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MONDAY SEMINAR

Monday, March 19th, 2018 – 12h15
Department of Physiology, Bugnon 7, 1005 Lausanne
Seminar room, 6th floor

Cysteine cathepsins in disease management

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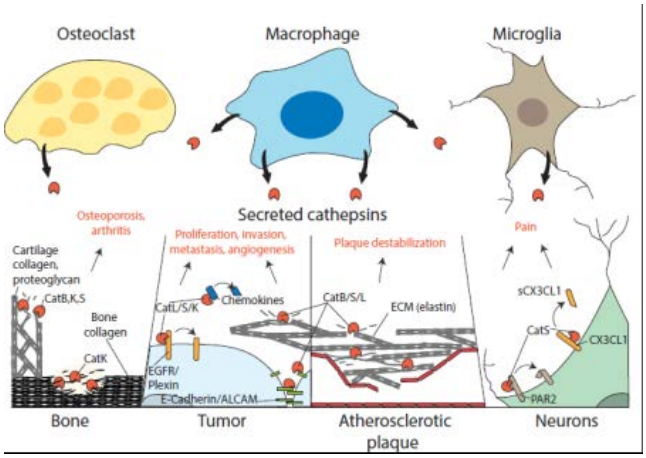
Host : Prof. Christian Widmann



Since the discovery of the critical role of cathepsin K in bone resorption, cysteine cathepsins have been investigated by pharmaceutical companies as drug targets. The first clinical results from targeting cathepsins by activity-based probes and substrates are paving the way for the next generation of molecular diagnostic imaging, whereas the majority of antibody-drug conjugates currently in clinical trials depend on activation by cathepsins. Finally, cathepsins have emerged as suitable targets for targeted drug delivery. Focus will be on cathepsins in inflammation-associated diseases, because dysregulation of the immune system where elevated cathepsin activity contributes to disease progression is a common feature of these diseases.

References

- *Kramer L, Turk D, Turk B (2017) The future of cysteine cathepsins in disease management. Trends Pharmacol Sci, 38:873-898.*
- *Kramer L, Renko M, Završnik J, Turk D, Seeger MA, Vasiljeva O, Grütter GG, Turk V, Turk B (2017) Non-invasive in vivo imaging of tumour-associated cathepsin B by a highly selective inhibitory DARPin. Theranostics, 7: 2806-2821.*
- *Vidmar R, Vizovisek M, Turk D, Turk B*, Fonovic M* (2017) Protease cleavage site fingerprinting by label-free in-gel degradomics reveals pH-dependent specificity switch of legumain. EMBO J. 36: 2455-2465.*
- *Vizovisek M, Fonovic M, Turk B (2018) Cysteine cathepsins in extracellular matrix remodeling: Extracellular matrix degradation and beyond. Matrix Biol. [Epub ahead of print]*