### **POSTER PRESENTATION**



**Open Access** 

# PReS-FINAL-1010: circulating micrornas in traps

OM Lucherini<sup>1\*</sup>, M Ferracin<sup>2</sup>, V Fulci<sup>3</sup>, M McDermott<sup>4</sup>, G Merlini<sup>5</sup>, I Muscari<sup>1</sup>, F Magnotti<sup>1</sup>, LJ Dickie<sup>4</sup>, M Galeazzi<sup>1</sup>, M Negrini<sup>2</sup>, CT Baldari<sup>6</sup>, L Obici<sup>5</sup>, R Cimaz<sup>7</sup>, L Cantarini<sup>1</sup>

*From* 20th Pediatric Rheumatology European Society (PReS) Congress Ljubljana, Slovenia. 25-29 September 2013

#### Introduction

To the best of our knowledge circulating miRNAs in TRAPS, as well as in other monogenic autoinflammatory disorders have never been investigated.

#### Objectives

To evaluate circulating microRNAs (miRNAs) levels in patients with tumor necrosis factor-receptor associated periodic syndrome (TRAPS), in comparison to healthy controls, and to correlate their levels to parameters of disease activity and/or disease severity.

#### Methods

Expression levels of circulating miRNAs were measured by Agilent microarrays in 29 serum samples from 15 TRAPS patients carrying mutations known to be associated with high disease penetrance and 8 healthy controls. Differentially expressed and clinically relevant miRNAs were detected using GeneSpring GX software.

#### Results

We identified a 6 miRNAs signature able to discriminate TRAPS from healthy controls. Moreover, 4 miRNAs were differentially expressed between patients treated with the interleukin (IL)-1 receptor antagonist anakinra and untreated patients. Of these, miR-92a-3p expression was found to be reduced in untreated patients, while its expression levels were similar to healthy controls in samples obtained during anakinra treatment. MiR-92b levels were inversely correlated with the number of fever attacks/year during the 1<sup>st</sup> year from the index attack of TRAPS, while miR-377-5p levels were positively correlated with serum amyloid A (SAA) circulating levels.

<sup>1</sup>Department of Medical Sciences, Surgical and Neuroscience. Rheumatology Unit., università di Siena, Siena, Italy

Full list of author information is available at the end of the article

#### Conclusion

Serum miRNAs levels show a baseline pattern in TRAPS, and may serve as potential markers of response to therapeutic intervention.

#### **Disclosure of interest**

None declared.

#### Authors' details

<sup>1</sup>Department of Medical Sciences, Surgical and Neuroscience. Rheumatology Unit., università di Siena, Siena, Italy. <sup>2</sup>Laboratory for Technologies of Advanced Therapies (LTTA) and Department of Morphology, Surgery and Experimental Medicine, University of Ferrara, Ferrara, Italy. <sup>3</sup>Dipartimento di Biotecnologie Cellulari ed Ematologia, Sezione di Genetica Molecolare, Sapienza, Università di Roma, Roma, Italy. <sup>4</sup>Leeds Institute of Rheumatic and Musculoskeletal Medicine, Leeds, UK. <sup>5</sup>Amyloid Research and Treatment Center, Fondazione IRCCS Policilnico San Matteo, and Department of Molecular Medicine, University of Pavia, Pavia, Italy. <sup>6</sup>Department of Life Sciences, Università di Siena, Siena, Italy. <sup>7</sup>Department of Pediatrics, Rheumatology Unit, Anna Meyer Children's Hospital and University of Florence, Florence, Italy.

Published: 5 December 2013

doi:10.1186/1546-0096-11-S2-P8 Cite this article as: Lucherini *et al*: PReS-FINAL-1010: circulating micrornas in traps. *Pediatric Rheumatology* 2013 11(Suppl 2):P8.

## Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

) BioMed Central

Submit your manuscript at www.biomedcentral.com/submit



© 2013 Lucherini et al.; licensee BioMed Central Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated.