

(IBD) with a variable clinical course. Common findings include enthesitis and dactylitis. Current treatments include anti-TNF $\alpha$  and anti-IL-12/IL-23 antibodies with varying success rates but the involvement of several pro-inflammatory cytokines suggests that other targeted therapies may be effective. Notably, the JAKs (a family of 4 non-receptor tyrosine kinases) are crucial for the signaling of many pro-inflammatory cytokines. In this regard, the JAK1-selective inhibitor filgotinib (GLPG0634, GS-6034) demonstrated clinical efficacy in patients with rheumatoid arthritis, a disease that shares some hallmarks with PsA and Crohn's disease, making this molecule a potential therapeutic tool for the treatment of PsA.

**Objectives:** Filgotinib was evaluated at the dose of 30 mg/kg/d (*per os*) in a mouse model of PsA induced by overexpression of IL-23.

**Methods:** Overexpression of IL-23 was induced by hydrodynamic delivery of mIL-23 enhanced Episomal Expression Vector (SBI) to male B10.RIII mice<sup>1</sup>. Evolution of inflammation of the paws and fingers was assessed by clinical scoring as well as *in vivo* molecular imaging (Bruker In-Vivo Xtreme imaging system). Enthesis and fingers were collected for expression analysis of inflammatory genes and target-related biomarkers. Neutrophil infiltrate, as well as pSTAT3 positive cells, were analyzed using immunohistochemistry in Achilles' enthesitis and subcutaneous area, respectively. Colon was collected for lesion score determination as well as inflammatory and target-related biomarker gene expression.

**Results:** High levels of IL-23 were maintained during the time-course of the study and were correlated with severity of finger and paw swelling. Localization of the fluorescent signal using ProSense<sup>TM</sup> imaging was associated with inflammation of enthesitis and finger reported in PsA. Moderate inflammation of the colon was also observed. Filgotinib significantly improved clinical scoring and tended to prevent neutrophil/granulocyte infiltrate in paw (with significant effect being showed at earlier time point). Filgotinib reversed some up-regulated inflammatory genes in enthesitis and/or fingers (CCL20, CXCL1, IL-22, MMP9 and TNF $\alpha$ ) and reduced the target-related gene Mx2. Filgotinib significantly counteracted pSTAT3 induction in the subcutaneous area further demonstrating target engagement in the diseased tissue. Finally in line with previous findings<sup>2</sup>, Mx2 expression in colon was slightly reversed by filgotinib.

**Conclusions:** In a mouse model of PsA, filgotinib improved global clinical score and decreased signs of inflammation in hindlimbs. Target engagement both in hindlimbs and colon was also demonstrated. These data support the evaluation of filgotinib in patients with PsA.

#### References:

[1] Sherlock et al. 2012 Nature Med 7:1069–1076.

[2] Van Rompaey et al. 2013 J Immunol. 191:3568–3577.

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## Bringing rheumatology research to the next level: addressing the main challenges of patient partnerships in research and health care service design

### OP0162-PARE AN EXPLORATION OF LIVED EXPERIENCES AMONGST ADULTS WITH RHEUMATOID ARTHRITIS USING AN ONLINE RESEARCH COMMUNITY PLATFORM: A PILOT STUDY

S.R. Stones<sup>1,2,3</sup>, S. Bull<sup>1</sup>, S. Becerra<sup>1</sup>. <sup>1</sup>Double Helix Consulting, Macclesfield; <sup>2</sup>Faculty of Life Sciences, The University of Manchester, Manchester; <sup>3</sup>School of Healthcare, University of Leeds, Leeds, United Kingdom

**Background:** Online technology has revolutionised the way in which people connect and share their experiences. It also brings new opportunities to engage patients in health and social care research through the use of an online research community platform (ORCP). For example, it can improve the accuracy and usefulness of information gathered about research priorities, and it can be used to understand behaviours and preferences. Given an increasing prevalence of long-term conditions including rheumatoid arthritis, online technology represents a novel route for participation and engagement in research.

**Objectives:** To explore the benefits and limitations of an ORCP through understanding lived experiences of adults with rheumatoid arthritis.

**Methods:** We used a purposive sampling approach to ensure variation of key attributes amongst people with rheumatoid arthritis. A total of eight individuals used the ORCP during the pilot study. Qualitative data were collected through online focus groups, conducted as semi-structured interviews and asynchronous

threaded discussions. The study was conducted in line with fieldwork guidelines, and written informed consent was obtained.

**Results:** The closed ORCP enabled a physically disconnected group to share their experiences of living with rheumatoid arthritis, describing the symptoms, diagnostic experience and support they received. In addition, participants shared their experiences and opinions about treatment delivery and adherence, the impact of rheumatoid arthritis, and the experiences of transitional care from paediatric to adult health services, where appropriate. Reasons and feeling about research participants and drug development processes were also discussed.

**Conclusions:** Our pilot study provided important accounts from people living with rheumatoid arthritis, highlighting the substantial impact of the disease on their daily lives. The ORCP removed physical contact between the researcher and participants, the absence of which may enable a richer data collection. However, it also has its limitations, primarily because the researcher is less able to gauge participants' attitudes and concerns. ORCPs represent a novel route of data collection, enabling researchers to immerse themselves into a community of individuals, whether they be patients, carers or professionals.

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### OP0163-PARE INVIGORATING THE PRINCIPLE OF PARTICIPATORY RESEARCH IN GERMANY - SETUP OF A TRAINING COURSE FOR PATIENT REPRESENTATIVES

J. Clausen. Deutsche Rheuma-Liga Bundesverband, Bonn, Germany

**Background:** Patient participation in research projects is important because it enhances the legitimacy of research projects and facilitates the implementation of research results after completion of the respective projects. Since 2009, patient representatives have been actively involved in EULAR projects, and the first EULAR training course for patient representatives was conducted in 2010.

**Objectives:** The aim of the project was to create a training course for German-speaking patient representatives and thereby to invigorate the principle of participatory research in Germany. The training course is supposed to enable patients to make valuable contributions in research projects. In addition the training course aimed at lowering barriers and strengthening the patients' self-confidence, in order to facilitate their integration in the unfamiliar environment among researchers.

**Methods:** Participants were trained during a two-day interactive training course. For evaluation of the course, each participant anonymously answered 14 questions in a questionnaire.

**Results:** The training course consists of seven modules. In the first module (I), the history of the EULAR "patient research partners" is described and the tasks of the future German patient research partners are outlined. In the following modules, various types of research and study designs (II), the generation of research questions and hypotheses (III), various scientific tools (IV), the detailed sequence of steps in a typical research project (V), literature research in scientific databases (VI) and the process of reviewing grant applications (VII) are explained. Each module is subdivided in an explanatory section, an exercise section (where the participants have to apply the newly achieved skills) and a final discussion section.

So far, two courses have been conducted. The training course was rated either "very good" or "good" by 77% and 23% of the participants, respectively. Those patients, already actively involved in research projects, acclaim participatory research as interesting and enriching.

**Conclusions:** The training course was perceived very well by the participants. In future follow-up meetings, the usefulness of the various modules and any missing items will be discussed and the training course adapted accordingly.

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## Osteoarthritis: new horizons for treatment

### OP0164 OPTIMIZING RECRUITMENT CRITERIA FOR AN OSTEOARTHRITIS STRUCTURE MODIFICATION TRIAL: DATA FROM THE OAI

M.A. Bowes<sup>1</sup>, G. Guillard<sup>1</sup>, A. Brett<sup>1</sup>, G.R. Vincent<sup>1</sup>, P.G. Conaghan<sup>2</sup>. <sup>1</sup>Imorphics, Manchester; <sup>2</sup>Leeds Institute of Rheumatic and Musculoskeletal Medicine, University of Leeds, Leeds, United Kingdom

**Background:** The design of clinical trials for osteoarthritis is challenging; structural changes in tissues are quantitatively small and proceed very slowly. No clear guidance exists on how to optimise recruitment. KL grade is a poor recruitment criterion as centres interpret KL differently. Quantitative measures should be