



PROJECT “COMPARATIVE ANALYSIS OF BIOPSY-PROVEN PRIMARY GLOMERULOPATHIES’ INCIDENCE IN ROMANIA AND NORWAY – A RETROSPECTIVE STUDY OVER THE PAST TWO DECADES”

FINANCED FROM THE FUND FOR BILATERAL RELATIONS AT NATIONAL LEVEL – PROGRAMME RO01 - TECHNICAL ASSISTANCE AND FUND FOR BILATERAL RELATIONS AT NATIONAL LEVEL – MEASURE II – HEALTH

Project title: Comparative analysis of biopsy-proven primary glomerulopathies’ incidence in Romania and Norway – A retrospective study over the past two decades

Project duration: 25.02.2016 – 30.06.2016

Project budget: 8161,83 RON

Funding source: Norway Grants 2009-2014 – 100% non-reimbursable funds

Funding Contract: 798/25.02.2016

Romanian partner: “Carol Davila” University of Medicine and Pharmacy, Bucharest
Project Director: Assist. Prof. Dr. Cristina Căpușă

Norwegian partner: Renal Research Group – Bergen University
Project Responsible: Prof. Dr. Hans-Peter Marti

General information on the grant program

Through the Norway Grants and EEA Grants (www.norwaygrants.org), Norway contributes to reduce social and economic disparities and to strengthen bilateral relations with the beneficiary countries in southern and central Europe. Norway cooperates closely with the European Union through the Agreement on the European Economic Area (EEA).

For the period 2009-2014, Norway’s contribution is €1.7 billion. Grants are available for non-governmental organizations, research and academic institutions, and the public and private sectors in the 12 newest EU member states, Greece, Portugal and Spain. Key areas of support are: environmental protection and climate change, research and scholarships, civil society, health and children, gender equality, justice and cultural heritage. There is broad cooperation with Norwegian entities, and activities may be implemented until 2016. The Bilateral National Fund (<http://www.eeagrants.ro/en>) is a tool meant to facilitate contact and cooperation between entities in Romania and in the Donor States (Iceland, Lichtenstein, Norway). The purpose is to support various bilateral cooperation initiatives such as conferences, workshops, study tours, studies, consulting, information activities, as well as preparatory activities in the programming phase setting the ground for future cooperation in programmes and projects. The total allocation for the 2009-2014 period is over €1.5 million.



General information on the partners

“Carol Davila” University of Medicine and Pharmacy is the oldest and one of the largest public higher education institution for health sciences in Romania. It has four faculties (Medicine, Dental Medicine, Pharmacy, and Nursing, Midwifery and Medical Assistants), with 24 academic departments as functional units and has links with >20 hospitals in Bucharest. The Internal Medicine and Nephrology Dept. from “Dr. Carol Davila” Teaching Hospital of Nephrology (SCD) operates in a public university-affiliated hospital specialized in kidney diseases, accredited for both healthcare and scientific research activities. It is a tertiary speciality in-patient care centre with around 150 hospital beds, which provides kidney disease diagnosis and treatment for people from the entire country, especially from south, south-west and south-east of Romania. The first hemodialysis centre was founded here in 1974. Also, from 1994 it hosts the Romanian Renal Registry, a structure in the subordination of the Ministry of Health, which collects observational data about chronic kidney disease patients undergoing dialysis treatment. The hospital has its own pathology laboratory and >250 kidney biopsies are performed yearly. The main scientific interests of the SCD Nephrology Dept. are: epidemiology of end-stage kidney disease, renal anemia and its therapies, nutrition in kidney diseases, oxidative stress, chronic kidney disease-related mineral and bone disorder, glomerulopathies and vasculitis.

The Renal Research Group is one of the 18 research teams at the Department of Clinical Medicine from the University of Bergen. The purpose and mission of the Department is to conduct medical research and education at the highest international level. The scientific activity is focused on clinical issues combined with basic laboratory and registry-based research and research related to imaging analysis.

The Renal Research Group (RRG) has conducted basic research in renal diseases and hypertension in the past 40-50 years. It works in close collaboration with the Norwegian Kidney Biopsy Registry (which was founded in 1988 and is presently the world's largest active kidney biopsy registry, with data collected from >13000 patients). The research activity of the Group is focused on the use of renal biopsies (proteomics, RNA sequencing, genomics, and epidemiology). Currently, projects on IgA nephropathy, diabetic nephropathy (NTT-MMP-2), Fabry disease and membranous nephropathy, are conducted by the RRG. In the field of epidemiological work, the main research objective has been to discover markers of early development of kidney failure at the time of renal biopsy.

General information on the project

Scientific context: Chronic kidney disease (CKD) is a major health problem worldwide. Although secondary kidney involvement due to diabetes mellitus and hypertension are the leading etiologies, primary glomerulopathies (GN) were reported as the third leading cause, with an annual incidence rate of 32 to 23 pmp in US between 2000 and 2011 [1] and 16.2 pmp in 2003 in France [2]. The incidence and prevalence of GN varies in different regions, probably due to genetic, racial and environmental factors and are available mainly from end-stage renal disease registries. It is responsible for 14.3% of renal replacement therapy patients in US [3], between 8% and 27% in various countries and regions from Europe [4], 19-24% in



Australia and New Zealand [5], but much more in under-developed countries (23-58%) [6]. In Romania, the frequency of glomerulonephritis in incident dialysis patients was 17.1% in 2007 and 12.6% in 2013 [7]. Fewer data are available for non-dialysis CKD patients. National kidney biopsy registries exist in many Western Europe countries (Denmark, France, Holland, Italy, Norway, Spain etc), but mainly regional data are available from Eastern Europe [8], and only scarce data on GN epidemiology exist in Romania.

Project's scientific aims:

1. To investigate and compare the incidence of biopsy-proven primary glomerulopathies over a twenty years time interval (1995-2014) in southern parts of Romania (approximately 17 from the 41 counties) and Norway.
2. To comparatively assess the trends in primary glomerulopathies incidence over time in these two countries.

Methodology: It is a retrospective study by means of retrieved data from biopsy registries, nephropathology records and patients medical record files. All the results of native kidney biopsies performed between January 01, 1995 and December 31, 2014 in the two participant centres will be reviewed and cases of primary glomerulopathies will be selected. In addition, main demographic and clinical data will be analyzed. For the Norwegian partner, all these data will be extracted from the Norwegian Kidney Biopsy Registry reports. Appropriate statistical analysis will be applied and the incidence will be defined as number of diagnosed patients divided by the region population for a specified year (recorded by the National Institute of Statistics), multiplied by 1 million (pmp).

Project's staff: Prof. Dr. Gabriel Mircescu (SCD), Assist. Prof. Dr. Cristina Capusa (SCD), Dr. Gabriel Stefan (SCD), Dr. Eugen Mandache (SCD), Dr. Cosmin Florescu (SCD), Prof. Dr. Hans-Peter Marti (RRG), Assoc. Prof. Dr. Sabine Leh (RRG).

Expected results: The direct outcome will be the increase of knowledge about the epidemiology of primary GN in two countries from different regions of Europe and with different socio-economic status. In addition, it could set the background for future bilateral cooperation in the field of nephropathology.

References

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