

## Scientific publications

Prof. Serhiy Souchelnytskyi

### SCIENTIFIC ACTIVITY

The area of my scientific activity is **cancer**. The focus is on **personalization of anti-cancer treatment**. The approaches I use are cancer proteomics, systems biology and cell and molecular biology studies. Clinical studies are used for application of the findings. The main emphasis of my current research is on development of practical clinically useful applications.

See also my personal web page [www.serhiysouchelnytskyi.expert](http://www.serhiysouchelnytskyi.expert)

### SCIENTIFIC PUBLICATIONS

#### Bibliometric parameters

**Number of publications is 148: 105 experimental articles, 37 reviews, and 6 patents** have been published or accepted by August, 2022.

**Sum of the times cited – 7.683; average citation per article is 52, H-index is 37** (by Google Scholars). Names in MedLine/PubMed: Souchelnytskyi, Souchelnytskiy, Sushelnitskii.

Publications are in general biology journals (e.g., Current Biology (Cell family), EMBO J., FASEB J., Mol. Biol. Cell, Mol. Cell. Biol.), cancer (e.g., Oncogene, Int. J. of Cancer, Exp. Oncol.), biochemistry (e.g., J. Biol. Chem., Biochemistry) and proteomics (e.g., Proteomics, Proteomics Clinical Appl., J. Prot. Res., Cancer Gen. Proteomics, Expert Rev. Proteomics) fields.

Patents are for markers for early detection of breast and ovarian cancers, for development of drugs addressing TGFbeta signaling in diseases, with emphasis on anti-cancer treatment, and on new therapies of ovarian cancer.

Publications are listed in 4 sections - **lists of experimental works, patents (page 9), reviews (page 9), and presentations in mass media (page 11)**.

### EXPERIMENTAL PAPERS (105)

1. Kannan S, **Souchelnytskyi S**. The exposure to human breast cancer cells altered 14 post-translational modifications of human serum albumin. **Adv. Med. Sci.** 2022, August; under revision.
2. Kannan S., Shilesh H, Mohammad H, Souchelnytskyi N, **Souchelnytskyi S**. A long-term 10g-hypergravity exposure promotes cell-cell contacts, and reduces adhesiveness to a substrate, migration, and invasiveness of MCF7 human breast cancer cells. **Exp. Oncol.**, 2022 May;44(1):23-30. doi: 10.32471/exp-oncology.2312-8852.vol-44-no-1.17270.
3. Kannan S, Krishnankutty R, **Souchelnytskyi S**. Novel post-translational modifications of human serum albumin. **Protein and Peptide Letter**, Protein Pept Lett. 2022 Mar 18. doi: 10.2174/0929866529666220318152509. Online ahead of print.
4. **Souchelnytskyi S**, Nera A, Souchelnytskyi N. COVID-19 engages clinical markers for the management of cancer and cancer-relevant regulators of cell proliferation, death, migration, and immune response. **Sci. Reports**, 2021, 11(1), 5228. <https://doi.org/10.1038/s41598-021-84780-y>
5. Kannan S, Ericsson J, Souchelnytskyi N, **Souchelnytskyi S**. A protocol for the detection of genetic markers in saliva by polymerase chain reaction without a nucleic acid purification step: examples of

- SARS-CoV-2 and GAPDH markers. *Proceedings of the Schevchenko Scientific Soc. Medical Sci.*. 2021, 64(1), online April, 7.
6. **Souchelnytskyi S**, Souchelnytskyi N. Chloroquine use in the treatment of COVID-19: systems biology report of common targets of SARS-CoV-2 and chloroquine. *ResearchSquare*, 2021. 10.21203/rs.3.rs-99139/v1
  7. Kolakowska J, Drzewiecka EM, Kozłowska W, Zmijewska A, **Souchelnytskyi S**, Franczak A. Alterations in proteomic profile of porcine conceptuses during early stages of development. *Reproductive Biology*, 2021, March; 21(1), 100468, <https://doi.org/10.1016/j.repbio.2021.100481>
  8. Starykovich M, Antonyuk V, Nehrych T, Negrych N, Horák D, **Souchelnytskyi S**, Kit O, Stoika R, Kit Y. Isolation and identification in human blood serum of the proteins possessing the ability to bind with 48 kDa form of unconventional myosin 1c and their possible diagnostic and prognostic value. *Biomed Chromatogr.* 2020 Nov 17:e5029. doi: 10.1002/bmc.5029.
  9. Souchelnytskyi N, Kost A, **Souchelnytskyi S**. CELL-BASED DIAGNOSTIC OF BRONCHIAL CARCINOMA: CASE STUDY OF A DIAGNOSTIC VALUE OF TESTS OF CIRCULATING TUMOR CELLS AND ORGANOID CULTURE. *Proceedings of the Shevchenko Scientific Society. Medical Sciences.* 2020, 59. <https://doi.10.25040/ntsh2020.01.07>.
  10. Woksepp H, Saini R.K.R, Zakharchenko O, Gautier A, Souchelnytskyi N, **Souchelnytskyi S**. Proteomics of transforming growth factor  $\beta$ 1 (TGF  $\beta$ 1) signaling in 184A1 human breast epithelial cells suggests the involvement of casein kinase 2 $\alpha$  in TGF  $\beta$ 1-dependent p53 phosphorylation at Ser392. *Exp Oncol.* 2019 Dec;41(4):304-311.
  11. Gotoh T, Iwahana H, Kannan S, Marei RG, Mousa H, Elgamal M, **Souchelnytskyi S**. Glycosylation is a novel TGF $\beta$ 1-independent post-translational modification of Smad2. *Biochem Biophys Res Commun.* 2020 Jan 22;521(4):1010-1016. doi: 10.1016/j.bbrc.2019.11.039. Epub 2019 Nov 12.
  12. Mousa H, Elgamal M, Marei RG, Souchelnytskyi N, Lin KW, **Souchelnytskyi S**. Acquisition of Invasiveness by Breast Adenocarcinoma Cells Engages Established Hallmarks and Novel Regulatory Mechanisms. *Cancer Genomics Proteomics.* 2019 Nov-Dec;16(6):505-518. doi: 10.21873/cgp.20153.
  13. Manko N, Starykovich M, Bobak Y, Stoika R, Richter V, Koval O, Lavrik I, Horák D, **Souchelnytskyi S**, Kit Y. The purification and identification of human blood serum proteins with affinity to the antitumor active RL2 lactaptin using magnetic microparticles. *Biomed Chromatogr.* 2019 Nov;33(11):e4647. doi: 10.1002/bmc.4647. Epub 2019 Aug 18.
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#### **PRESENTATIONS IN MASS MEDIA:**

1. QU Space program presentation, 2020. <https://twitter.com/quresearch/status/1329012991451426816>
2. 2015-2021. Multiple presentations in newspapers in Qatar. The subject is personalization of cancer treatment, development of tests for diagnostic and selection of drugs for individualization of treatment. <https://www.pressreader.com/qatar/gulf-times/20210205/282175063801638>  
<https://thepeninsulaqatar.com/article/05/02/2021/QU-marks-World-Cancer-Day>
3. Since 2005, there is a number of presentations and interviews in international and Swedish national newspapers, TV and radio. On the internet, it is >400 references to the marker project. The subject is early detection of breast and ovarian cancer.
4. BBC interview about my activities in management of breast cancer. This interview was broadcasted few times during the spring 2010.
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