interdisziplinäres Zentrum für Klinische Forschung

Clinician Scientist Programme - Biosketch Module Step 1

Title/ First Name/ Last Name

Dr. Raluca Ursu

Clinic

University Hospital Erlangen

CV (Current position, academic career, achievements and extracurricular activities, languages)

Raluca Ursu, MD

Current positiion:
04/2019 – Resident Doctor, Nephrology and Hypertensiology, Kidney Transplant Center, University Hospital Erlangen, Germany
06/2015 – 03/2019 Resident Doctor, Nephrology Clinic Coburg, Germany
01/2014 – 05/2015 Assistenzärztin im Bereich Innere Medizin und Nephrologie im Carol Davila, Nephrologisches Krankenhaus in Bukarest

Additional qualifications:
04/2016 ERA-EDTA 11th Leipzig Renal Biopsy Course
10.09 – 13.09.2016 8. Jahrestagung der deutschen Gesellschaft für Nephrologie, Berlin- Workshop Sonographie der Nierenarterien und Virtuelles Mikroskopieren für den Nephrologen
18.03. – 25.03.2017 Kompaktkurs „Notfallmedizin“, Berchtesgaden

Scientific work:
05/2015 – Presentation: Buleu C, Luca D, Ursu R, Bogdan O Popescu - Hyponatremia in patients suffering from neurologic disorders - XIII national Neurology Congress, Bucharest, Romania
06/2013 – Dissertation: Implications of organised preventive campaigns for early diagnosis of melanoma - an European movement - Results from the Euromelanoma prevention campaigns, 2010-2011
10/2019 – Posterpresentation: R. Ursu, M. Schiffer, M. Opgenoorth - Complicated pregnancy after Kidney Transplantation - 28. German Transplantation Congress
02/2020 – 02/2021 Clinical Scientist Programme, Erlangen University Hospital

Languages: German, English - advanced, French, Spanish, Italian - elementary

Research Area

Renal and Vascular Research

Rare renal diseases

CSP Project Outline

Micro-RNA dependent regulation of signaling pathways might have a context dependent role in different glomerulonephropathies. Micro-RNAs (miRs) are small non-coding RNAs that regulate gene expression in physiological processes as well as in diseases1. They are stable and detectable in human biofluids (urine and serum), making them feasible as potential biomarkers2. The miR-200-Zeb1/2 axis works via a feedback loop, influencing epithelial-to-mesenchymal transition, known to be implicated in fibrosi
We hypothesize that upregulation of miR-200b/c might play a role not only in primary podocytopathies, where it might be detrimental by downregulating podocyte VEGF-A, but also in diabetic nephropathy, where it might be beneficial by antagonizing EMT and increased VEGF-A. Established cell culture and zebrafish models are used to investigate the role of the miR-200b/c-ZEB1/2/VEGF-A axis in diabetic nephropathy and in primary podocytopathies. We will look for up-/downstream targets of miR-200b/c in cultured podocytes and glomerular endothelial cells exposed to various stress factors. Expression of miR-200b/c will be characterized through in situ hybridization on kidney tissue from patients with various podocytopathies and diabetic kidney disease and correlated with the stage of proteinuria and kidney function. We will inject miR-200b/c mimics in our zebrafish model for diabetic nephropathy (Pdx Knockout larvae) in a rescue approach. In contrast to that, miR-200b/c mimics will be overexpressed in wild type zebrafish to screen for signs of podocytopathies.
We aim to determine the significance of miR-200b/c and of the transcription factors Zeb1/2 for the primary and secondary podocytopathies, with the translational scope of exploring them as pathophysiological factors and biomarkers.

Most important/ first Publication (or Title Dissertation)

Dissertation: Opposing roles of the miR-200b/c-ZEB1/2 axis in primary podocytopathies and diabetic nephropathy