

The Future of European Pain Research

Introduction

On 21 March 2023, Cristian Silviu Busoi MEP and Alex Agius Saliba MEP hosted a panel discussion on “The Future of European Pain Research” at the European Parliament.

Pain science and pain management are of crucial societal importance, though our understanding of pain is limited. This event showcased the IMI-PainCare project, where significant breakthroughs are being made for the benefit of patients everywhere, and provided a look to the future of European pain research and where funding should be prioritised in 2023 and beyond.



The event was divided in two parts:

1. The first one focused on showcasing the IMI-PainCare project. The IMI-PainCare project aims to improve the care of patients suffering from acute or chronic pain. IMI-PainCare consists of three subprojects; patient reported outcome measures to improve management of acute and chronic pain (PROMPT), pharmacological validation of functional pain biomarkers in healthy subjects and animals (BioPain) and improving translation in chronic pelvic pain (TRiPP).

The IMI-PainCare consortium consists of 40 participants from 14 different countries. 6 participants are from EFPIA (European Federation of Pharmaceutical Industries and Associations), 23 are from internationally acclaimed academic and clinical institutions, 5 are specialist SMEs, 3 are patient organisations, and 3 are scientific societies.

More information on IMI-PainCare: <https://www.imi-paincare.eu/>

- The second part focused on the European Pain Federation EFIC Pain Research Strategy. EFIC represents the European pain research community and serves as a forum for researchers, clinicians and educators focusing on pain. EFICs research strategy aims to optimise the management and understanding of pain by supporting high-quality, collaborative clinical and translational research as well as basic science.

More information on the EFIC research strategy:

<https://europeanpainfederation.eu/efic-pain-research/efic-pain-research-strategy/>

Agenda

Time	Item	Who
11:00-11:10	Welcome and assembly in the room	
11:10-11:15	Welcome from scientific leadership	Rolf-Detlef Treede (Heidelberg University)
11:15-11:20	Welcome from host MEP – the role of the European Union in health research	Cristian Silviu Busoi MEP (EPP)
11:20-11:50	Overview of IMI-PainCare from each sub-project leader 1. Functional biomarkers for pain 2. Translational research in pelvic pain 3. Standardizing patient reported outcome measures	1. Ombretta Caspani (Heidelberg University) and Tony Blockeel (University of Bristol) 2. Katy Vincent (University of Oxford) 3. Winfried Meissner (Jena University Hospital) and Esther Pogatzki-Zahn (University of Münster)
11:50-12:00	Patient input in pain research	Judy Birch (Pelvic Pain Support Network)
12:00-12:05	Pain and the European Commission's Mental Health Strategy	Alex Agius Saliba MEP (S&D)
12:05-12:20	Questions	Moderated by Rolf-Detlef Treede
12:25-12:35	Challenges and opportunities in translational pain research	Thomas Graven Nielsen (European Pain Federation EFIC)
12:35-12:45	Defining a strategy for the future of European pain research	Luis Garcia Larrea (European Pain Federation EFIC)
12:45-12:50	Access to pain management in Europe	Cyrus Engerer MEP
12:50-13:00	Questions and conclusion	Moderated by Rolf-Detlef Treede (S&D)

Key Points from Speakers

Introductory remarks

Rolf-Detlef Treede (prof.) (Heidelberg University) kicked off the event by welcoming the audience and speakers as well as introducing the agenda for the event and the objectives of

the IMI-PainCare project. Prof. Rolf-Detlef Treede also served as a moderator throughout the event.

Pietro Fiocchi MEP (ECR) spoke briefly of pain costs to the European Union as well as how patient follow-up procedures should be improved. MEP Fiocchi spoke of improvements by facilitating faster access to care that they are trying to implement in the Lombardi region of Italy.

Following that, **Cristian Silviu Busoi MEP (EPP)** provided a video message, where he began by thanking EFIC for their hard work. He stated that chronic pain affects roughly 1 in 5 Europeans, resulting in a huge disease burden with few efficacious treatments. MEP Busoi emphasized the urgent need for progress in the field of pain treatment and urged the European Union to look more closely at the field of pain science and invest funding into understanding more about its mechanisms and its treatment. He explained that pain has become a priority since 2019, how for example cancer is a priority under the Horizon Europe research project, and that pain will be included in future Horizon Europe calls. Busoi concluded by promising to continue to fight for research in healthcare. Full video available [here](#).

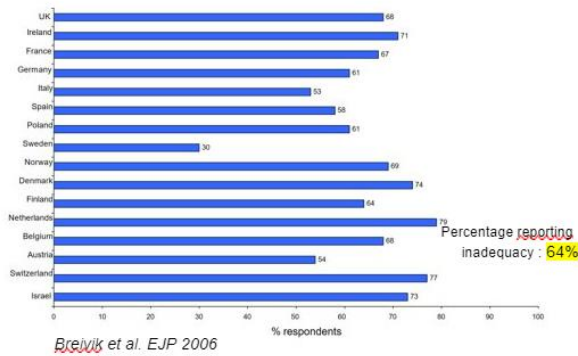


IMI-PainCare session

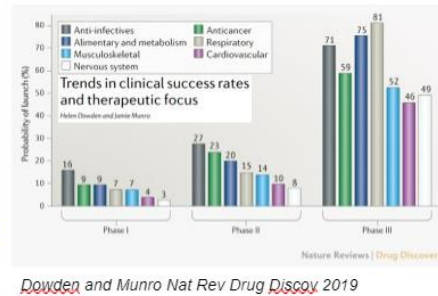
Catarina Leone (University La Sapienza), André Mouraux (UCLouvain), Ombretta Caspani (Heidelberg University) and Tony Blockeel (University of Bristol) gave a presentation on Biopain, one of the IMI-PainCare subprojects which focuses on Improving translatability of pharmacodynamic biomarkers in pain pathways.

- **Dr. Leone** mentioned the burden of pain as a societal condition and the staggering number of patients unhappy with treatment. She also spoke of the stagnation of drug development which is largely due to the lack of inter-disciplinary research.

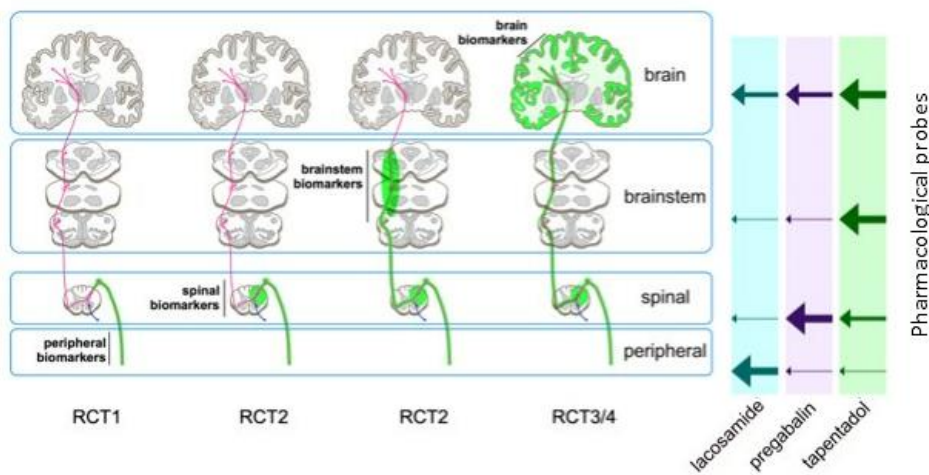
Inadequacy pain relief from medication



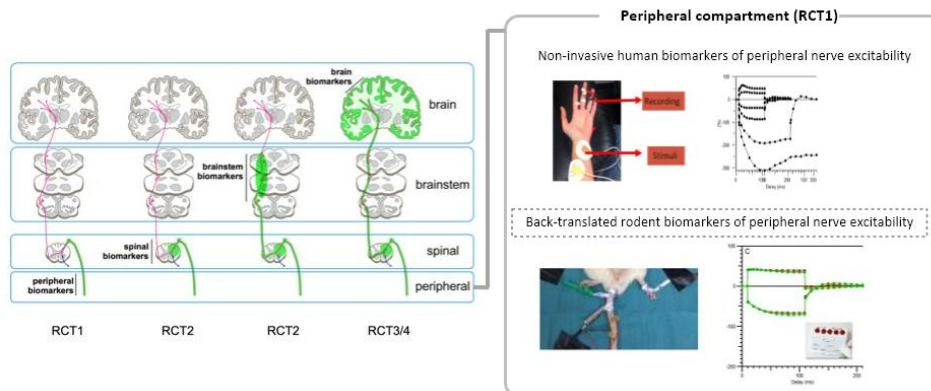
Low success rate in analgesic drug development



- **Prof. André Mouraux** explained signs in brain and spinal regions of how well the body responds to a drug for pain (biomarkers) and how three different drugs were tested and compared to establish the best biomarkers in healthy individuals.



- **Dr. Tony Blockeel** continued by explaining the different methods (e.g. probes, electrodes) researchers use to activate brain and spinal regions that may provide evidence for drug success.



- The presentation was concluded by **Dr. Ombretta Caspani** who stressed the role of biomarker research in progressing the development of new pain medicines. She explained that these biomarkers would inform personalisation of care, selection of particular drugs and doses, and predict patient response to different pain medicines.

Dr. Katy Vincent (University of Oxford) presented TRiPP, another IMI-PainCare subproject. She explained that pain conditions affecting women, such as bladder pain syndrome, are underfunded. She explained that women are more affected by chronic pain. She proceeded to introduce TRiPP (Translational Research in Pelvic Pain), which aims at improving translation in chronic pelvic pain by focusing on endometriosis-associated pain (EAP) and bladder pain syndrome (BPS).

Dr. Vincent explained that her team studied 786 women. Almost all were found to experience some type of chronic pain. The research included the following data collection methods:

- Questionnaires
- Blood samples
- Detailed pain testing, such as filling the bladder with water

Results highlighted the poor quality of life experienced by women with chronic pelvic pain. The results showed that painful sex is common and life impacting across all types of chronic pelvic pain. The study shed light on mechanisms that may be generating and maintaining chronic pain in these women, and how these results may inform personalised treatments. She highlighted the importance of improving animal models of chronic pelvic pain diseases to better represent the symptoms in humans.

Dr. Vincent concluded by emphasizing how invaluable the funding for the project was and how rewarding it was to be able to work so closely with patient partners.

“Conditions that chronically affect women are underfunded even though women are overrepresented in many pain conditions,” Katy Vincent from [@IMI_PainCare](#) on translational research in pelvic pain

Prof. Winfried Meissner (Jena University Hospital) and Prof. Esther Pogatzki-Zahn (University of Münster) presented PROMPT (Providing Standardized Patient-reported Outcome Measures (PROMs) for Improving Pain Treatment).

Prof. Winfried Meissner introduced the background of the project and their activities in aligning core patient reported outcomes to identify best practice and efficiency of drugs. He explained that many patients suffer from chronic and post-surgical pain which is why pain assessment is essential for treatment decisions.

Prof. Esther Pogatzki-Zahn explained how PROMPT took an international approach by involving many stakeholders and that data was obtained from almost 400 patients in order to detect best treatment options based on their recovery.

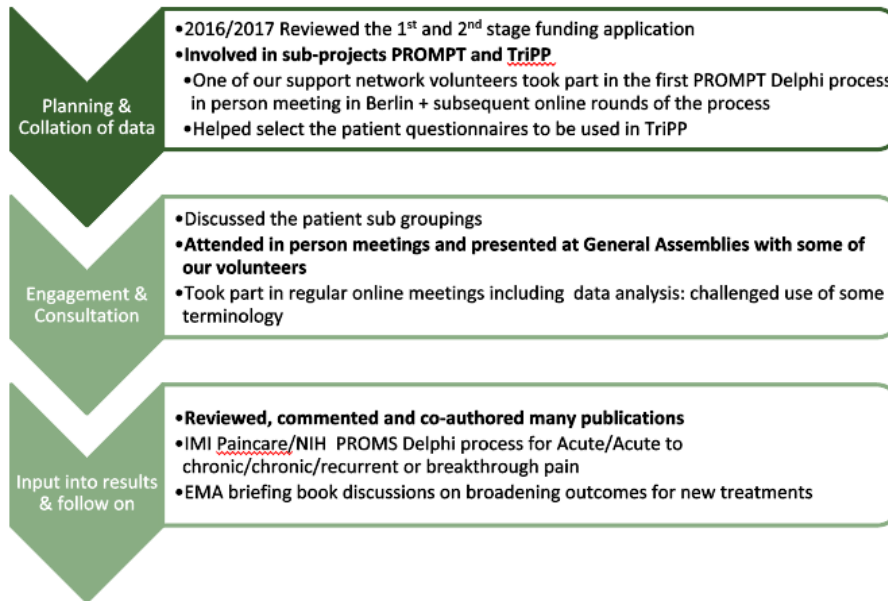
Currently, they are in the process of analysing the large number of different types of care.

Judy Birch (Pelvic Pain Support Network) presented the importance of patient input in pain research which means:

- planning
- disseminating
- research done with patients rather than to patients.

Ms. Birch explained how patient involvement is different from patient participation and shines light upon how in PROMPT, patients were involved in the planning of the study by helping in selecting questionnaires and in providing input in patient subgroupings. She also differentiated positive and negative experiences from the process, highlighting the importance of feeling included as well as the value of the interdisciplinarity of the project.

Slide from Ms. Birch’s presentation on patient involvement:



Liked	Disliked
Being included as much as we wanted to be	Understanding/dealing with admin: appreciated help with this
Not being dismissed	Use of some terminology (catastrophization, neuroticism)
Feeling that our input is valued	
Interdisciplinary aspects	
EU Public / private partnership	

Alex Agius Saliba MEP (S&D) then joined the speakers. He spoke of the EU Mental Health Strategy, the link between pain and mental health, and about the effect of pain on quality of life. MEP Saliba subsequently stated he would like to call for a specific pain dimension to the mental health strategy, and increased funding for pain research as part of any strategy that comes forward.



Moderator **Prof. Treede** raised the issue of stigma when it comes to pain, and **MEP Saliba** explained that the biggest taboo group are those unemployed and seeking employment, and how pain holds as much of a taboo as mental health issues.



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“Chronic pain and mental health often go hand in hand; we have to fight the stigma and make sure people are not suffering in silence,” MEP [@alexagiussaliba](#) states on [#TheFutureofEuropeanPainResearch @IMI_PainCare](#)

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Developing a Future Pain Research Strategy

Prof. Thomas Graven Nielsen (European Pain Federation EFIC) presented his paper on the Challenges and Opportunities in Translational Pain Research:

- He explained the aim of translating findings from bench to bedside, so from animal research to patient.
- He also introduced the five key concepts in this context:

1: TRANSLATIONAL PAIN RESEARCH

- Translating 'pain' at the laboratory bench
- Animal and human correlates of pain
- Adequate mechanisms and models for forward translation

2: FROM BENCH TO MAN

- Relevant animal models and clinical trials
- Measuring clinically relevant spontaneous/ongoing pain
- Considering sex and age

3: EXPLORING PAIN PERCEPTION AND ITS MODULATION IN HEALTHY HUMAN VOLUNTEERS

- Experimental induction of pain in human volunteers
- Experimental induction of peripheral sensitization and facilitation of central mechanisms
- Experimental manipulation of descending modulatory pathways
- What can be recorded in humans?
- From healthy volunteers to patients
- Considering sex and age

4: TRANSLATING EXPERIMENTAL TECHNIQUES TO STUDY PAIN INTO CLINICAL TOOLS

- Tools for measuring pain in patients
- Tools for mechanism-based diagnosis of pain in clinical conditions
- Tools for improving future clinical trials
- Non-pharmacological neuromodulation of the nociceptive system

5: INTERACTION BETWEEN SOMATOSENSORY AND PSYCHOLOGICAL SYSTEMS



Prof. Luis Garcia Larrea (European Pain Federation EFIC) presented the European Pain Federation EFIC and its Pain Research Strategy, The Research Strategy, led by Prof. Gisele Pickering, has the following objectives:

- Communicate a clear set of priorities to all research stakeholders
- Facilitate the generation of high-quality European research
- Advance scientific understanding and management of pain
- Raise the profile of pain research in Europe
- Foster collaboration between research groups and other stakeholders
- Facilitate the translation of high-quality research into policy and practice
- Invest in young pain researchers who have capacity to be future leaders

He presented preliminary findings from the Pain Research Strategy development, namely the outcomes of a broad survey circulated across the pain research community with over 600 responses from pain researchers and clinicians.

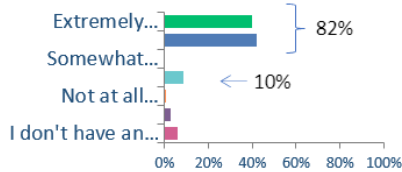
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The strategy was also built upon by:

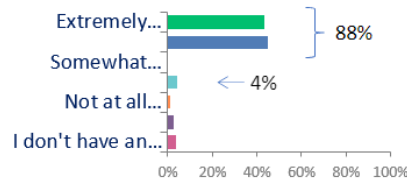
- Steering committee expertise
- Literature reviews
- Public and patient consultations (in progress)

A slide from Prof. Larrea's presentation which summarizes the findings of the EFIC Research Strategy survey with over 600 expert participants:

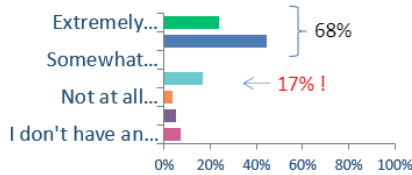
Understand molecular aspects of pain conditions in animals & humans



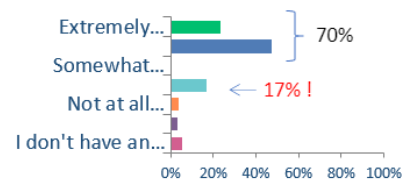
Explore the neurobiology of pain-signalling systems



Backward translation of observations in patients into animal settings



Forward translation: knowledge from animal research to understand pain in humans



Dr. Brona Fullen, President (European Pain Federation EFIC) contributed to the event with a video message, which unfortunately due to technical difficulties could not be shown during the event. In the video, Dr. Fullen conveyed her message that the amount of people suffering from chronic pain makes pain science crucial.

She emphasised EFIC's focus on pain research in the European Union, which is why policy makers, research institutions and funding agencies should come together to ensure progress in the field. Full video available [here](#).



Cyrus Engerer MEP (S&D) joined the speakers on stage and spoke of the following topics:

- His view that the EU is lagging behind the US in pain management and treatment, with patients often labelled as hypochondriacs or burdens to society, when they should be at the center when discussing future legislation.
- The psychological aspect of chronic pain and how the EU is still delayed in finding a solution.
- The issue of equality between member states when it comes to pain treatment.



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“The European Union needs to do more to address inequalities in health and pain management; it also needs to focus more on and include patients” MEP [@engerer](#) on [#TheFutureofEuropeanPainResearch](#)

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Policy Developments

- MEP Saliba spoke about policy developments in the field of pain and of a mental health position paper being developed by the Socialists group in the Parliament, in advance of the Parliament’s full position. He explained that a focus of the position paper is to establish a link between mental health and pain.
- Prof. Treede stated that an ICD-11 position paper is currently being developed within EFIC and highlighted how chronic cancer-related pain is now included in the 11th revision and how transformative that is for pain assessment and treatment.
- MEP Saliba and Prof. Treede also discussed the need to remove barriers to the access of good pain care across Member States, to remove current disparities between countries.

Questions

The speakers received several questions from the audience, one of them regarding the **necessity for coordination of pain treatment at an EU level**. MEP Saliba addressed the fact that this remains a struggle within this domain. He believes that asserting a correlation between mental health and pain will aid in directing funding for research. Some audience members stressed the importance of access to coordinated care for chronic pain, and non-pharmacological treatment options. Another member of the audience **enquired about whether there are any plans on research regarding the prevention and rehabilitation of pain**. Prof. Treede addressed the question by asserting that the IMI-PainCare team have the option to make proposals directly to the Innovative Healthcare Initiative. He also referred to

the European Brain Council's "Value for Treatment" project, which involves calculating the value of various interventions to treat and manage pain.

Conclusion and Next Steps

The event was concluded by the final statement from Prof. Treede explaining that work is ongoing to better understand the status of pain management and treatment across Europe, especially through a Monitor entitled 'The Societal Impact of Pain (SIP) Road Map Monitor' which highlights national guidelines and action plans in different countries.

Prof. Treede, concluded by stating that the IMI-PainCare project will set the base for future research on the topic of pain.

The European Pain Federation EFIC sees the urgent need to focus on these key areas in pain research:

1. **Understanding pain:** Knowledge of the causes of chronic pain, and how it emerges, is still limited.
2. **Assessing and diagnosing pain:** Better pain measurement tools for different patient groups will lead to more accurate, and early, diagnoses.
3. **Development of new treatments:** Most current treatments for chronic pain have only modest short-term benefits.
4. **Increase use of effective and safe treatments and reduce use of ineffective and harmful treatments:** There is an underuse of treatments that can help people safely and effectively; at the same time, many people receive treatments that do not work and that carry harms.
5. **Personalised pain management:** Current treatments are one-size-fits-all in nature, and are not individualised to the patient's gender, age, lifestyle or overall health.
6. **Understand and address comorbidities:** Pain is often co-existent with other health conditions, including mental health disorders, obesity, and sleep disorders – all of which complicate management and slow recovery.
7. **Assess and target patient health literacy:** People with a lived experience of chronic pain often receive health information that is difficult to understand and act on and are rarely involved in efforts to improve pain knowledge, practice, and policy.

In conclusion, pain research in Europe is making important strides in understanding the underlying mechanisms of pain and developing new treatments and therapies. However, there is still much work to be done, and greater investment and collaboration will be needed to continue to advance our understanding of this complex condition and improve the lives of those affected by pain. MEPs from the EPP, S&D and ECR group were united in their support for the objectives of the meeting and the need to further support pain research in EU funding schemes such as Horizon Europe.