**References**


**Disclosure of Interests:** Laure Orgeolet: None declared, Nathan Foulquier: None declared, Laurent Misery: None declared, Pascal Redou: None declared, Jacques-Olivier Pers: None declared, Valérie Devauchelle-Pensec: None declared, Alain Saraux Consultant for: Roche SAS, Speakers bureau: Chugai Pharma France

**DOI:** 10.1136/annrheumdis-2019-eular.5417

---

**AB0187**

**CAN ARTIFICIAL INTELLIGENCE REPLACE MANUAL SEARCH FOR SYSTEMATIC LITERATURE REVIEW ON CUTANEOUS MANIFESTATIONS IN PRIMARY SJOGERN’S SYNDROME?**

Laure Orgeolet1,2, Nathan Foulquier1, Laurent Misery1, Pascal Redou1, Jacques-Olivier Pers1, Valérie Devauchelle-Pensec1, Alain Sarau1,1 CHU Brest, Brest, France; 2CHU Brest, Dermatology, Brest, France.

**Background:** Manual systematic literature reviews are becoming increasingly challenging due to the sharp rise in publications. The task is particularly daunting when the study topic is complex.

**Objectives:** The primary objective of this literature review was to compare manual and in-house computer software retrieval of publications on the cutaneous manifestations of primary Sjögren’s Syndrome (pSS). The secondary objective was to evaluate the prevalence of cutaneous manifestations in pSS.

**Methods:** We compared manual searching and searching with the in-house computer software BIBOT (1) designed for article retrieval and analysis. Both methods were used for a systematic literature review on a complex topic i.e., the cutaneous manifestations of pSS. Articles published in French or English between 1 January 1990 and 30 May 2018 were sought.

**Results:** The manual search retrieved 855 articles and BIBOT 1042 articles. In all, 202 articles were then selected by applying exclusion criteria. Among them, 155 were retrieved by both methods, 33 by manual search only, and 14 by BIBOT only. Further selection was performed by reading the 202 articles, of which 54 were deemed relevant, including 23 providing data on the prevalence of one or more cutaneous signs in a cohort of patients with pSS. Cohort sizes and the nature and prevalence of cutaneous manifestations varied across publications. In all, 52 cutaneous manifestations were reported, of which the most common were cutaneous vasculitis (561 patients), xerosis (651 patients), and annular erythema (215 patients).

**Conclusion:** Agreement was good between the two methods. BIBOT was faster and automatically classified the articles in a chart. Combining the two methods retrieved the largest number of publications. The prevalence of cutaneous manifestations in patients with pSS varied considerably across studies. The advanced machine learning techniques used in artificial intelligence hold promise for literature reviews.

**Disclosure of Interests:** None declared

**DOI:** 10.1136/annrheumdis-2019-eular.7142

---

**AB0118**

**MOLECULAR NETWORKS IN MONOCYTES FROM SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS RELATED TO THE PATHOGENESIS OF MONOCYTE DYSFUNCTION AND MODULATORY EFFECTS OF ANTI-DSDNA ANTIBODIES AND MOLECULAR MECHANISMS UNDERLYING IN VIVO STATIN TREATMENT**

Alejandra M. Párra-Trives1,2, Pérez Sánchez Laura1, María Galindo-Izquierdo1, María Luque-Tévar1, Alejandro Ibáñez-Costa2, Iván Arias de la Rosa1, María del Carmen Abadías-Aguilera1, Pedro Seguí Azpícueta1, Nuria Barberá Puerto1, Eduardo Collantes-Estevez1, María A. Aguilleira1, Haifa1, Israel; Carlos Perez-Sanchez2, Chary Lopez-Pedrera1, 1IMIBIC/Reina Sofia University Hospital of Cordoba, Cordoba, Spain; 2Hospital 12 de Octubre, Madrid, Spain.

**Objectives:** 1. To characterize the mRNAs and microRNAs transcripts of monocytes from systemic lupus erythematosus (SLE) patients and their association with the pathophysiology of the disease. 2. To evaluate the role of anti-dsDNA antibodies in the regulation of these processes. 3. To investigate the molecular mechanisms involved in the efficacy of Fluvastatin in preventing the atherothrombotic risk.

**Methods:** Monocytes from peripheral blood of 81 SLE patients and 40 healthy donors (HD) were purified by negative immunomagnetic isolation. Then, gene expression microarray (Agilent G4112F platform) and nCounter microRNA expression arrays (Nanostring) were performed. Functional categorization of altered genes and miRNAs was made using IPA software, and interaction networks were identified. Genes and miRNAs integrating the networks were validated in the whole cohort by RT-PCR. Predicted miRNA-RNA interactions were tested by microRNA over-expression or inhibition experiments. Serum and cellular inflammatory and oxidative profiles were evaluated by multiplex assay, PCR and specific commercial kits, respectively; phosphorylation status of intracellular proteins was analyzed by PathScan array. To evaluate the clinical significance of the parameters analyzed, correlation and association studies were performed. Mechanistic studies were developed to typify the specific effects of the anti-dsDNA antibodies on monocytes. Besides, the beneficial effects of ex vivo Fluvastatin treatment on the monocyte molecular profiles were assessed.

**Results:** Microarray identified 553 altered genes in SLE monocytes. Relevant biofunctions and disorders on which these genes were involved included inflammatory, immunological, cardiovascular, neurological, renal and reproductive disease. Analysis of microRNA profiles showed altered expression of 35 miRNAs in SLE monocytes. Sixty-one genes were inversely correlated and predicted as CVD-related target genes of 26 differentially expressed miRNAs. Transfection studies confirmed the relationship between specific miRNAs and their identified target genes.

**Conclusion:** These genes and miRNAs with the anti-dsDNA positivity, early atherosclerosis and nephropathy, along with correlations with disease activity (SLE-DAI), activation of some intracellular signaling proteins, and levels of serum inflammatory and oxidative markers were demonstrated. In vitro studies demonstrated the specific modulation of several genes/miRNAs by anti-dsDNA, along with the increase of prothrombotic and proinflammatory mediators, the induction of apoptosis and the phosphorylation of intracellular proteins participating in renal and CVD-related signaling pathways. Besides, treatment of HD-monocytes with SLE patients’ serum after Fluvastatin supplementation prevented the proinflammatory altered gene/miRNA profiles induced by serum from those patients before treatment.

**Disclosure of Interests:** None declared

**DOI:** 10.1136/annrheumdis-2019-eular.3981

---

**AB0189**

**DECREASED URINE SEMAPHORIN 3A SECRETION PREDICTS THE EXTENT OF RENAL DAMAGE IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS**

Doron Rimati1,2, Merav Lifar2, Nasrin Ezza2, Elisa Troubi1, Amal Silwai1, Gileb Slobodan1, Itzhak Rosen2, Michael Rosenbaum1, Abid Awiasat1, Nina Bourman1, Lisa Kay1, Shira Ginsberg1, Nizar Jises1, Zehava Vadasz2, Bnai Zion Medical Center, Rheumatology, Ramat Gan, Israel; 2Bnai Zion Medical Center, Division of Allergy and Clinical Immunology, Haifa, Israel.

**Background:** Semaphorins are a family of proteins, involved in axon-guidance, malignancy spread and angiogenesis. Semaphorin 3A (sema3A) is recognized also as “immune semaphorin”, it is expressed on regulatory T cells and has been