

PERSONAL INFORMATION

Pille Saalik

WORK EXPERIENCE

- 2005–2012 **researcher**
University of Tartu (Estonia)
cell-penetrating peptides
- 2012–2018 **post-doctoral fellow**
University of Tartu (Estonia)
Cancer biology, tumor penetrating peptides
- 2018–Present **specialist at department of biologicals**
State Agency of Medicines (Estonia)

EDUCATION AND TRAINING

- 2004–2009 **PhD, cell biology**
University of Tartu (Estonia)
- 2017–2019 **Secondary school science teacher**
University of Tartu (Estonia)

ADDITIONAL INFORMATION

- Expertise** Cell biology, cell-penetrating peptides, tumor-penetrating peptides, eukaryotic cell culture, in vivo cancer models (mouse, rat), peptide phage display.
- Publications**
1. Peptide-guided nanoparticles for glioblastoma targeting.
Säälik P, Lingasamy P, Toome K, Mastandrea I, Rousso-Noori L, Tobi A, Simón-Gracia L, Hunt H, Paiste P, Kotamraju VR, Bergers G, Asser T, Rätsep T, Ruoslahti E, Bjerkvig R, Friedmann-Morvinski D, Teesalu T.
J Control Release. 2019 Aug 28;308:109-118. doi: 10.1016/j.jconrel.2019.06.018. Epub 2019 Jun 27.
 2. Arginine-Rich Cell-Penetrating Peptides Require Nucleolin and Cholesterol-Poor Subdomains for Translocation across Membranes. Lorents A, Säälik P, Langel Ü, Pooga M. Bioconjug Chem. 2018 Mar 14. doi: 10.1021/acs.bioconjchem.7b00805.
 3. Precision Targeting of Tumor Macrophages with a CD206 Binding Peptide. Scodeller P, Simón-Gracia L, Kopanchuk S, Tobi A, Kilk K, Säälik P, Kurm K, Squadrito ML, Kotamraju VR, Rinken A, De Palma M, Ruoslahti E, Teesalu T. Sci Rep. 2017 Nov 7;7(1):14655. doi: 10.1038/s41598-017-14709-x.
 4. Pae, J.; Säälik, P.; Liivamägi, L.; Lubenets, D.; Arukuusk, P.; Langel, Ü.; Pooga, M. (2014). Translocation of cell-penetrating peptides across the plasma membrane is controlled by cholesterol and microenvironment created by membranous proteins. Journal of Controlled Release, 192, 103–113. 10.1016/j.jconrel.2014.07.002.
 5. Räägel, H.; Hein, M.; Kriiska, A.; Säälik, P.; Floren, A.; Langel, Ü.; Pooga, M. (2013). Cell-penetrating peptide secures an efficient endosomal escape of an intact cargo upon a brief photo-induction. Cellular and Molecular Life Sciences, 70, 4825–4839. 10.1007/s00018-013-1416-z.
 6. Säälik, P.; Niinep, A.; Pae, J.; Hansen, M.; Lubenets, D.; Langel, Ü.; Pooga, M. (2011). Penetration without cells: membrane translocation of cell-penetrating peptides in the model giant plasma membrane vesicles. Journal of Controlled Release, 153 (2), 117–125.
 7. Räägel, Helin; Säälik, Pille; Pooga, Margus (2010). Peptide-mediated protein delivery – Which pathways are penetrable? Biochimica et Biophysica Acta-Biomembranes, 1798 (12),

2240–2248.10.1016/j.bbamem.2010.02.013.

8. Turner, Y.; Wallukat, G.; Säälük, P.; Wiesner, B.; Pritz, S.; Oehlke, J. (2009). Cellular uptake and biological activity of peptide nucleic acids conjugated with peptides with and without cell-penetrating ability. *Journal of Peptide Science*, 16 (1), 71–80.10.1002/psc.1198.

9. Räägel, H.; Säälük, P.; Hansen, M., Langel, Ü.; Pooga, M. (2009). Cell-penetrating peptides-protein constructs induce a population of non-acidic vesicles during trafficking through the endolysosomal pathway. *Journal of Controlled Release*, 139 (2), 108–117.10.1016/j.jconrel.2009.06.028.

10. Säälük, P.; Padari, K.; Niinep, A.; Lorents, A.; Hansen, M.; Jokitalo, E.; Langel, Ü.; Pooga, M. (2009). Protein delivery with transportans is mediated by caveolae rather than flotillin-dependent pathways. *Bioconjugate Chemistry*, 20 (5), 877–887.10.1021/bc800416f.

11. Padari, K.; Säälük, P.; Hansen, M.; Koppel, K.; Raid, R.; Langel, Ü.; Pooga, M. (2005). Cell transduction pathways of transportans. *Bioconjugate Chemistry*, 16 (6), 1399–1410.

12. Säälük, P.; Elmquist, A.; Hansen, M.; Padari, K.; Saar, K.; Viht, K.; Langel, V.; Pooga, M. (2004). Protein cargo delivery properties of cell-penetrating peptides. A comparative study. *Bioconjugate Chemistry*, 15 (6), 1246–1253.

Projects

Memberships Member of Estonian Biochemical Society

Other Relevant Information