



## **CardioVision Brno 2030**

Final Report of Mr. Ondrej Sochor, M.D.

### **Background**

I started my residency in the Department of Internal Medicine at St. Anne University Hospital, Brno. I got my Board Certification of Internal Medicine in 2005 and then my Board Certification of Vascular Medicine in 2009. With the permission of the authorities, I was allowed to run the Nicotine Dependency Center, currently one of the seven biggest nicotine dependency centers with more than 100 outpatients per year. The need of preventive program concerning cardiovascular risk factors seemed evident to me, as well as to a team of my colleagues, so we started the preparations for a preventive cardiology project in Brno, now called the CardioVision Brno 2030.

I learned about the American Fund for Czech and Slovak Leadership Studies from my colleagues in Brno Martin Pešl M.D., and Richard Salzmann M.D., Ph.D. During the preparation for my stay in the United States, I had to manage my daily duties (including nightshifts) and, also, the paperwork needed before the departure. If I could, I would reserve more time for the visa arrangements, which took longer than I supposed purely due to technical problems with issuing them. In addition, for future participants, I would suggest to be prepared for time-consuming checks performed by the TSA officers upon arrival at American airports.

### **American Partners**

**Mayo Clinic** is a non-profit, internationally renowned medical practice and research group located in three metropolitan areas of the United States: Rochester, Minnesota, Scottsdale, Arizona and Jacksonville, Florida. Mayo Clinic, Rochester, was ranked as the second best overall hospital in the United States by the "U.S. News & World Report in 2009". In 2010, the "U.S. News & World Report" has once again named Mayo Clinic to the Honor Roll of top hospitals in its annual "Best Hospitals" issue. Every year more than one million people from all 50 states and nearly 150 countries come to Mayo Clinic for care. More than 123,000 people are hospitalized per year at Mayo Clinic.

**CardioVision 2020** In order to improve the health status of residents in Olmsted County in Minnesota, a group of individuals (mostly employees of Mayo Clinic) began organizing the community initiative CardioVision 2020 in 1996. They initiated many unique steps, such as: smoke-free policies for restaurants and workplaces in Rochester, improvement of conditions for physical activities for the Mayo Clinic employees, persuading the owners of restaurants to label their food offerings with healthy cardiovascular profiles, and raising the awareness of lipid levels.

### **Brief Evaluation Statement**

To my delight, I had more hands-on project exposure and participation than I expected. The support for me, as a visiting scientist, included written training materials, an amazing library (with on-line access), outstanding lectures by world renowned specialists and speakers, immediate peer review, as well as general appreciation of my work. To be a part of such a prestigious organization like Mayo Clinic gave me a unique opportunity to appreciate the gift of my profession.

### **Detailed Description**

My objectives were to: (i) gain an understanding of how the team of CardioVision 2020 works (learning by doing), establish a link between the team of CardioVision 2020 and the team of CardioVision Brno 2030; and (ii) establish a link between the Division of Cardiovascular Diseases and Internal Medicine Mayo Clinic, Rochester, Minnesota and the 1st Department of Internal Medicine – Cardioangiology at St. Anne's University Hospital in Brno, Czech Republic. These objectives were accomplished, and in many respects exceeded. I participated in all the meetings for CardioVision 2020 (currently called Healthy Living Rochester), took an active part in running their website, published articles in the local newspaper, etc.

Thanks to the kind invitation of Professor Somers, M.D., Ph.D. I was able to participate in the Sleep Laboratory, especially with endothelial function tests. Also, of use to me in my daily practice in the Czech Republic, I observed smoking cessation treatments in the Nicotine Dependency Center of Mayo Clinic as well as in Good Samaritan Clinic, Rochester, Minnesota. I measured body fat with a unique method called BodPod and Body Volume Imaging, under the kind mentorship of Professor Lopez-Jimenez, M.D., MSc. This cardiometabolic aspect of preventive cardiology brought me closer to the cardiac rehabilitation program. We will also measure the body fat percentage in the CardioVision Brno 2030 project, but with the use of a cheaper method (bio-impedance).

During my internship I had the unique opportunity to meet many world renowned specialists at the Mayo Clinic, Rochester, Minnesota during their lectures, seminars, and meetings. As a visiting scientist, I attended seminars concerning Epidemiology, Clinical Cardiovascular Research, and Statistics. In addition, I attended presentations and trainings involving personal development (presentation skills, publishing research, crucial conversations, professionalism, etc.).

I had the opportunity to take part in the American Heart Association (AHA) Meeting in Chicago in November 2011. Furthermore, I sent my abstract for the 2011 Society for Research on Nicotine and Tobacco Annual Meeting in Toronto, Canada with my work concerning the Roma ethnic minority in the Czech and Slovak Republic and their nicotine dependency. This abstract was accepted. Unfortunately, due to a lack of time, I could not ask for a Canadian Visa and could not visit this scientific meeting.

With the permission of my superiors, I participated in the project of safety of home-monitoring of coagulation parameter called INR, lead by the team of Professor McBane, M.D. (staying within the framework of Cardiovascular Division). Two abstracts were submitted by Professor McBane's team for the AHA meeting for the fall 2011 (the results are not yet known).

### **Organization and Time Schedule**

I was invited by Professor Francisco Lopez-Jimenez, M.D., MSc. for one year, starting from October 12th, 2010, to expand my knowledge of preventive cardiology. After my first six months, (covered by the American Fund for Czech and Slovak Leadership Studies), I received support from St. Anne University Hospital, Brno for the next six months. I have been employed by this hospital since 2002, which also is the site of our common project CardioVision 2030. An extension of my internship was considered more beneficial compared to a shorter stay and was recommended by my supervisors at St. Anne University Hospital and also at Mayo Clinic.

This extension allowed me to continue taking courses and seminars in statistics and clinical research. I have continued to participate in an obesity study and a study of endothelial dysfunction. My stay at Mayo Clinic has permitted me to finalize the preparations for our common project, CardioVision Brno 2030 with Professor Lopez-Jimenez, M.D., MSc. (International Mentor of this project) and other colleagues.

### Program Cost

My costs were a little bit higher than I expected, however the final total was acceptable. For other participants, – it might be useful to plan a larger reserve.

Item	Cost Estimate in US\$		Actual Costs in US\$
Executive training seminars		0	0
Internship		0	0
Administrative fees (visa, registration, fees, etc.)		700	500
International travel		2,000	1,800
Local transportation	40 x 6	240	250
Medical insurance		600	1,000
Monthly maintenance	1,200 x 6	7,200	7,200
Contingency/Miscellaneous		500	1,300
<b>Total</b>		<b>11,240</b>	<b>12,050</b>

### Program Benefits

My stay permitted me to start collaboration with Professor Thomas, M.D., MSc., Professor Lopez-Jimenez, M.D., MSc. (Healthy Living Rochester) and Professor Somers, M.D., Ph.D. (Sleep Laboratory, Cardiology) and their teams. My experience at Mayo Clinic, the famous institution for outstanding education, gave me not only theoretical knowledge about the education of adults in preventive cardiology, but also a good practical knowledge, including the newest methods of health education (media, Internet social networking). This stay was a fundamental inspiration for developing our preventive project CardioVision 2030 at St. Anne University Hospital.

Similarly to Healthy Living Rochester, our study will focus on population-based intervention, including modern communication technologies. This project will start after I return to St. Anne University Hospital in Brno in October 2011. It already has funding approved by the European Union (European Regional Development Fund) as part of a group of other projects of FNUSA-ICRC. We want this project to join previous unique cardiovascular prevention programs, such as: North Karelia Project, the Minnesota Heart Health Program, the Pawtucket Heart Health Program, the Stanford Five-City Project, and others. Just as these projects we intend to decrease the values of different cardiovascular risk factors (smoking, physical inactivity, obesity, hypertension, dyslipidaemia). This should improve the cardiovascular fitness of the Brno population over the next twenty years.

### Risks

From a medical point of view, it would be a big advantage for all Czech medical students to have universal exams like USMLE (American exams for every medical student, including theoretical branches as well as clinical specialties). European students should (probably voluntarily) undergo the USMLE exams for free since they are offered by several European universities. Then every European medical student or doctor should apply for a clinical clerkship or employment in the United States.

The implementation of the research experience will take place in the next months, starting in October. The first lectures are scheduled for fall 2011. At that time, I would like to share my experience concerning education and research at Mayo Clinic, Rochester, Minnesota. As well, we would like officially start our Kardiovize Brno 2030 project.

Given my experience, I would recommend to avoid the difficulties I encountered obtaining my visa. I would mention that there might also be possible problems by the officials at the American airports

(even causing a missed connection flight). These problems are unpredictable, however, with no possible mitigation available.

### **Thank You**

I would like to thank the American Fund for Czech and Slovak Leadership Studies for their support. It helped me start a new period in my life, focusing on preventive cardiology, a vital element of human health. I am deeply committed to use my experience from this program for the benefit of patients and the general population in my city of Brno and the Czech Republic.

I would like to express my gratitude to my colleagues at St. Anne University Hospital: Dr. Ivo Hofirek M.D., Dr. Stanislav Sarnik M.D., Ph.D., Dr. Robert Prosecky, M.D. and other colleagues of the 1st Internal Department lead by Prof. Jiri Vitovec, M.D., CSc., and to the Deputy Director of ICRC project at St. Anne's University Hospital Ass. Prof. Tomáš Kára, M.D., Ph.D. It was their support and encouragement that made my stay at Mayo Clinic possible.

In addition, a thank you also belongs to my mentors Professor Somers, M.D., Ph.D., Professor Lopez-Jimenez MD., PhD, MSc. and Professor Thomas, MD., M.Sc. and their teams for their help and support, which has been so important to me.