# Aim

The recognition that a disease or a lesion of the somatosensory system itself can be associated with the experience of pain has been a major insight. The recent change in the definition of neuropathic pain and its role as a descriptor has prompted a reappraisal of how to deliver this topic (EFIC Core Curriculum for the European Diploma in Pain Medicine - 3.2). The Bergamo EFIC School will assist pain clinicians to refine their clinical neurological diagnostic and assessment approach to identify neuropathic pain and to improve their ability to interpret clinical, instrumental and laboratory finding and to establish the most appropriate treatment.

# **EFIC President**

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Silviu Brill | Israel
Didier Bouhassira | France
Roberto Casale | Italy
Anthony Dickenson | UK
Per Hansson | Sweden
Luis Garcia Larrea | France

Maria Nolano | Italy Piercarlo Sarzi-Puttini | Italy Paola Sacerdote | Italy Riccardo Torta | Italy Valeria Tugnoli | Italy

# Course Venue

Habilita Care & Research Hospitals San Marco Branch, Piazza della Repubblica, 10 24122 – Bergamo, Italy

# General Information

School's Director: robertocasale@habilita.it School's Secretariat: efic@defoe.it

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# Organizing Secretariat



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# 9<sup>th</sup> EFIC BERGAMO PAIN SCHOOL "NEUROPHATIC PAIN"

9th - 12th October 2017

# Roberto Casale

EFIC Bergamo Pain School, Scientific Director Habilita Care and Research Rehabilitation Hospitals



Piazza della Repubblica, 10 24122 – Bergamo, Italy

Endorsed by European Pain Federation EFIC®



Opening Lecture. Definition and mechanisms of pain. Translation of symptoms into pain mechanisms | A. Dickenson

This pivotal lecture will cover mechanisms of pain in the context translation to patients.

Transduction, Transmission: Perception. Modulation. Nociception and pain. Pain without nociception and nociception without pain. Nociceptive and neuropathic

#### Coffee Break

#### A Neuroanatomy refresh - Part I & II

Part I - Pain generators in the nervous system | R. Casale

"Where" a neurological lesion or disease might express itself with neuropathic pain (peripheral or central).

### Part II - How a neurological lesion or disease might express itself | D. Bouhassira

Positive (allodynia, hyperalgesia, hyperpathia) and/or negative sensory symptoms with other (motor, vegetative) symptoms and how to identify neuropathic pain as a player in those conditions.

Pain questionnaires, diaries and pain mapping, quality of life and ADL questionnaires: when and how to use them. Assessment of patients with barriers to communication | D. Bouhassira

A critical reappraisal of their usefulness and limits with special regards on: Neuropathic pain questionnaires (LANSS; BPI, NPQ, DN4 etc.;) Infants, children, patients with cultural, educational or language barriers to communicate, adults with cognitive problems, intubated or minimally conscious state patients pose a difficult task. As a consequence there are no shared guidelines that can help the clinician in assessing and treating pain.

FROM 2 TO 6 pm

Objective pain diagnostics: theory and practice - Part I Routine neurophysiology (Clinical indications and limitations) EMG, ENG, Reflex responses (blink, RallI). | L. Garcia-Larrea

SEPs, PEPs, CHEPS (different somatosensory evoked potentials from different types of stimuli and their meaning). | L. Garcia-Larrea

Testing the autonomic nervous system in clinic. | V. Tugnoli

Quantitative Sensory Testing (thermal, vibratory) examination in normal subjects. | R. Casale

#### Coffee Break

## Afternoon practical training

Participants will carry out exercises planning a diagnostic workout for neuropathic pain and applying some of the above-mentioned techniques (e.g. nerve conduction velocity, QST, vegetative tests ,etc) on themselves.

They will also use and compare different pain questionnaires on themselves.

## TUESDAY | 10 October 2017

FROM 8.30 TO 1 pm

The skin biopsy: the intraepidermal nerve fiber density (IENFD) | M. Nolano Autonomic nervous system testing | V. Tugnoli

#### Coffee Break

# Clinical red flags, laboratory red flags | P. Sarzi-Puttini

(blood samples for inflammatory markers, etc.) Key points to make a differential diagnosis between nociceptive and neuropathic pain. In the rheumatologic patient

## The clinical examination of the chronic neuropathic pain patient | P.Hansson

This pivotal tutorial will examine diagnostic approaches to most common pain syndromes in neurology i.e.: painful diabetic polyneuropathy, post herpetic neuralgia, entrapment neuropathies (including complicated low back pain).

- Data from clinical evidence and case scenarios are presented and discussed in relation with guidelines on Neuropathic pain (IASP NeupSig EFNS etc)
- Diagnostic work-up of neuropathic pain flow chart
- QST interpretation in pain medicine
- Pressing issues

#### Lunch Break

#### Afternoon Practical Training

### The clinical examination of the chronic neuropathic pain patient in practice | P. Hansson

Under the guidance of an expert clinician, participants will have the opportunity to participate to an outpatient consultation of the most common pain syndromes in neurology painful diabetic polyneuropathy, postherpetic neuralgia, limb nerve entrapment neuropathies (including complicated low back pain).

#### Coffee Break

## The QST examination in patients | P. Hansson

Participants will carry out exercises applying what they have learned in the morning lessons through workshops composed of small groups, role playing and multimedia simulations including QST testing.

# WEDNESDAY | 11 October 2017

FROM 8.30 TO 1 pm

Guidelines on the pharmacological treatment of neuropathic pain: which one and what revision P. Hansson

Drug classification and terminology from a pain medicine perspective - Part I | P.

Drugs acting on transduction: nociceptor activation and peripheral sensitization Drugs acting on transmission (from periphery to spinal cord; central sensitisation)

Coffee Break

# Drug classification and terminology from a pain medicine perspective - Part II | R.

Drugs acting on modulation (descending pathways)

Drugs acting on perception

Associated therapeutic goals (sleeping disorders, depression etc) | R.Torta

Cannabinoids | S.Brill

Lunch Break

FROM 2 TO 6 pm

#### Topical treatments | R. Casale

Ketamine, Baclofen, Lidocaine, Capsaicine, Benzodiazepine etc.

Physical modalities for pain control Part I II & III

Part I - Non invasive physical treatments | R. Casale

- TENS (and non invasive electrotherapy in general);
- Heat & Cold;
- LASER;
- Mechanical stimulation
- Physiotherapy and movement

# Coffee Break

Part II - Mirror Therapy, Imagery, "Pain box" | R. Casale

Aperitiv Session - Wine tasting and the psychophysical approach to pain perception. Is pain a "simple experience"?

Attendants will describe sensations evoked by different stimulatons (including wine tasting)

# THURSDAY | 12 October 2017

FROM 8.30 TO 1 pm

Physical Therapy for pain control Part I II &III

Part III - Invasive or minimally invasive treatments using physical agents | S. Brill

Neuromodulation (SCS and related techniques): evidence based evaluation

# Coffee Break

Heat and cold for thermoablation and related techniques Radiofrequency

When to use or not to use invasive or minimally invasive treatments using physical agents: a real word analysis

## Take home messages & Learning questionnaires

In this setting, the clinical and diagnostic tools learned during the School will be discussed and compared, with teachers, in relation to real clinical cases.

## Lunch Break