

Annual Report 2016-2017

EULAR Study Group

EULAR Study Group**Neuro Endocrine Immunology of Rheumatic Diseases – NEIRD** (*started in 1999*)Chair: M Cutolo email: mcutolo@unige.it T: (+39) 335233621**2016-2017 Annual Report**

The Neuro Endocrine Immune Network (NEI) is the most important communication-system in human body to maintain the health status. The altered interaction between the nervous system, the immune/inflammatory cells and the endocrine system plays an important role in the pathophysiology of autoimmunity. The involvement of the adrenal steroid hormones in the immune response is fundamental and follow a circadian rhythm. The nocturnal ability of the neuroendocrine-immune 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 glucocorticoids (GCs). Other important steroid hormones involved in the NEI are the sex hormones (pregnancy) and the D hormone.

Major topics of the EULAR SG NEIRD during the last academic years (2016-2017) include:

- * Circadian rhythms and chronotherapy in rheumatic diseases
- * Role/effects of glucocorticoids in rheumatic diseases
- * Pregnancy and rheumatic diseases
- * Vitamin D involvement in rheumatic diseases

Recent Research projects involving EULAR/NEIRD endorsement/contribution

° **Contribution to the EULAR funded project 2014-2016 (n° CLI064):** "Development and validation of a new patient reported outcome questionnaire to estimate vitamin D status and its correlation with quality of life, disease activity and disability in rheumatoid arthritis patients in Europe" (D-PRO project) 2016. Results submitted and accepted by the ESCIR Committee.

Published: European multicentre pilot survey to assess vitamin D status in rheumatoid arthritis patients and early development of a new Patient Reported Outcome questionnaire (D-PRO). *Vojinovic J, Tincani A, Sulli A, Soldano S, Andreoli L, Dall'Ara F, Ionescu R, Pasalic KS, Balcune I, Ferraz-Amaro I, Tlustochowicz M, Butrimiene I, Puncseviciene E, Toroptsova N, Grazio S, Morovic-Vergles J, Masaryk P, Otsa K, Bernardes M, Boyadzhieva V, Salaffi F, Cutolo M. Autoimmun Rev. 2017 Mar 6. pii: S1568-9972(17)30055-1*

° **Contribution to EULAR task force** "Points to consider for use of Antirheumatic drugs before pregnancy and during pregnancy and lactation" (last meeting Berlin-February 20, 2015).

Published: The EULAR points to consider for use of antirheumatic drugs before pregnancy, and during pregnancy and lactation. *Götestam Skorpen C, Hoeltzenbein M, Tincani A, Fischer-Betz R, Elefant E, Chambers C, da Silva J, Nelson-Piercy C, Cetin I, Costedoat-Chalumeau N, Dolhain R, Förger F, Khamashta M, Ruiz-Irastorza G, Zink A, Vencovsky J, Cutolo M, Caeyers N, Zumbühl C, Østensen M. Ann Rheum Dis. 2016 May;75(5):795-810*

° **Contribution to the EULAR task force** "EULAR evidence-based and consensus-based recommendations on the management of long-term glucocorticoid therapy in rheumatic diseases" (Leader F Buttgerit)

Published: Defining conditions where long-term glucocorticoid treatment has an acceptably low level of harm to facilitate implementation of existing recommendations: viewpoints from an EULAR task force. *Strehl C, Bijlsma JW, de Wit M, Boers M, Caeyers N, Cutolo M, Dasgupta B, Dixon WG, Geenen R, Huizinga TW, Kent A, de Thurah AL, Listing J, Mariette X, Ray DW, Scherer HU, Seror R, Spies CM, Tarp S, Wiek D, Winthrop KL, Buttgerit F. Ann Rheum Dis. 2016 Jun;75(6):952-7.*

° **Contribution to the Horizon 2020 project** – the Framework Programme for Research and Innovation (2014-2020), Project title funded by EU: "The Glucocorticoid Low-dose Outcome in Rheumatoid Arthritis

Study (GLORIA) (project n°634886)" (Leader M. Boers, some membres: JA Da Silva, F Buttgerit, J Rovensky, M Cutolo). First manuscript in preparation

Courses and meetings (2016-2017)

- ° "EULAR online Course" Module (42a) "NeuroEndocrine Immunology" (edition 2015 - 2017) Straub RH, Pontgratz G, Sulli A, Cutolo M authors
- ° *Contribution of NEIRD to the NEIRD Study Group ACR 2016*. Washigton, Sunday, November 13, 2016. Convention Ctr: Chairs/Speakers: Richard Imrich, Alfonse Masi & J.W.J. Bijlsma. Georg Pongratz. Title: "Adrenal Gland in Rheumatoid Arthritis and Related Disorders"
- ° *Contribution to the EULAR Project: "Two-step implementation project of the EULAR guidelines on management of glucocorticoid therapy in rheumatic diseases"* EULAR task force. Berlin: 28.1.2016
- ° *Contribution to the "Third International symposium & Imaging workshop Giant cell arteritis, Polymyalgia Rheumatica & Large vessel vasculitis*, March 10-13, 2016 Southend, UK: "Modified release prednisone in PMR", F Buttgerit, E Matteson, B Dasgupta, M Cutolo
- ° *Contribution to the PANLAR/EULAR Symposium at PANLAR Congress (April 12-2016 Panama) Session Title: "Neuroendocrineimmunology Meets Rheumatoid Arthritis"*
- ° *Contribution on behalf of EULAR together with the European Pain Federation (EFIC) to the 1st EFIC/EULAR Topical Symposium 2016 on "Acute and Chronic Joint Pain" Session: "Chronobiology of chronic pain"* M Cutolo: held in Dubrovnik, from 21 – 23 September 2016.
- ° Contribution to the *XVI Mediterranean Congress of Rheumatology* held in Serajevo (Croatia) 2-4.sep.2016. Session on NEIRD title "Rheumatoid Arthritis: Risk Factors and Neuroendocrine Mechanisms"
- ° *NEIRD Endhorsement to the X ISNIM (International Society for Neuro Immuno Modulation) CONGRESS: "Translational NeuroImmunoModulation"* Rome 26-28.5.2017: ISNIM "Session 1: Neuroimmunomodulation and autoimmune diseases".

Chapters of Books (2016-2017)

- ° Chapter - Title: "*Steroids and autoimmunity*". Trombetta AC, Meroni M, Cutolo M. in: Textbook Front Horm Res. 2017;48:121-132. W. Savino Editor Basel Karger
- ° Chapter -Title: "*Neuroendocrine immune crosstalk in chronic inflammatory systemic diseases*" RH Straub, M Cutolo, in Rheumatology, Chapter 15: 7th edition MC. Hochberg et al. Editors. Elsevier 2017.
- ° Chapter - Title: "*NeuroEndocrine Immunology of Rheumatic Diseases*". EULAR Textbook on Rheumatic Diseases Chapter 2 - Straub RH, Pongratz G, Sulli A, Cutolo M. BMJ 2015

Selected publications (2016-2017)

- The EULAR points to consider for use of antirheumatic drugs before pregnancy, and during pregnancy and lactation. Götestam Skorpen C et al. *Ann Rheum Dis*. 2016 May;75:795-810
- Air Travel, Circadian Rhythms/Hormones, and Autoimmunity. Torres-Ruiz J, et al. *Clin Rev Allergy Immunol*. 2017 Feb 27. doi: 10.1007/s12016-017-8599-2 [Epub ahead of print]
- Glucocorticoids and chronic inflammation. Straub RH, Cutolo M. *Rheumatology (Oxford)*. 2016 Dec;55(suppl 2):ii6-ii14
- Glucocorticoids and chronotherapy in RA. Cutolo M. *RMD Open*. 2016 Mar 18;2(1)
- Modified release prednisone for polymyalgia rheumatica: a multi-centre, randomised, active-controlled, double-blind, parallel-group study. M Cutolo, M Hopp, S Liebscher, B Dasgupta, F Buttgerit. *RMD Open* 2017 Mar 17;3(1):e000426
- European multicentre pilot survey to assess vitamin D status in rheumatoid arthritis patients and early development of a new Patient Reported Outcome questionnaire (D-PRO.) (EULAR project No CLI064) Vojinovic J, Tincani A et al. *Autoimmun Rev*. 2017 May;16(5):548-554
- Vitamin D deficiency and clinical correlations in systemic sclerosis patients: a retrospective analysis for possible future developments. Trombetta A et al. *PLOS ONE in press* 2017 [PONE-D-17-09891]