

APTAMERS DEVELOPMENT:

- Aptamer discovery:

1. Ramos, E., Moreno, M., Martín, M. E., Soto, M. & Gonzalez, V. M. *In Vitro Selection of Leishmania infantum H3-Binding ssDNA Aptamers*. *Oligonucleotides* **20**, 207–213 (2010).
2. Sefah, K., Shangguan, D., Xiong, X., O'Donoghue, M. B. & Tan, W. Development of DNA aptamers using Cell-SELEX. *Nat. Protoc.* **5**, 1169–1185 (2010).
3. Identification and characterization of nucleobase-modified aptamers by click-SELEX *nature protocols* 1153–1180 (2018). at <<https://www.nature.com/articles/nprot.2018.023>>.

Websites:

1. Planning to work with aptamers?. [Eu.idtdna.com](http://eu.idtdna.com) (2018). at <<https://eu.idtdna.com/pages/education/decoded/article/planning-to-work-with-aptamers>>

- qPCR:

The idea to use the results of a qPCR to check the enrichment of the round of SELEX, comes from the experimental work done by the research group of Victor González and María Elena Martín palma at the Ramón y Cajal institute.

- ELONA:

1. Simple Methods and Rational Design for Enhancing Aptamer Sensitivity and Specificity (2018). Kalra, P., Dhiman, A., Cho, W. C., Bruno, J. G., and Sharma, T. K. *Frontiers in Molecular Biosciences*, **5**. <https://doi.org/10.3389/fmolb.2018.00041>
2. Stoltenburg, R. et al. G-quadruplex aptamer targeting Protein A and its capability to detect *Staphylococcus aureus* demonstrated by ELONA. *Sci. Rep.* **6**, 33812; doi: 10.1038/srep33812 (2016).
3. In Vitro Selection of Leishmania infantum H3-Binding ssDNA Aptamers (2010). Ramos, E., Moreno, M., Martín, E. M., Soto, M., and Gonzalez, V. M.
4. Drole, D. W., Moon-Mcdermott, L., and Romig, T.S. (1996). An enzyme-linked oligonucleotide assay. *Nat. Biotechnol.* **14**, 1021–1025.

- PCl extraction and ethanol precipitation:

1. Kerney, R. [Public.gettysburg.edu](http://public.gettysburg.edu/~rkerney/Protocols/MolecularBiology/DNAExtraction.pdf) (2018). at <<http://public.gettysburg.edu/~rkerney/Protocols/MolecularBiology/DNAExtraction.pdf>>

- Aptamer electrode:

1. :: DropSens :: FAQs. Available at:
http://www.dropsens.com/en/faqs_dropsens.html. (Accessed: 29th August 2018)
2. Kuralay, F., Campuzano, S., Haake, D. A. & Wang, J. Highly sensitive disposable nucleic acid biosensors for direct bioelectronic detection in raw biological samples. *Talanta* **85**, 1330–1337 (2011).
3. Li, L., Zhao, H., Chen, Z., Mu, X. & Guo, L. Aptamer biosensor for label-free square-wave voltammetry detection of angiogenin. *Biosens. Bioelectron.* **30**, 261–266 (2011).
4. Li, W., Wang, K., Tan, W., Ma, C. & Yang, X. Aptamer-based analysis of angiogenin by fluorescence anisotropy. *Analyst* **132**, 107–113 (2007).
5. Meirinho, S. G., Dias, L. G., Peres, A. M. & Rodrigues, L. R. Electrochemical aptasensor for human osteopontin detection using a DNA aptamer selected by SELEX. *Anal. Chim. Acta* **987**, 25–37 (2017).

DEVICE MANUFACTURING:

- Chip:

Papers:

1. Meirinho, S. G., Dias, L. G., Peres, A. M. & Rodrigues, L. R. Electrochemical aptasensor for human osteopontin detection using a DNA aptamer selected by SELEX. *Anal. Chim. Acta* **987**, 25–37 (2017).

Websites:

1. Processes, N. and OpenCourseWare, M. (2018). *Nano-to-Macro Transport Processes*. [online] MIT OpenCourseWare. Available at: <https://ocw.mit.edu/courses/mechanical-engineering/2-57-nano-to-macro-transport-processes-spring-2012/index.htm> [Accessed 10 Aug. 2018].
2. Elveflow. (2018). *HOME Microfluidic flow control - Elveflow*. [online] Available at: <https://www.elveflow.com/> [Accessed 10 Jun. 2018].
3. 2017.igem.org. (2018). *Team:BostonU HW - 2017.igem.org*. [online] Available at: http://2017.igem.org/Team:BostonU_HW [Accessed 2 Jun. 2018].

AUDIO VIDEO DEMONSTRATE:

Bendsound.