Mojca Strazisar

Neuromics Support Facility
VIB-UAntwerp Center for Molecular Neurology

Education

BSc in Microbiology, Biotechnical Faculty, University of Ljubljana, Slovenia, 2002
PhD in Biochemistry and Molecular Biology, Faculty of Medicine, University of Ljubljana, Slovenia 2008

Current position

Expert Scientist-Head of Neuromics Support Facility, since 2015

Former positions

Young Researcher, Faculty of Medicine, University of Ljubljana, Slovenia 2003-07
Researcher, Faculty of Medicine, University of Ljubljana, Slovenia 2007-08
Postdoctoral researcher, Faculty of Medicine, University of Ljubljana, Slovenia 2009-10
Postdoctoral researcher, VIB DMG University of Antwerp, Belgium, 2011-14
Research Associate, VIB-UAntwerp CMN, 2014-15

E-mail: mojca.strazisar@uantwerpen.vib.be
Phone: +32 3 265 1099

Keywords

Neuromics Support Facility-Genomic Service Facility- Bioinformatics – Histology Cellular Imaging- Technologies - Molecular genomics and genetics – Fragment analysis- Cell Culture- Massively parallel sequencing– Targeted DNA/RNA sequencing- Exome sequencing – Transcriptomics - Quality control– miRNA- 1st, 2nd 3rd generation of sequencing

Science

In 2011 I became a postdoctoral scientist in the VIB Department of Molecular Genetics with the main focus to develop, test and implement novel technologies to be utilized in our research. During 2011-2012 we screened for SNVs and CNVs using in–house proprietary assays, multiplex amplicon quantification (MAQ) and multiplex amplification of specific targets for resequencing (MASTR), on large sample cohort of patients suffering from different psychiatric disorders and controls. Given the importance of miRNAs in brain function we also performed a pilot study and subsequent main screen of miRNA genes, known to be expressed in brain with the goal to identify variants affecting miRNA function and/or expression levels. In 2015 I joined a Genomic Service Facility, now expanded to Neuromic Support Facility to facilitate and optimize primarily the sequencing service (exome, genome, transcriptome) and to help develop the technical pipelines, which will grant our department an integrated access to the –omics technologies, enabling the study of molecular signatures using different approaches. I was introduced to all aspects of NSF workflow and am involved in researching novel technological possibilities that can strengthen and complement our existing platforms. I am involved in the daily lab-work, because it enables me to find and evaluate different strategies in order to select the most suitable solutions for the Center. I also actively facilitate smooth, clear and prompt communication between the NSF and the users of our support by working hand-in-hand with the demands of the researchers, clients and NSF.

Lab experience

-Automatization (BioMek Nx, FxP)
-NGS sequencers SOLID (SBL) and Illumina (SBS) (sample-library preparation, quality control (QC), operating the platforms, data analysis)
- 3rd generation, ONT platforms (sample, library prep, running, data QC)
- Sanger sequencing ABI 377, 310, 3730 XL (GeneScan, MAQ, MASTR optimization and QC, sequencing, fingerprinting, STR, microsatellite analysis, CNV) – sample prep, analysis
-Sequenom Compact (assay design, sample preparation and data analysis)
-Quality control (gel, DropSense, NanoDrop, LabChip Gx, Qubit, Fragment Analyzer, QPCR (ABI 7500 and Viia7))
-Transcriptomics (qPCR- ABI7500 and Viia7, Roche LightCycler – SYBR green, TaqMan, IDT, RNA-seq, Microarrays (Affymetrix, Tecan)
-Variant detection and analysis (SPSS, DHPLC, PCR, STR, MSI, sequencing, fragment analysis, HRM (high resolution melting), NGS, QPCR (TaqMan)
-Cell work (cloning, transformation, cell culturing, viral and bacterial work, transfection, transduction, blood separation: plasma, serum, lymphocytes)
-DNA, RNA, miRNA, protein extraction (cells, tissues)
-Extra: PCR (including QPCR, melted curve analysis, long range, multiplex and nested), safely working with pathogens and infectious agents
-Data analysis and QC (statistics, in-house analysis tools, LIMS, genome, gene analysis, transcription and pathway analysis)

Courses/Certificates

2017 C1 CEFR ITACE for lecturers, Linguapolis
2017 VIB Self-leadership for women scientists
2015 VIB Leadership Program for postdocs and staff scientists
2014 Nederlands voor anderstaligen niveau 3,2,1, Linguapolis
2014 Vaardigheid – Beter gebruik van MVK, UAntwerpen
2013 Multivariate statistics, Statua, UAntwerpen
2013 R-workshop, Statua, UAntwerpen
2012 Basic principles of Statistics, Statua, UAntwerpen
2011 Basic Biosafety, UAntwerpen
2010 Human Genome analysis, Wellcome Trust Advanced Course, Cambridge, UK

Extra

Lecturer in Integrative Omics course (Masters degree, UAntwerpen)
Education Committee Biochemistry (effective advisory member, UAntwerpen)
Examination Board Master Biochemistry and Biotechnology (effective advisory member, UAntwerpen)
VIB Technology Watch Team (member)
Research data management technical working group (member)
Supervisor, promotor, co-promotor (Bachelor, Masters degree)

Research projects and Fellowships

https://www.uantwerpen.be/nl/personeel/mojca-strazisar/onderzoek/

http://sicris.izum.si/search/rsr.aspx?lang=eng&id=16755&opt=1

Selected Publications

Strazisar M, Cammaerts S, van der Ven K, Forero DA, Lenaerts AS, Nordin A, Almeida-Souza L, Genovese G, Timmerman V, Liekens A, De Rijk P, Adolfsson R, Callaerts P, Del-Favero J. MIR137 variants identified in psychiatric patients affect synaptogenesis and neuronal transmission gene sets. Mol Psychiatry. 2015 Apr;20(4):472-81. (IF: 14,897)

Cammaerts S, **Strazisar M**, Dierckx J, Del Favero J, De Rijk P. miRVaS: a tool to predict the impact of genetic variants on miRNAs. Nucleic Acids Res. 2015 Sep 17. pii: gkv921. [Epub ahead of print] PMID: 26384425 (IF: 9.112)

Cammaerts S, **Strazisar M**, De Rijk P, Del Favero J. Genetic variants in microRNA genes: impact on microRNA expression, function, and disease. Front Genet. 2015 May 21;6:186.Review. PMID: 26052338

Van Den Bossche MJ, **Strazisar M**, De Bruyne S, Bervoets C, Lenaerts AS, De Zutter S, Nordin A, Norrback KF, Goossens D, De Rijk P, Green EK, Grozeva D, Mendlewicz J, Craddock N, Sabbe BG, Adolfsson R, Souery D, Del-Favero J: Identification of a CACNA2D4 deletion in late onset bipolar disorder patients and implications for the involvement of voltage- dependent calcium channels in psychiatric disorders. Am J Med Genet B Neuropsychiatr Genet. 2012; 159B(4):465-75 (IF: 3.705) (PMID: 22488967)

all publications