

**Mathematisch – Naturwissenschaftliche Fakultät**  
der Universität zu Köln  
- Der Dekan -

# **Einladung**

zu dem am Donnerstag, den 01. Juli 2010, ab 14 Uhr  
im Großen Geo-Bio Hörsaal,  
Zülpicher Straße 49, 50923 Köln

stattfindenden öffentlichen

**wissenschaftlichen Habilitationsvortrag**  
im Fach Genetik

von

**Dr. Aleksandra Trifunovic**

über das Thema

## **The role of microRNA in rheumatoid arthritis and other autoimmune diseases**

MicroRNAs (miRNAs) constitute a recently discovered family of small RNAs, 21–25-nucleotides (nt) in length, that play critical roles in the lives of cells. miRNAs are thought to regulate about 30% of the protein-coding genes of the human genome, and individual miRNAs typically target several transcripts rather than just one specific gene. Recently, miRNA involvement in the adaptive and innate immune systems has been recognized. Genetic ablation of the miRNA machinery, as well as loss of deregulation of certain individual miRNAs, severely compromises immune development and regulation, implicating miRNA in the pathophysiology of both immunity and autoimmunity. Rheumatoid arthritis serves an example of a chronic inflammatory disorder in which miRNAs modulate the inflammatory process in the joints, with the potential to serve as biomarkers for both the inflammatory process and the potential for therapeutic response.

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