

Module 14 – Less Frequent Methods in Acupuncture and in Comprehensive Medicine

Lecturers: MUDr. Gustáv Solár, PhD
Doc. MUDr. Karol Hornáček, PhD
PaedDr. Zlatica Solárová, PhD.
PhDr. Kvetoslava Kotrbová, MPH, PhD.
Ing. Daneš Koťátko
Ing. John Stuart Reid

The objective of education module is to share and exchange with the participants the latest scientific and research results and theoretical knowledge and principles in the field of the physics of sound and light, knowing of which is necessary for prevention, diagnostics and treatment of the patients in comprehensive patient care performed not only by doctors; also from the field of the latest digital methods of brain activity analysis and other neurotechnologies applicable in clinical practise; clinical and interdisciplinary aspects in comprehensive therapy and rehabilitation as well as the importance of multiprofessional cooperation in the area of providing health care. The fundamental theoretical knowledge of these fields contributes to an improved quality of differential diagnostics and comprehensive acupuncture therapy and prevention in the participants' medical practice, with a special focus on the application within the medical discipline of acupuncture, especially as far as enriching this with knowledge of the area of sound therapy and music medicine, neurotechnologies and other less frequent methods are concerned, since the care provided in this way as a rule presupposes multiprofessional cooperation. The participants will be familiarised with also with these problematics as well as with the interconnections between these methods. The course is open to medical doctors both with and without a specialization.

Characteristics and contents, detailed overview of topics of education:

The participants will receive the fundamental theoretical knowledge in the fields of the physics of sound and light, sound therapy and music medicine, brain diagnostics using digital technologies and therapy based on the latest neurotechnologies, clinical and interdisciplinary aspects of comprehensive therapy and rehabilitation as well as the importance of multiprofessional cooperation in the area of providing health care always in the context of their potential application within preventive, diagnostic and therapeutic techniques in acupuncture.

The course is completed by passing a theoretical examination in its individual parts that is also a precondition for attending the next part, represented as a rule by other modules of this Clinic's study programme accredited by the Ministry of Health of the Slovak Republic or possibly separate education events provided by the partner organizations SonicAge, Ltd. Great Britain, Dynamic Business Services, Ltd. (Dynamické obchodní služby, spol. s r. o.) Prague and the Department of Psychiatry, Balneology and Medical Rehabilitation of the Faculty of Medicine of the Slovak Medical University in Bratislava – upon individual agreement between the participant and the organization. At the end of the course and after passing the final

examination, the participants receive a certificate of attendance. The participation in individual parts of the course is confirmed by a certificate of attendance.

Form of event: course / online live

Target group: medical doctors, the course is intended only for doctors

Timeline: 48 hours (2 long weekends of 3 days x 24 lessons)

Credits: 24

Preliminary Annotation of the Course:

1. First Part: Introduction to the Problematics

(Lecturer MUDr. Gustáv Solár, PhD.)

- 1.1 Interdisciplinary Contexts of Comprehensive Medicine
- 1.2 Medical Consequences of the Philosophy of Comprehensive Medicine
- 1.3 Less Frequent Methods in Medicine
- 1.4 Energy-Information Theory of Acupuncture
- 1.5 Analysis of Energy-Information Factors and Patient's Symptoms and Processes from Patient's Environment
- 1.6 Energy-Information Processes and Their Modelling
- 1.7 Key Phenomenon of the Philosophy of Comprehensive Medicine
- 1.8 Drawbacks and Stages of Anamnesis in Connection with Comprehensive Diagnostics
- 1.9 Somatic, Psychic, Social and Spiritual Causes of Etiopathogenetic Processes
- 1.10 Holistic Understanding of Health and Illness in the Context of Clinical Experience

2. Second Part: The Physics of Sound and Light and Clinical Aspects of Sound

(Lecturer: Ing. John Stuart Reid)

The Physics of Sound and Light

- 2.1 Sound as a formative force in the Universe;
- 2.2 Introduction to Faraday Wave phenomena/ cymatics / compression ratio of sound in water
- 2.3 Short demonstration of cymatics, using a Chladni plate
- 2.4 The physics of sound and light and the relationship between sound and light;
- 2.5 Resonance definition and demonstrations;
- 2.6 Wavelength, Amplitude, Frequency and Speed of sound calculations;
- 2.7 Harmonics in music and speech;
- 2.8 Introduction to psychoacoustics and the cochlea; to decibel calculations and Hemisync.
- 2.9 Speed of sound Definition
- 2.10 Sound waves versus sound bubbles
- 2.11 Wavelength of sound versus frequency of sound

- 2.12 Reverberation time criteria for human speech versus musical performance
- 2.13 White noise/ Sounds in Nature / Fast Fourier Transforms
- 2.14 Elastic collisions versus inelastic collisions and the infrared component of sound / demonstration: creation of infrared by sound
- 2.15 Alfred Tomatis--The Concious Ear
- 2.16 Vocal sound and the phi ratio
- 2.17 Vocal sound spectra for females and males
- 2.18 Directional characteristics of human voice
- 2.19 Voice and musical ranges versus frequency
- 2.20 Sound pressure level and sound power level
- 2.21 Room Eigentones and their relevance to Sound Therapy and applications
- 2.22 Background noise criteria

Clinical Aspects of Sound

- 2.23 Definitions of Therapeutic Ultrasound, Therapeutic Audible Sound,
- 2.24 Discussion concerning studies of Therapeutic Ultrasound, Therapeutic Audible Sound
- 2.25 Chemical and biochemical aspects of sound / cell to cell communication in the infrared spectrum
- 2.26 Therapeutic support of audible sound-alternative sources, e.g. Gongs, Tibetan bowls, crystal bowls, tuning forks
- 2.27 The role of resonance in Sound Therapy / body part frequency data
- 2.28 Introduction to sonocytology / Dr James Gimzewski/ video showing spectra for healthy cell and stressed cell
- 2.29 Differentiating between the sounds emitted by healthy cells versus cancer cells / the potential for eradicating cancers
- 2.30 Pain mediation by sound, to role of nociceptors, afferent fibres and natural opiates
- 2.31 The role of music in suppressing cortisol and boosting dopamine levels
- 2.32 The role of sound in stimulating cells in the G0 / cell quiescent phase of the cell cycle excitation of Integral Membrane Proteins.
- 2.33 Medical interventions by ultrasound
- 2.34 Therapeutic support by intrasound and infrasound and audible sound;

3. Third Part: Digital Methods of Brain Activity Analysis and Neurotechnologies

(Lecturer: Ing. Daneš Kořátko)

- 3.1 Digital Methods of Brain Activity Analysis
- 3.2 Neurotechnologies and Neurophysiology
- 3.3 Measuring and Processing of Biological Signals
- 3.4 Qualitative EEG Examination, Evoked Potentials
- 3.5 Audiovisual Stimulation, Nasal Stimulation
- 3.6 Biological Feedback. Neurofeedback, Biofeedback

- 3.7 Neuropsychologic Diagnostics. Quantitative QEEG Methods
- 3.8 Other Neurotechnologic Methods Intended for Improving Brain Activity
- 3.9 Optimization of Brain Activity by Neurotechnologies
- 3.10 Summary, World Research Centres, Trends, Biomarkers

4. Fourth Part: Clinical and Interdisciplinary Aspects of Comprehensive Therapy and Rehabilitation

(Lecturer: Doc. MUDr. Karol Hornáček, PhD.)

- 4.1 Forms of Motion Therapy and their Intersections with Less Frequent Methods
- 4.2 Comprehensive Psychiatry, Balneology and Medical Rehabilitation and Their Potential Multiprofessional Intersections
- 4.3 Substantiation of Rehabilitation and Its Development
- 4.4 Application Areas of Rehabilitation: Physical, Psychic, Social
- 4.5 Physical Medicine
- 4.6 Medical Physical Education (Application, Forms)
- 4.7 Balneology, Climatology
- 4.8 Using Rehabilitation in Treatment and Preventive Care
- 4.9 Posture and Possibilities of Influencing It by Rehabilitation
- 4.10 Manual Medicine, Acupuncture, Animotherapy
- 4.11 Energy, Information

5. Fifth Part: Common Aspects of Medicine and Other Disciplines and Sciences in Relation to Prevention, Diagnostics, Therapy and Research

(Lecturer: MUDr. Gustáv Solár, PhD.)

- 5.1 Common Aspects of Medicine and Other Disciplines and Sciences in Relation to Prevention, Diagnostics, Therapy and Research of the Problematics
- 5.2 Somatic Psychological, Social, Spiritual and Physical Factors of Therapeutic Process
- 5.3 Theoretical Models in Acupuncture and in Comprehensive Medicine
- 5.4 Pyramidal Model and its Substance and Interdisciplinary Connections
- 5.5 Selected Physical Energy-Information Aspects of the Organism

6. Sixth Part: Acupuncture Questionnaire in Comprehensive Diagnostics

(Lecturer: PaedDr. Zlatica Solárová, PhD.)

- 6.1 History of Questionnaire - Theoretical Basis of Traditional Philosophy
- 6.2 Specifics of Questionnaire in Acupuncture Diagnostics
- 6.3 Structure of Questionnaire
- 6.4 Assessment of Questionnaire
- 6.5 Personality Typology from the Perspective of Current Knowledge (Hypothesis)
Pathologic Patterns in Diagnostics and Assessment of Questionnaire
- 6.6 External and Internal Harmful Factors

7. Seventh Part: Multidisciplinary Cooperation in Health Care – Current State and Opportunities

(Lecturer: PhDr. Kvetoslava Kotrbová, PhD., MPH)

7.1 Current Challenges for the World's Health Care Systems

7.2 Situation in Slovakia – Capacities, Structure, Historical Experience as Source of Inspiration

7.3 Indicators of Health, Well-Being and Quality of Life

7.4 Multiprofessional Model of Primary Health Care of the European Expert Panel and Potential Projections in Comprehensive Acupuncture Health Care Using Less Frequent Methods

7.5 Comprehensive Multiprofessional Health Care and Education System