

Meeting Report of a “International Conference on Spiritual Neurosciences” held on the 16-17th November 2024 by the Department of Neurology, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, Dehradun

The Department of Neurology and the Neuroscience Centre at Swami Rama Himalayan University (SRHU), Dehradun organized the first-ever International Conference on "**Spiritual Neurosciences**" with an aim to advance evolutionary and holistic healthcare as envisioned by H.H. Swami Rama, the founder of the Swami Rama Himalayan University, Jolly Grant, Dehradun.

Swami Rama's experimentation combined the practical methodologies of Western Science with the traditional knowledge and wisdom of Eastern Sages. The practices adopted through merging of a profound Neurology Department and Yoga school committed promoting and applying the comprehensive approach for healthy physical and mental health. The conference featured presentations on topics such as **EEG Correlates of Meditation, Yoga Nidra and Cognitive Reserve and Meditation** by distinguished Neuroscientists from India and abroad. It was a novel attempt to incorporate the latest neuroscience knowledge with ancient Indian wisdom to enhance the understanding and application of holistic care principles. This initiative is designed to establish a paradigm for a comprehensive approach towards preventing and managing neurological disorders aiming at optimal health and well-being. Its overarching objective is to advance a genuinely humanitarian approach to healthcare

Session 1 on Spiritual Practices and Current Neurosciences began with a talk by Dr Rajesh Manik, Kalinga University, Naya Raipur on Neural Anatomy and Physiology of Human Chakra. He discussed the anatomical and physiological aspects of human chakras wherein he had explored their association with functional chakras and various nerve plexuses, including the Muladhara, Swadhisthana, Manipura (solar plexus), Anahata (cardiac plexus), Vishuddha (brachial plexus), and Ajna chakras. He also discussed how these energy centers, described in ancient traditions, could potentially intersect with scientific understandings of neural activity and physiological processes. He researched as to how functional chakras might influence endocrine systems, stress responses, and overall human well-being, opening avenues for integrative research between spiritual concepts and medical science. Dr Shobit Garg, SGRR University presented his research on Neurobiology of Stress: The PNIE Axis. He delved into the historical evolution of stress concepts and its neurobiological underpinnings. He explained how chronic psychological stress activates the HPA axis, which remains hyperactive, leading to prolonged fight-or-flight responses. This has significant implications for immune health, as stress increases susceptibility to viral infections via the CTRA pathway. He highlighted stress management practices like transcendental meditation, Hatha yoga, Vipassana, and mindfulness, which have been shown to reduce CTRA scores, thereby enhancing resilience against stress-induced health issues. Dr Swami Dayadhipananda, Ramakrishna Mission Hospital, Mumbai talked about the Levels of Consciousness: Spiritual and Neuroscience Concept. Dr Dayadhipananda emphasized on the interplay between ancient wisdom and neuroscience in understanding consciousness. He discussed three levels of consciousness—conscious, subconscious, and unconscious—aligning them with traditional concepts of Sat (existence), Chit (awareness), and Anandam (bliss). Through case studies, he demonstrated how conventional treatments are insufficient for holistic well-being. He advocated for

integrated approaches involving yoga and ancient knowledge to elevate consciousness and self-management, even for conditions like Type 1 diabetes.

Dr John Clark, USA spoke on QEEG: Role in Spiritual Practices. He explained how advanced imaging techniques like qEEG, EEG, and fMRI have deepened our understanding of brain activity during meditation. He traced the history of meditation research and described how tools like LORETA can analyse brainwave changes associated with spiritual practices. He discussed how meditation enhances brainwave stability, breathing patterns, and HRV. These findings highlight meditation's transformative effects on neural functioning and its potential for biofeedback therapy.

In the first Plenary Lecture, Prof. B N Gangadhar, Chairperson, International Medical Commission (NMC) expressed science of **Spirituality & Integrative healthcare in Mental Health**. He emphasized Ayurveda's holistic approach to health, which includes spiritual well-being, and underscored the growing evidence linking yoga and spirituality to improved mental health outcomes. He called for developing integrative healthcare models that combine traditional and evidence-based practices, leveraging complementary and alternative medicine (CAM) to empower patients. He highlighted research showing how yoga improves mental coherence and advocated for spiritual lifestyles to achieve total health. Dr Prakash Keshaviah, SRHU, Dehradun in his plenary talk shared His Holiness Swami Rama's Messages on Willful control of Autonomic Nervous System (Voluntary Control Over Involuntary States). He talked **on** groundbreaking insights from Swami Rama's work at the Menninger Foundation. Swami Rama demonstrated remarkable control over physiological processes, such as regulating blood flow and stopping his heart for 10 seconds. These experiments, supported by scientific evidence, showed his ability to generate specific brainwave patterns, such as delta, theta, and alpha waves, at will. Dr Keshaviah also introduced Swami Rama's body-breath-mind-soul model, illustrating the profound connection between spiritual practices and physiological states.

During session 3 on Neural Networks and Evaluation technique for Spiritual Practices, Dr Ashwani Bhat, SRHU, Dehradun presented his research work on Neural Networks involved in Meditation. Dr Bhat has been working on the neural mechanisms underlying meditation, focusing on attention as a fundamental cognitive domain. He explained the roles of key neural networks, such as the default mode, fronto-parietal, and salience networks, in regulating attention. By transitioning between focused attention and open monitoring states, meditation alters brain activity to enhance selective attention. He provided evidence on the cortical and subcortical regions involved in meditation, emphasizing the active role of these processes in reducing default mode network activity. Dr. Ravindra P.N. from NIMHANS, Bangalore, delivered an insightful talk on the intricate relationship between ageing, sleep, and the role of meditation in influencing sleep patterns and consciousness. He explored how ageing affects sleep quality, with common challenges including reduced sleep efficiency, fragmented sleep, and a decline in slow-wave sleep, which is crucial for cognitive and physical restoration. Dr. Ravindra highlighted the transformative potential of meditation in mitigating these age-related sleep disturbances. He explained that meditation practices promote relaxation, reduce stress, and enhance the quality of sleep by modulating the neuro-physiological pathways involved in sleep regulation. Furthermore, meditation can deepen one's awareness of "sleep consciousness," offering unique insights into the interplay between the mind and sleep states.

Dr Binny Sareen, Peace Ambassador, Mount Abu shared his work on Cognitive Reserve and Meditation highlighting as to how meditation strengthens cognitive reserve, the brain's ability to adapt and find alternative ways of performing tasks. She explained how meditation fosters neuroplasticity, enhances self-awareness, and boosts working memory. Combining spiritual practices like music with meditation was shown to have profound benefits for brain health and cognitive resilience. Dr Naveen K.V., University of Sydney while presenting the Role of Integrated medicine in current medical practice (Functional Integration: An Operational Model) differentiated between alternative, complementary, and integrative medicine, emphasizing the need to incorporate traditional practices into evidence-based frameworks. He envisioned a future where integrative medicine becomes the foundation of medical specialties, advocating for India's leadership in preserving and advancing traditional knowledge within global healthcare systems.

Day 2 of the conference was held at the serene Sadhaka Gram Ashram in Rishikesh, fostering an atmosphere of introspection and learning. The day commenced with a serene guided meditation session led by Swami Ritavan Bharati Ji. His gentle guidance helped participants connect with their inner selves, fostering a sense of mindfulness, calm, and spiritual awakening. The session created a harmonious atmosphere, setting the tone for the day's enriching discussions and activities. The Scientific session on "Occult Sciences" followed, featuring an expert panel comprising Dr. R K Verma, Professor of Surgery at SGRR University, Dr. Sanjeev Kumar Pandey, Professor, SRHU, Dr. Avinash Priyaranjan, Professor at SRHU, and Dr. Malini Srivastava, Associate Professor at SRHU. The keynote presentation, delivered by Professor Manjari Tripathi from Head of Department Neurology, AIIMS New Delhi, focused on "Yoga Nidra: Current Understanding." Professor Tripathi discussed the integration of Yoga Nidra with cognitive behavioral therapy, highlighting its effectiveness in promoting restorative sleep and improving N3 (deep) sleep for individuals with chronic sleep disorders. She elaborated on the inverse relationship between stigma and quality of life in epilepsy patients and emphasized the role of Yoga in reducing stigma and enhancing well-being. Additionally, she explored the therapeutic potential of the ketogenic diet as a complementary treatment for epilepsy, alongside Yoga Nidra. Her insightful talk underscored the growing recognition of Yoga Nidra as a powerful, non-pharmacological approach for managing sleep disorders and neurological conditions, blending ancient wisdom with modern scientific evidence. The second topic, "Perspectives on Hypnosis in Current Medical Practice," was presented by Professor R.M. Kaushik from SRHU. He explained hypnosis as an altered state of consciousness, akin to Yoga Nidra, and discussed its physiological effects and the brain areas affected by hypnosis. Professor Kaushik highlighted the application of hypnotherapy in stress reduction, allergy response modification, and hypno-analysis. He also conducted a live session on a systematic relaxation technique for inducing a hypnotic trance, focusing on the 61-point relaxation method. The next keynote presentation, "Plant-Based Diet and Health," was presented by Professor P. Sarat Chandra from Head of Department Neurosurgery AIIMS, New Delhi. He discussed the benefits of a vegan diet and plant-based proteins, noting that plant-based eaters consume 70% more protein than average. He highlighted the impact of plant-based diets on gut microbiome health and the risks of cancer induction associated with processed meat-based diets. Professor Chandra emphasized the antioxidant-rich nature of plants and their role in reducing inflammation. Dr. Prasanna Despande's session on Current Scope of Medical

Astrology offered an in-depth exploration of the intersection between astrology and human health. He began by introducing the core concepts of astrology, including the use of horoscopes, and how the alignment and movement of celestial bodies influence various aspects of life, including physical well-being. Dr. Despande explained the importance of the 12 Rashis (zodiac signs), each of which is believed to correspond to different organ systems within the body. The alignment of the planets and stars in a person's Kundli can provide insights into their predispositions to certain health conditions, potential strengths and weaknesses, and even predict future health challenges. This ancient practice, he suggested, could be a complementary tool in modern healthcare, offering a holistic view of an individual's health based on both physical and metaphysical factors.

A brief announcement was made by Prof. Deepak Goel, HOD, Department of Neurology, SRHU on formation of a new Society on Spiritual Neurosciences as an aftermath of the conference. It will be established meeting all legal requirements of any society with a periodic Journal where all research papers related to subject-matter and its advancement could be published.

The session concluded with a ceremonial felicitation of the expert panel and keynote speakers, recognizing their valuable contributions to the conference. Dr. Deepak Goel and Dr. Ashwani Bhat from SRHU presented tokens of appreciation to the speakers, celebrating the knowledge shared during this insightful discussion on the scope of medical astrology. Together, these sessions provided a comprehensive exploration of ancient and modern approaches to health and wellness, blending Yoga, hypnosis, plant-based nutrition and astrology with cutting-edge scientific research for promoting holistic well-being.

Author's details

Dr Rajendra Dobhal, Vice Chancellor, Swami Rama Himalayan University,
Email-vc@srhu.edu.in,

Dr Deepak Goel, Department of Neurology, Himalayan Institute of Medical Sciences,
Swami Rama Himalayan University,*

(Convener) Email-deepakgoel@srhu.edu.in,

Dr Ashwani Bhat, Department of Neurology, Himalayan Institute of Medical Sciences,
Swami Rama Himalayan University,

Email-ashwanibhat@srhu.edu.in,

Dr Nikku Yadav, Department of Clinical Research, Himalayan Institute of Medical
Sciences, Swami Rama Himalayan University,

Email-nikkuyadav@srhu.edu.in