

Matej Orešič, Ph.D., Adj. Prof.
 Born: 13.12.1967, Maribor, Slovenia
 Citizenship: Finland, Slovenia
 Residence: Finland, Denmark
 Email: mtjo@steno.dk
 Phone: +45 3075 6216
 WWW page: <http://www.symmys.fi/matej.html>

Education	<p>Docent, Computational Systems Biology (February 2005) Helsinki University of Technology Ph.D., Cornell University, 1999 (Advisor Prof. David Shalloway) Field of Biophysics, Department of Molecular Biology and Genetics, Cornell University, Ithaca, NY, USA. Minors in biochemistry and cognitive science. Thesis Title: <i>Studies of specific correlations between synonymous codon usage and protein secondary structure</i>. PhD Candidacy Examination, Cornell University, May 1995 Diploma, University of Ljubljana, 1992 (Advisor Prof. Raša Pirc) Department of Physics, Faculty of Natural Sciences and Technology, University of Ljubljana, Ljubljana, Slovenia. Thesis Title: <i>Model of a quasi one-dimensional spin glass</i></p>
Current affiliations	<p>Steno Diabetes Center (Gentofte, Denmark) [April 2014 – present] Principal Investigator, Systems Medicine Turku Centre for Biotechnology (Turku, Finland) [September 2006 – present] Affiliated Group Leader</p>
Major current scientific roles	<p>Coordinator: Collaborative project (EU 7th Framework Programme, HEALTH) <i>Neuroimaging platform for characterisation of metabolic co-morbidities in psychotic disorders (METSy)</i>. [9/2013-9/2017] PI: Academy of Finland Centre of Excellence in Molecular Systems Immunology and Physiology Research (SyMMyS) [1/2012 – 12/2017], director until 4/2014.</p>
Current positions of trust and advisory roles	<p>Horizon 2020 programme (EU); Advisory Group member, Societal Challenge 1 'Health, demographic change and wellbeing'; chair of Personalized Medicine working group [2013-present] European Research Council (EU); Panel Member, Starting Grants, LS7–Diagnostic tools, therapies and public health [appointment 2012-2016] ERASysBio; Member, Scientific Advisory Board [2009 – present] Skolkovo Foundation (Russia), Expert Panel Member, Bio-medical Cluster [2011 – present] Metabolomics Journal; Member, Editorial Board [2010 – present] PLoS ONE journal; Member, Editorial Board [2010 – present] Molecular BioSystems journal; Member, Scientific Advisory Board [2008 – present]</p>
Previous positions of trust and advisory roles	<p>Zora Biosciences, Ltd. (Espoo, Finland) Founder and Member, Board of Directors [2006 – 11/2013; Chairman until 3/2008] The Metabolomics Society (http://www.metabolomicssociety.org/) Member, Board of Directors [9/2008 – 9/2013; two consecutive terms] Gene Network Sciences, Inc. (Cambridge, MA, USA) Member, Scientific Advisory Board [2007 – 2010] Beyond Genomics, Inc. (Waltham, MA, USA) Consultant [2003-2004]</p>
Previous professional experience and affiliations	<p><i>April 2003 – March 2014</i> VTT Technical Research Centre of Finland <i>Espoo, Finland</i> Research Professor, Systems Biology and Bioinformatics (as of November 1, 2007) <i>June 2008 - January 2014</i> <i>Helsinki, Finland</i> Institute for Molecular Medicine Finland FIMM Senior Scientist <i>August 2001 - March 2003</i> <i>Boston, MA, USA</i> Beyond Genomics, Inc. (current name BG Medicine, Inc.) Principal Scientist and Head, Computational Biology and Statistics <i>August 2000 – August 2001</i> <i>Boston, MA, USA</i></p>

	LION Bioscience Research, Inc. Bioinformatician August 1999 – August 2000 Ithaca, NY USA
	Department of Molecular Biology and Genetics, Cornell University Postdoctoral Research Associate September 1994 – August 1999 Ithaca, NY, USA
	Field of Biophysics, Department of Molecular Biology and Genetics, Cornell University Graduate Research Assistant August 1992 – August 1994 Ithaca, NY, USA
	Department of Physics, Cornell University Graduate Research Assistant August 1991 – August 1992 Ljubljana, Slovenia
	Division of Theoretical Physics, Jožef Stefan Institute Research Associate June 1990 – September 1990 München, Germany
	Siemens AG, Research Center Trainee
Teaching	Fall semester 2005 Department of Computer Science, Helsinki University of Technology Course instructor September 1999 – August 2000 Ithaca, NY, USA
	Department of Physics, Cornell University Lecturer September 1996 – August 1999 Ithaca, NY, USA
	Department of Physics, Cornell University Teaching assistant (part time)
Thesis supervision	Masters thesis instructor <u>Erno Lindfors</u> (Helsinki University of Technology), completed in May 2005. Thesis title: Developing tools for investigating the structure of biological networks. <u>Vasudev Kantae</u> (University of Helsinki, FIMM), completed in November 2012. Thesis title: High-throughput Mass Spectrometry based Method for the Quantitative Targeted Metabolomics. Doctoral thesis supervisor <u>Peddinti Gopalacharyulu</u> (VTT and Aalto University), completed May 2010. <u>Laxman Yetukuri</u> (VTT and Aalto University), completed June 2010. <u>Erno Lindfors</u> (VTT and Aalto University), completed November 2011. <u>Maria Lankinen</u> (VTT and University of Kuopio), completed June 2011. <u>Tapio Lönnberg</u> (University of Turku), completed October 2012. Post-doctoral training instructor <u>Dr. Mariukka Kolehmainen</u> (University of Kuopio, Academy of Finland post-doc, 2005).
Scientific expert positions	Supervisor and group leader [February 2004 – present] National Graduate School in Informational and Structural Biology Supervisor [January 2007 – present] Drug Discovery Graduate School Doctoral thesis opponent <u>Sampsa Hautaniemi</u> (5.12.2003, Tampere University of Technology, Finland). <u>Perttu Haimi</u> (17.6.2011, University of Helsinki, Finland) <u>Rasmus Madsen</u> (5.10.2012, Umeå University, Sweden) <u>Natalja Pustovalova Nørskov</u> (7.5.2013, Aarhus University, Denmark) Doctoral thesis reviewer <u>Janne Nikkilä</u> (2005, Department of Computer Science, Helsinki University of Technology). <u>Sami Myllykangas</u> (2008, Faculty of Medicine, University of Helsinki) <u>J. Zander Lindeque</u> (2011, North-West University, South Africa) Ad hoc journal reviewer (selected) Nature (2007, 2008), Nature Comm. (2013), The Lancet (2010), N. Engl. J. Med. (2008), Mol. Syst. Biol. (2008, 2009, 2010), Hepatology (2011, 2012, 2013), J. Lipid Res. (2013), Mol. Psychiatry (2011), Transl. Psychiatry (2011, 2012), Schizop. Bull. (2011), Metabolomics (2007, 2008, 2009,

2010, 2011, 2012, 2014), FASEB J. (2013, 2014), J. Proteome Res. (2011, 2012, 2014), PLoS Biol. (2005, 2006, 2008, 2010), Am. J. Physiol. (2010, 2011), Genome Med. (2009, 2011), Anal. Chem. (2009, 2011, 2012, 2013), Diabetologia (2011), PLoS ONE (2009-2013), PLoS Comput. Biol. (2009, 2011), PLoS Genet. (2011), FASEB J. (2011), Biochim. Biophys. Acta (2009, 2011), BMC Bioinformatics (2005, 2006, 2007, 2008, 2009, 2010), Bioinformatics (2005, 2006, 2008, 2009, 2011), Mol. Biosyst. (2007, 2008, 2009, 2010), Am. J. Clin. Nutr. (2010), Nat. Rev. Drug Disc. (2005), J. Theor. Biol. (2005, 2010)

Panel member, grant reviewer and project evaluator (selected)

- European Research Council - ERC Consolidator Grants (2014), panel member and reviewer
- Midterm review of TNO Systems Biology Enabling Technology programme, Netherlands (2013), evaluator
- l'Agence Nationale de la Recherche, France (2010, 2011, 2012), Member of the Jury, "National Infrastructures for Biology and Health"
- Skolkovo Foundation, Russia (2011, 2012, 2013, 2014), reviewer (expert advisory board)
- European Research Council - ERC Synergy Grants (2013), shadow panel member and reviewer
- European Research Council - ERC Starting Grants (2012), panel member and reviewer
- Wellcome Trust, UK (2009, 2010, 2013), reviewer (research, strategic, infrastructure grants)
- Alzheimer's Society, UK (2012), reviewer
- Danish Council for Independent Research (2011, 2012), reviewer
- Medical Research Council, UK (2011, 2013), reviewer
- IBISA, France (2009, 2011), infrastructure grants, reviewer
- eBio programme, Germany (2011), panel member and reviewer
- FP7-HEALTH (2010, 2011), panel member and reviewer
- FP7-KBBE (2011), panel member and reviewer
- ERA-NET ERASysBio (2009, 2011), panel member and reviewer
- The Icelandic Research Fund (2010, 2011), reviewer
- Netherlands Organisation for Scientific Research (2008, 2012, 2013), reviewer
- Progress and final evaluation of DIOGENES FP6 Integrated Project, appointed by the European Commission (2009, 2010)
- l'Agence Nationale de la Recherche, France (2010, 2011), research grants, reviewer
- City University of Hong Kong (2010), strategic research grants
- Netherlands Organisation for Health Research and Development (ZonMw) (2008, 2009), reviewer
- Parkinson's Disease Society, UK (2009), reviewer
- Progress evaluation of NuGo FP6 Network of Excellence, appointed by the European Commission (2008)
- National Science Foundation, USA (2007), reviewer
- Phillip Morris External Research Grants, USA (2007), reviewer
- NEST Pathfinder – Synthetic Biology, 6th Framework Programme, European Commission (2005, 2006), reviewer
- Cancer Research, UK (2006), reviewer

Received grants and awards (last 5 years)

Listed budgets show contribution to the applicant, not the complete project budget.

- Strategic Research Agreement, Juvenile Diabetes Research Foundation (7/2014-7/2016): *Integrative multi-omic study of early predictive markers of progression to type 1 diabetes*. [Principal investigator; \$549,998]
- GE NFL Head Health Challenge I award (3/2014-3/2015) [Awardee; \$300,000]
- Collaborative project, EU 7th Framework Programme, HEALTH (9/2013-9/2017): *Neuroimaging platform for characterisation of metabolic co-morbidities in psychotic disorders (METSU)*. [Coordinator; contribution from EC 1,005,029€]
- Academy of Finland Centre of Excellence in Molecular Systems Immunology and Physiology Research - SyMMys (1/2012 – 12/2017). [Director and PI; contribution to the Centre from Academy of Finland for the first 3-year period is 3,373,943€]
- Collaborative project, EU 7th Framework Programme, HEALTH (12/2011-12/2015): *Development of novel treatment strategies based on knowledge of cellular dysfunction in diabetes (BetaBat)*. [WP leader; contribution from EC 496,000€]
- Collaborative project, EU 7th Framework Programme, HEALTH (12/2011-12/2015):

	<p><i>Mechanisms of prevention of type 2 diabetes by lifestyle intervention in subjects with pre-diabetes or at high-risk for progression (DEXLIFE)</i>. [WP leader; contribution from EC 940,065€]</p> <ul style="list-style-type: none"> • Collaborative project, EU 7th Framework Programme, KBBE (10/2011-10/2015): <i>BIO knowLEDGe Extractor and Modeller for Protein Production (BIOLEDGE)</i>. [Coordinator; contribution from EC 978,106€] • Collaborative project, EU 7th Framework Programme, KBBE (2009-2013): <i>Molecular targets open for regulation by the gut flora – new avenues for improved diet to optimize European health (TORNADO)</i>. [WP leader; contribution from EC 624,394€] • Collaborative project, EU 7th Framework Programme, Food, Agriculture and Fisheries, and Biotechnology (2009-2012): <i>Characterization and modelling of dietary effects mediated by gut microbiota on lipid metabolism (ETHERPATHS)</i>. [Coordinator; contribution from EC 1,898,617€]
Conference / Symposium organizer	<ul style="list-style-type: none"> • Keystone Symposium on Systems Biology of Lipid Metabolism (Organizer; February 9-13, 2015; Beaver Run Resort, Breckenridge, CO, USA, in planning phase): http://www.keystonesymposia.org/15B4 • Symposium on molecular biomarkers in schizophrenia, at 14th International Congress on Schizophrenia Research (Organizer and speaker; Orlando, FL, 2013). • MetaboMeeting 2011 (Local host and member of scientific committee; Helsinki, Finland, 2011)
Invited speaker	<p>Invited and selected talks at over 100 international and national events since 2004. Selected examples of large international events:</p> <ul style="list-style-type: none"> • International Metabolomics Conference (Tsuruoka, Japan, 2005; Boston, USA, 2006; Manchester, UK, 2007; Boston, USA, 2008; Amsterdam, Netherlands, 2010; Washington, DC, USA, 2012; Tsuruoka, Japan, 2014) • 77th European Atherosclerosis Society Congress (plenary, Istanbul, Turkey, 2008) • European Congress of Endocrinology (Berlin, Germany, 2008; Copenhagen, Denmark, 2013) • International Conference on Systems Biology (Göteborg, Sweden, 2008; Edinburgh, UK, 2010) • Gordon Conferences, Macromolecular Organisation and Cell Function: Cellular Systems Biology (Oxford, UK, 2008) • Immunology of Diabetes 10 (plenary, Malmö, Sweden, 2009) • 35th Annual Meeting of the International Society of Pediatric and Adolescent Diabetes (opening keynote, Ljubljana, Slovenia, 2009) • 11th International Congress on Obesity (Stockholm, Sweden, 2010) • 35th FEBS Congress (plenary, Gothenburg, Sweden, 2010) • Keystone Symposium, Lipid Biology and Lipotoxicity (Killarney, Co. Kerry, Ireland, 2011) • 2nd International Symposium on Mass spectrometry in Life Sciences (Bangalore, India, 2011) • 19th European Congress on Obesity (Lyon, France, 2012) • 22nd IUBMB & 37th FEBS Congress (Sevilla, Spain, 2012) • 2nd International Congress on Translational Research in Human Nutrition (Clermont-Ferrand, France, 2013) • 15th European Congress of Endocrinology (Copenhagen, Denmark, 2013) • 46th Annual Meeting of the European Society of Pediatric Gastroenterology Hepatology and Nutrition (London, UK, 2013) • 15th International Symposium on Celiac Disease (Chicago, IL, USA, 2013) • 20th International Mass Spectrometry Conference (keynote; Geneva, Switzerland, 2014)
Society Memberships	Metabolomics Society, European Association for the Study of Diabetes
Languages	English (fluent), Slovenian (native), German (good), Serbo-Croatian (fluent), Finnish (basic), Spanish (basic), Russian (basic)
Other achievements	<p>Internationally recognized Argentine Tango performer and teacher. Led a performance group until 2000, produced several shows. Performance and choreography in Carnegie Hall, NYC (1999).</p> <p>Yugoslavian champion in sailing (Europe Class) in 1986, member of national team for several years, coach of Slovenian sailing team in 1992 (Europe Class), before moving to USA. Advanced competitive sailing teacher 1992-1994 at Cornell University.</p>