what it means for high altitude medicine
13:00-14:00	<b>LUNCH</b>	

**Session – 12**  
**Young Investigator Talks**  
**Chair: Rahul Kumar, Rakesh Kukreja**

Time	Speaker	Title of Talk
14:00-14:20	<b>Taylor Shay Harman</b> <i>Syracuse University, USA</i>	Andean versus Tibetan adaptive modes: evidence at rest and during exercise
14:20-14:25	Discussion	
14:25-14:45	<b>Shaarika Munshi</b> Imperial College London, London, UK.	Variation in hypoxemia adaptation in patients with pulmonary arteriovenous malformations- clinical quantification and predictors of exercise capacity
14:45-14:50	Discussion	
14:50-15:10	<b>Hiroaki Arima</b> <i>Nagasaki University, Japan</i>	Gender difference and polycythemia associated with polymorphism in rs13419896 and rs2790859 among Tibetan highlanders living in Mustang, Nepal
15:10-15:15	Discussion	
15:15-15:35	<b>Rikeshwer Prasad Dewangan</b> Jamia Hamdard, New Delhi, India	Targeting Hypoxia-Inducible Factor (HIF): An Aspects of Medicinal Chemistry and Drug Development
15:35-15:40	Discussion	
15:40-16:00	<b>Manzoor Ali</b> <i>CSIR-IGIB, Delhi, India</i>	Profiling of circulating cell-free DNA and its release mechanisms in High-Altitude Physiology & Pathophysiology
16:00-16:05	Discussion	
16:05	<b>Tea/Coffee</b>	

**Session – 13**  
**Panel discussion - Clinical Hypoxia at High altitude**  
**Chair: Forhad A Zaman**

Time	Speaker	Title of Talk
16:30-17:30	<b>Dr Manasi Bhattacharjee</b> <i>AIIMS Guwahati, India</i> <b>Dr Diganta Borah</b> <i>AIIMS Guwahati, India</i> <b>Dr Kalyan Sharma</b> <i>AIIMS Guwahati, India</i> <b>Dr Ankur Khandelwal</b> <i>AIIMS Guwahati, India</i> <b>Dr Rashmi Agarwal</b> (Moderator) <i>AIIMS Guwahati, India</i>	Clinical Hypoxia at High altitude

**Session – 14**  
**Awards and Valediction**  
**Chair: Santosh Pasha, Rahul Kumar, Aastha Mishra**

Time	Activity
17:30-17:50	Announcement and Presentation of Awards
	Dr. Qadar Pasha Young Investigator Award (A certificate and a cash award of INR 20K)
	Best Poster Awards
17:50-18:10	Valediction: Vote of thank Meeting Organizers
19:00	<b>DINNER AND EXPLORATION OF SCIENTIFIC COLLABORATIONS</b>

**Day 5: Thursday, August 8, 2024**

**Roundtable discussions over breakfast: Targets achieved during the symposium**

**Local Hospital Visit / Interactions with HA physicians**

**Bon voyage with an enriched experience, &  
We meet at the 8<sup>th</sup> International Leh Symposium 2026**