Physical Biology Laboratory Seminar

Advanced Platforms for Biological Testing: Bridging the Gap between *In Vitro* and *In Vivo*

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The physiological complexity of cellular interactions is often neglected using *in vitro* models: these interactions can affect the behavior of the cells and diversify the outcome of nanomedicine treatments. *In vitro* investigations on complex biomimetic systems allows for obtaining more predictive results before moving towards pre-clinical testing.

In this talk, we will provide some examples of advanced *in vitro* microphysiological systems, with special focus on the central nervous system, and on alternative ethical issues-free *in vivo* models, based on quail embryos.

<u>Ceccarelli M.C., [...], Ciofani G. Lab on a Chip, 24(22): 5085-5100 (2024)</u> <u>Emanet M., [...], Ciofani G. ACS Applied Materials and Interfaces, 16(31): 40311-41720 (2024)</u> <u>Marino A., [...], Ciofani G. APL Bioengineering, 7(3): 036103 (2023)</u>

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