

Can Studies of Co-morbidities with TMJDs Reveal Common Mechanisms of Disease?

The Fifth Scientific Meeting of the TMJ Association
June 1–3, 2008
Bethesda, Maryland

Held at the Federation of American Societies for Experimental Biology (FASEB), Bethesda, Maryland, June 1–3, 2008, and co-sponsored by the US National Institutes of Health (NIH) and the National Institute of Dental and Craniofacial Research (NIDCR), the fifth, bi-annual meeting of the TMJ Association, organized by the eminent Milwaukee-based, US TMJ patient advocacy group, was a clear demonstration that the field of TMJ has come a long way in the past 8 years. Besides the organizers, representatives of the American Chronic Pain Association, Help for Headache & Migraine, International Foundation for Functional Gastrointestinal Disorders, Endometriosis Association, Interstitial Cystitis Association, National Vulvodynia Association, National Fibromyalgia Association, and Chronic Fatigue Association (CFIDS) were also in attendance.

The intent of the meeting was (1) to define the degree of overlap between the conditions represented, and (2) to identify the scientific opportunities that will advance the understanding of mechanisms underlying the comorbid clinical phenomena shared by many chronic pain conditions. Besides allodynia, impaired motor function, problems with appetite, sleep, reproduction, cardiovascular systems, memory, and negative emotions generate the symptoms that add to the clinical complexity on an individual basis. The pivotal role of persistent pain in the symptom complex of the conditions spoken for by both patients and their advocates rapidly emerged as the dominant theme. The role of emerging biotechnological tools offering opportunities to unravel complexly regulated phenomena for ill-defined disease phenotypes stimulated excitement and new scientific pursuits. This subject was elegantly addressed in an introductory presentation given by the NIDCR Director, Dr Lawrence Tabak.

The program called for 25 oral presentations, one patient round table discussion, 13 posters, and assigned time to three working groups that dealt with immediate scientific opportunities and perceived obstacles to progress. Presenters included (in the order presented): Lawrence Tabak (NIH-NIDCR), Christian Stohler (University of Maryland), Peter Svensson (University of Aarhus), William Maixner (University of North Carolina), Richard Lipton (Albert Einstein College of Medicine), Paul Durham (Missouri State University), Christine Sang (Harvard University), Linda Watkins (University of Colorado), Emeran Mayer (University of California, Los Angeles), Karen Berkley (Florida State University), Larissa Rodriguez (University of California, Los Angeles), Lori Birder (University of Pittsburgh), Daniel Clauw (University of Michigan), Lesley Arnold (Cincinnati College of Medicine), Jon Levine (University of California, San Francisco), Dane Cook (University of Wisconsin-Madison), Suzanne Vernon (CFIDS), Nancy Klimas (University of Miami), Joan Bathon (Johns Hopkins University), Alisa Koch (University of Michigan), Ke Ren (University of Maryland), Jon Kar Zubieta (University of Michigan), David Bereiter (University of Minnesota), and John Watson (University of California, San Diego). Topics focused on the nature of the various chronic pain conditions and description of and presumed mechanisms underlying the comorbid phenomena.

Subsequent discussions emphasized the need for increased collaboration between investigative teams and the emergence of interdisciplinary team science that is required to bring the bioinformatics thinking into this field. It was further understood that the emerging scientific tools require a greater level of coupling between basic science and clinical expertise in order to be used to their fullest potential. There was the appearance among some

attendees that the sophistication of phenotyping is unequal among the chronic pain conditions and that gaps in the toolsets available to clinical scientists are limiting progress. The difficulties in assembling sufficiently large clinical cohorts need to be overcome by a multicenter approach.

Overall, this was another exciting conference assembled by Allen Cowley (University of Milwaukee). It offered the participants a good

picture of what the scientific opportunities are for developing a mechanistic understanding of the clinical phenomena referred to as the comorbid conditions that are shared by many chronic diseases, notably those where pain plays an important role clinically.

Christian Stohler
Associate Editor