spend a substantial amount of their time and able to travel frequently, is another
obstacle to overcome. This presentation provides some examples of the involvement in Health Technol-
ogy Assessments of the German Rheumatism League, Germany’s largest patient
organisation with about 3 000 000 members, and the essential prerequisites for the
participation of patient organisations in that process.

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FRIDAY, 15 JUNE 2018
EULAR Projects in investigative rheumatology

SP0110
AUTOANTIBODY STANDARDISATION IN RHEUMATIC DISEASES. THE ROLE OF THE EUROPEAN CONSENSUS FINDING STUDY GROUP ON AUTOANTIBODIES IN RHEUMATIC DISEASES (ECFSG)
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The aim of the European Consensus Finding Group on autoantibodies in rheumatic diseases (ECFSG), a.k.a the EULAR autoantibody study group, is to achieve a common consensus in autoantibody diagnostics: a laboratory result should be the same, independent of the country or laboratory where the result is obtained. Since 1988, the ECFSG has yearly distributed unknown sera to Euro-
pean laboratories (presently 43) for evaluation in a clinical context. These sera are chosen to reveal differences between different laboratories. The results are dis-
cussed in conjunction to the European Workshop for Rheumatology Research (EWRW) every year. Use of reference materials helps to align test results by adopting internationally used measurement units, but reference materials are missing for many autoantibody specificities. Since 2014 an ECFSG focus has been on evaluating samples that might constitute new reference materials for companies producing autoantibody measurement assays, as well as for clinical laboratories. Hitherto investigated autoantibody specificities are provided in the table 1. In my talk I will present the work of ECFSG, including the characterisation of the samples that have constituted raw material for currently available reference materials. I will also tell about our first characterisation of a tentative new reagent sample, that thereafter was produced as reference material by the National Insti-
tute of Biological Standards and Control (NIBSC) in the UK. In November 2017 that reagent was endorsed by the World Health Organisation (WHO) to become the new international reference reagent for anti-double stranded DNA (anti-
dsDNA) antibodies.

Disclosure of Interest: None declared

SP0111
HOW NEURO ENDOCRINE IMMUNOLOGY IMPACT RHEUMATIC DISEASES?
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The Neuro Endocrine Immune Network (NEI) is the most important communica-
tion-system in human body to maintain the health status. NEIRD evaluate the rela-
tionships between NEI and Rheumatic and Musculoskeletal Diseases (RMDs). The altered interaction between the nervous system, the immune/inflammatory cells and the endocrine system plays an important role in the pathophysiology of autoimmunity and chronic inflammation. The involvement of the adrenal steroid
hormones in the immune response is fundamental and follow a circadian rhythm (circadian rhythm studies obtained the Nobel Prize for Medicine in 2017). As Mat-
ter of fact, the nocturnal ability of the NEI system to mount an efficient immune and inflammatory response, with related clinical consequences, is matter of important chronotherapeutical approaches with exogenous steroids, in particular with gluco-
corticoids (GCs) (their discovery obtained the Nobel Prize in 1950 and still a pillar in the treatment of RMDs and not only). Other important steroid hormones involved in the NEI are the sex hormones (estrogens). EZ O3H-metabolites are potent enhancers of cell proliferation and the d-hormone (steroidal hormone structure of the final metabolite of Vitamin D). Clinical observations indicate a strong influence of the neuroendocrine system on immune function and vice versa in chronic inflammatory rheumatic diseases. The influence of hormones and neu-
ronal pathways happens before and after the outbreak of the disease. Very recent data demonstrate the modulatory role of estrogens on epigenetic mechanisms (ie DNA methylation and gene upregulation). For example differentially expressed miRNA pathways linked to EZ in human endothelial cells through ER have been shown, and provide new insights by which oestrogen can modulate endothelial function. This point might be crucial in autoimmune diseases like systemic sclero-
sis (SSc) a disease prevalent in females and that start from damaged endothe-
lium. We have started a large study on epigenetic and pregnancy on patients with RMDs such as rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). On the other hand, the disease process with an activated immune system influences several hormonal and neuronal pathways. In addition, the energy bot-
tleneck leads to important disease sequelae such as sickness behaviour/fatigue/
 depressive symptoms, sleep disturbances, anorexia and malnutrition, bone loss, muscle wasting and cachectic obesity, insulin resistance with hyperinsulinaemia (insulin-like growth factor–1 resistance), dyslipidemia, alterations of steroid hor-
mones axes, disturbances of the hypothalamic-pituitary-glandular (HPG) axis, ele-
vated sympathetic tone, hypertension and volume overload, decreased parasympathetic tone, inflammation–related anaemia, and finally circadian (cir-
cannual) rhythms of symptoms. New therapeutic strategies should respect these
findings because rheumatic patients die earlier due to the mentioned disease
sequelae. It is suggested that disease sequelae must be treated more conse-
quently because they are inherent to chronic inflammatory systemic diseases
(possible evolution for some of them in cancer). Therapeutic strategies in this field of
NEIRD are slowly developing. Low-dose glucocorticoid therapy as supplemen-
tation of the “small adrenal engine”, chronotherapy with glucocorticoids (night
release) and vitamin D supplementation are the best examples of the successful utilisation of demonstrated concepts.

REFERENCES:

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SP0112
MICROCIRCULATION IN RHEUMATIC DISEASES
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Background: The EULAR Study Group on Microcirculation in Rheumatic Dis-
esases (SG MC/RD) aims to build an international network of expert centres to
facilitate and exchange knowledge. It is a non-profit group and has no financial
support. Both altered microvascular morphology and peripheral flow are the major
focus of research.

Objectives: 1) To integrate different expertise to study the pathophysiology of
disease processes. 2) To exchange knowledge and to facilitate standardisation
concerning different techniques to assess the (micro)circulation such as nailfold
capillaroscopy, laser doppler and laser speckle contrast analysis (LASCA). 3) To
elaborate predictive indexes for disease progression and follow-up based on the
integration of different tools and biomarkers. 4) To develop intervention protocols
based upon an understanding of and targeting disease mechanisms (i.e. micro-
vascular damage progression to fibrosis).

Methods: The EULAR SG MC/RD was accepted by the EULAR Executive com-
mittee in March 2014 and is being supervised by the EULAR Committee on Inves-
tigative Rheumatology, currently chaired by Prof. X. Mariette. Anno 2018 the
number of members has risen to 79 (out of which 26 from 14 non-European coun-
tries). The EULAR study group meets half yearly (every EULAR/ACR) and

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