

## Curriculum vitae

### A. Personal data

Name: Igor Stagljär

Title: Professor

Nationality: Croatia and Canada

Languages: Croatian (mother tongue)  
English (full professional proficiency)  
German (full professional proficiency)

Linked-In profile: <https://www.linkedin.com/in/igor-stagljär-1216b82>

UofT Lab web page: <http://local.biochemistry.utoronto.ca/stagljär/>

### B. Personal Statement

Dr. Igor Stagljär is a highly-accomplished mid-career scientist and a Professor in the Departments of Biochemistry and Molecular Genetics at the Donnelly Centre, University of Toronto, Canada, and, since October 2017, a Laboratory Head at the Mediterranean Institute of Life Sciences, Split, Croatia. He trained with Profs. Charles Weissmann and Markus Aebi (ETH Zurich, Switzerland) for his Ph.D. and Profs. Walter Schaffner, Ulrich Hübscher (University of Zurich, Switzerland) and Stanley Fields (University of Washington, Seattle, WA, USA) for his postdoctoral work. He has published over 114 research papers, is the holder of 4 patents, and has been honored as one of the top inventors at the University of Toronto.

He is a recognized expert and world leader in the field of protein-protein interactions (PPIs) and PPI technology development, and, in particular, he is internationally known for the development of the Membrane Yeast Two-Hybrid (MYTH) and Mammalian Membrane Two-Hybrid (MaMTH) technologies, both of which have revolutionized membrane PPI research. Most recently, Dr. Stagljär's development of MaMTH into a drug screening platform (MaMTH-DS) has the potential to dramatically improve the development of therapeutics against membrane PPI targets. He is currently directing major proteomics projects to map how integral membrane proteins interact to produce either healthy or diseased cells, to identify novel membrane PPI therapeutic targets, and to screen for novel drugs, in particular to target lung cancer. To this end, his lab is using high-throughput interactive proteomics, genetic, and biochemical tools and developing new technologies and workflows.

Dr. Stagljär is the recipient of several national and international science awards, the most recent being the Croatian Biological Society Plaque "Zdravko Lorkovic" and Canadian "The 2015 Inventor of the Year" award. In addition, he has been awarded over \$25 million in research funds from a range of national and international funding agencies, non-profit foundations and pharmaceutical companies, such as Merck, Genentech, Eli Lilly and Novartis, including a prestigious \$3.25 million Genome Canada "Disruptive Innovations in Genomics" grant that has been awarded to only four Canadian researchers thus far. Furthermore, he is a member of the Editorial Board of *BMC Biotechnology*, *Journal of Molecular Biology*, *Biochemical and Biophysical Research Communications*, and *Molecular Systems Biology*. Based on his academic successes, Dr. Stagljär has co-founded two companies, Dualsystems Biotech Inc., a world-leading company in the field of interactive proteomics, and a new Toronto-based biotech start-up company named ProteinNetwork Therapeutix, Inc.

## C. Research Interests

- (i) Proteomics
- (ii) Protein interaction networks in health & disease
- (iii) Mechanism of action of drugs
- (iv) Cell signaling
- (v) Membrane transport

## D. Positions and Honors

### Positions

- 1995-2000 Post Doctoral Fellow, Department of Molecular Biology, University of Zurich, Switzerland
- 2000-2001 Senior Research Associate, Institute of Veterinary Biochemistry and Molecular Biology, University of Zurich, Switzerland
- 2001 Swiss National Foundation fellow and Visiting Scientist, Genome Sciences and Medicine, University of Washington, Washington, USA
- 2002-2005 Assistant Professor, Institute of Veterinary Biochemistry and Molecular Biology, University of Zurich, Switzerland
- 2005-2009 Associate Professor, Donnelly Centre, Department of Biochemistry, Department of Molecular Genetics, University of Toronto, Canada
- 2010 - Professor, Donnelly Centre, Department Molecular Genetics, Department of Biochemistry, University of Toronto, Canada
- 2016 Sabbatical at the Salk Institute for Biological Sciences, La Jolla, CA (Feb-April, 2016), working in the lab of Prof. Tony Hunter
- Sabbatical at the German Cancer Research Center, Heidelberg, Germany (April-May 2016), working in the lab of Prof. Jörg Hoheisel
- Sabbatical at the Mediterranean Institute of Life Sciences, Split, Croatia (June 2016) working in the lab of Prof. Miroslav Radman
- 2017- Lab head at the Mediterranean Institute of Life Sciences, Split, Croatia

### Editorial Boards

- 2005 - Editorial Board Member, *BioTechniques*
- 2006 - Editorial Board Member, *Molecular Genetics and Genomics*
- 2011 - Section Editor, *BMC Biotechnology*
- 2012 - Editorial Board Member, *Journal of Molecular Biology*
- 2013 - Editorial Board Member, *Biochemical and Biophysical Research Communications*

### E. Five most important Publications

1. Paumi, C.M., Menendez, J., Arnoldo, A., Engels, K., Iyer, K., Thaminy, S., Georgiev, O., Barral, Y., Michaelis, S., and **Stagljar, I.** (2007) Mapping Protein-Protein Interactions for the Yeast ABC Transporter Ycf1p by Integrated Split-Ubiquitin Membrane Yeast Two-Hybrid (iMYTH) Analysis, *Molecular Cell* **26**,15-25.
2. Snider, J., Hanif, A., Lee, M.E., Jin, K., Yu, A.R., Chuk, M., Damjanovic, D., Graham, C., Wierzbicka, M., Tang, P., Balderes, D., Wong, V., San Luis, B-J., Shevelev, I., Sturley, S.L., Boone, C., Babu, M., Zhang, Z., Paumi, C.M., Park, H-O., Michaelis, S., and **Stagljar, I.** (2013) Mapping the functional yeast ABC transporter interactome, *Nature Chemical Biology* **9**, 565-572.
3. Petschnigg, J., Groisman, B., Kotlyar, M., Taipale, M., Zheng, Y., Kurat, C.F., Sayad, A., J. Rafael Sierra, Mattiazzi Usaj, M., Snider, J., Nachman, A., Krykbaeva, I., Tsao, M-S., Moffat, J., Pawson, T., Lindquist, S., Jurisica, I. and **Stagljar, I.** (2014) The mammalian-membrane two-hybrid assay (MaMTH) for probing membrane-protein interactions in human cells, *Nature Methods* **11**, 585-592.
4. Yao, Z., Darowski, K., St-Denis, N., Wong, V., Offensperger, F., Villedieu, A., Amin, S., Maly, R., Aoki, H., Guo, H., Xu, Y., Iorio, C., Kotlyar, M., Emili, A., Jurisica, I., Babu, M., Neel, B.G., Gingras, A-C., and **Stagljar, I.** (2017) A global analysis of the receptor tyrosine kinase – protein phosphatase interactome, *Molecular Cell* **65**, 347-360. doi: 10.1016/j.molcel.2016.12.004.
5. Sokolina, K., Kittanakom, S., Snider, J., Kotlyar, M., Maurice, P., Gandía, J., Benleulmi-Chaachoua, A., Tadagaki, K., Oishi, A., Wong, V., Reyes, B.A., Brown, K.R., Kobayashi, H., Menendez, J., Auerbach, D., Angers, A., Bouvier, M., Ciruela, F., Jockers, R., Jurisica, I., and **Stagljar, I.** (2017) Systematic protein-protein interaction mapping for clinically-relevant human GPCRs, *Molecular Systems Biology* **13**, 918. doi: 10.15252/msb.20167430.