

LIVED EXPERIENCE OF A WOMAN IN HYPERTENSION RESEARCH NETWORK MEMBER: AMELA JUSIC



This issue our lived experience article is by Amela Jusic from Bosnia and Herzegovina, Postdoctoral Research Fellow, Department of Population Health, Luxembourg Institute of Health

Since April 1992, Bosnia and Herzegovina (BiH) is internationally recognized as a new independent country and became a member of the United Nations, which triggered a brutal war that lasted four years. In December 1995, the Dayton Peace agreement established Bosnia and Herzegovina as a country of two entities and one district—the Federation of BiH, Republika Srpska and District Brcko.

The long post-war transition had a strong impact and caused a poor socioeconomic situation with unemployment, unhealthy and unsafe food and unhealthy lifestyles, common among the population which is mirrored in high prevalence of hypertension (42% of adult population) and one of the highest morbidity and mortality in Europe due to cardiovascular diseases.

The complex structure of Dayton BiH caused decentralization of the health system and the 26 years following the termination of the Bosnian war, it has not returned to normal. Currently, the main public health challenge in Bosnia and Herzegovina is reducing non-communicable diseases including hypertension. However, due to the complexity of the country and health system, there is still no national hypertension association nor diagnostic and treatment guidelines.

As a result of numerous limiting economic and societal factors, low transfer of knowledge and technology between Bosnian and international institutions, except limited reports on hypertension prevalence in Bosnia and Herzegovina, there is no study investigating hypertension on the multiomics level.

Despite these numerous challenges I faced through working with limited research and academic resources, I was eagerly focused on building capacities to bring genomics research at University of Tuzla, Bosnia and Herzegovina where I have been working since graduation.

As a result of my strong motivation and effort to foster genomics research in Bosnian academic and health institutions, I received funding for three grants investigating genomic biomarkers for cardiovascular diseases from the Federal Ministry of Education and Science, Federation of Bosnia and Herzegovina. These projects resulted in several important publications reporting pioneering results on genetic polymorphisms associated with cardiovascular diseases in the Bosnian population.

Through leading these small projects and recent reports on the global burden of hypertension, I recognized the importance of genomic biomarkers, which will allow not only early diagnosis of hypertension but also prognosis and response on hypertension therapy.

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Since the investigation of genomics biomarkers requires state of the art technologies, I realized the research environment and resources in my home country are not sufficient to perform high quality research to deeply investigate biomarkers for hypertension or educate a novel generation of young scientists.

To move genomics research forward in my home country I invest a lot of effort in establishing international collaborations with eminent researchers from the cardiovascular field as a member of the management committee for three Cost Actions. In early 2019, I established collaboration with the Cardiovascular Research Unit, Department of Precision Health of the Luxembourg Institute of Health. As result, I received funding from the European Union's Horizon 2020 research and innovative programme Marie Skłodowska-Curie Actions Individual fellowship for the project "The function and biomarker potential of mitochondrial microRNAs in hypertension (MITO)".

For this project, we collected blood samples of hypertension patients and healthy controls in collaboration with clinicians and the office for the international affairs of the University of Tuzla in Bosnia and Herzegovina and transferred them to Luxembourg to investigate novel RNA biomarkers and methods to improve healthcare of hypertension patients.

Alongside the duties for this ongoing project, I have produced several publications and a book chapter related to noncoding RNAs biology and their biomarker and therapeutic potential in cardiovascular diseases.

In line with recent reports on global hypertension prevalence and as a scientist working in hypertension research, I also published the brochure "*Hypertension: know what is behind your numbers*", compiling my knowledge about hypertension, recent evidence and current work at the Luxembourg Institute of Health. In order to be read and understood by the entire Luxembourgish population as well as the population in my home country, the brochure has been translated in six languages (English, French, German, Luxembourgish, Portuguese and Bosnian).

Since the global burden of hypertension is substantial, my plan for the near future is to continue to investigate RNA biomarkers and therapeutic targets for hypertension and cardiovascular disease, participate in the improvement of global health care and personalized medicine as well as to transfer know how to the next generations of young researchers.

If you would like to collaborate on funding applications or have upcoming positions about RNA biomarkers for hypertension contact Amela: amelajusic88@gmail.com.