Lab on a Chip

Devices and applications at the micro- and nanoscale

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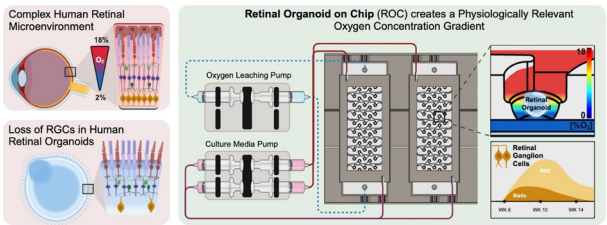

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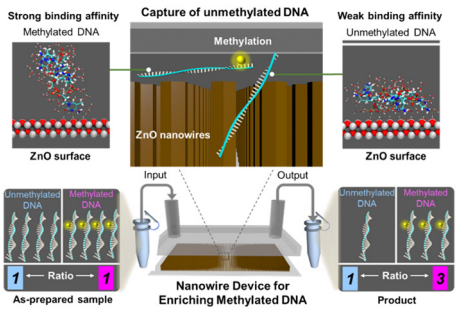

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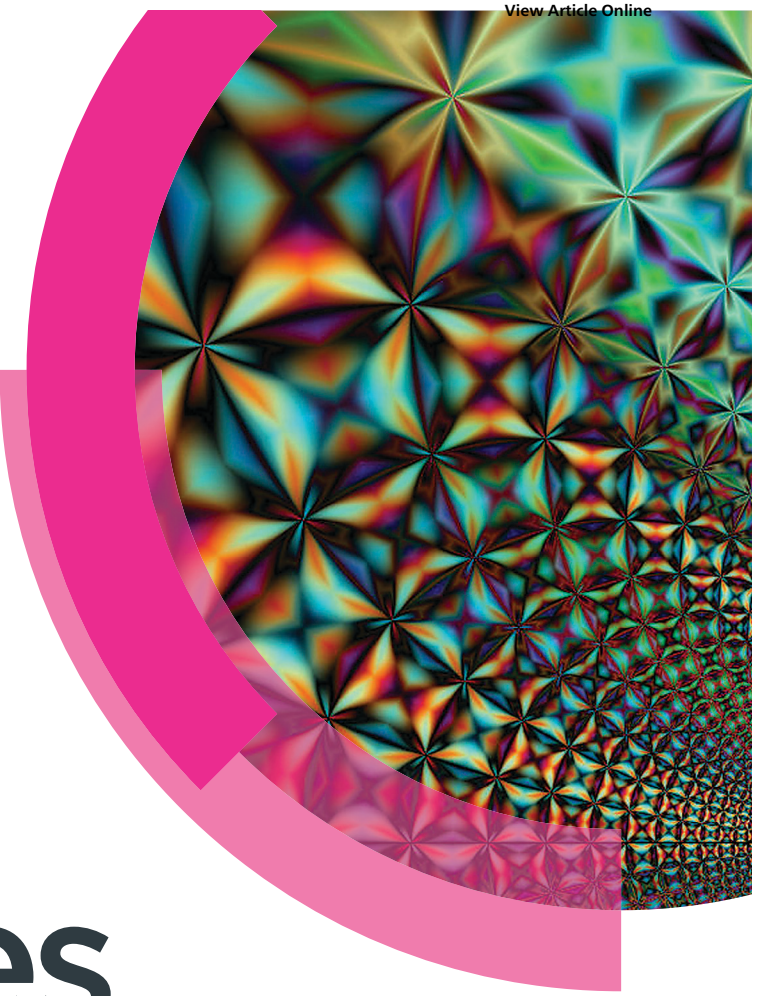

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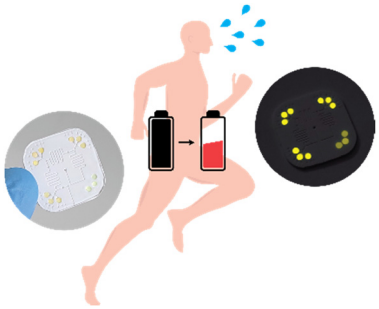

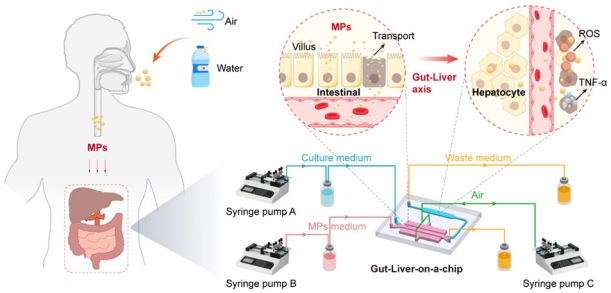

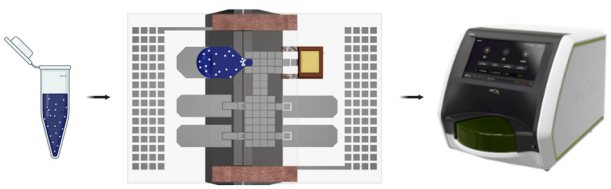

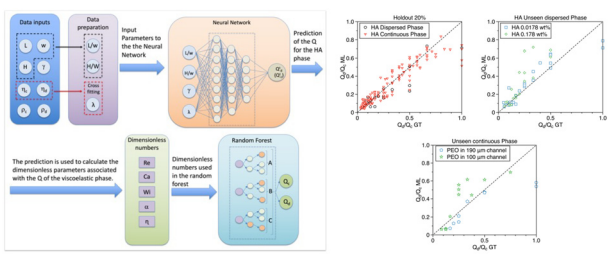

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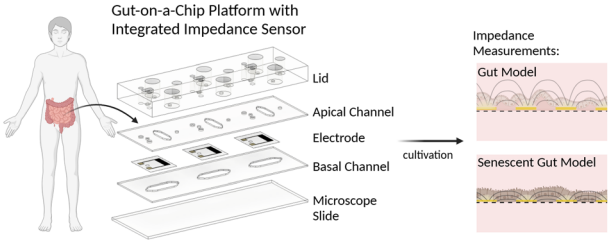

Sensor-integrated gut-on-a-chip for monitoring senescence-mediated changes in the intestinal barrier

Konstanze Brandauer, Alexandra Lorenz, Silvia Schobesberger, Patrick Schuller, Martin Frauenlob, Sarah Spitz and Peter Ertl*

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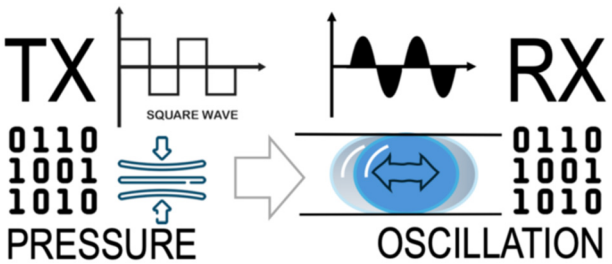

Synthetic molecular communication through microfluidic oscillating droplets for intrabody physiological data transmission

Fabrizio Pappalardo, Carla Panarello, Salvo Quattropani, Laura Galluccio, Antonino Licciardello, Roberta Ruffino, Giovanni Li-Destri, Alfio Lombardo, Giacomo Morabito and Nunzio Tuccitto*

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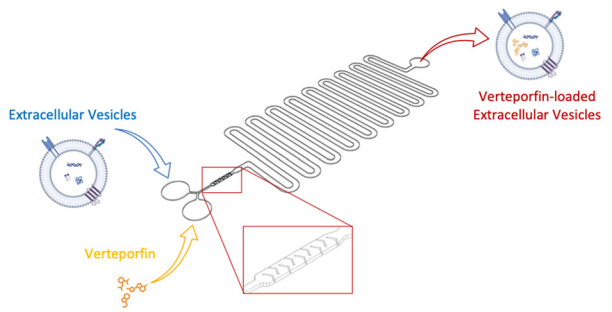

Microfluidic loading of verteporfin into extracellular vesicles for neuroblastoma therapy

Caterina Piunti, Sara Micheli, Sara Giancaterino, Pina Fusco, Cristiana Boi and Elisa Cimetta*

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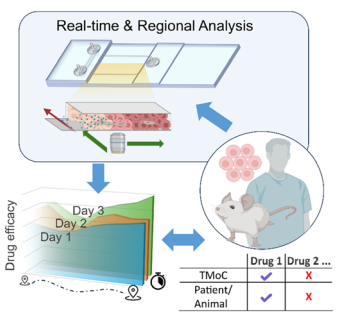

Real-time and regional analysis of the efficacy of anticancer drugs in a patient-derived intratumoral heterogeneous tumor microenvironment

Ya-Hui Lin, Chiao-Min Lin, Kee-Ming Man, Chih-Chiang Hung, Hsin-Ling Hsu, Yunching Chen, Hsuan-Yu Mu,* Tzu-Hung Hsiao* and Jen-Huang Huang*

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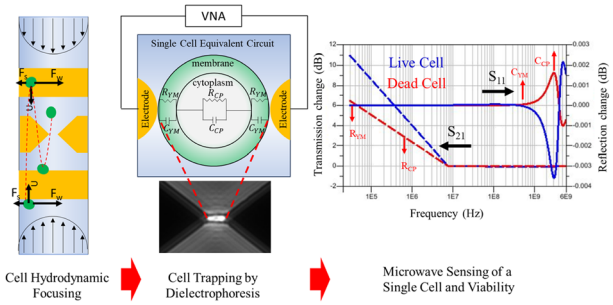
Label-free differentiation of living *versus* dead single yeast cells using broadband electrical impedance spectroscopy

Amirhossein Favakeh, Amir Mokhtare, Mohammad Javad Asadi, James C. M. Hwang and Alireza Abbaspourrad*



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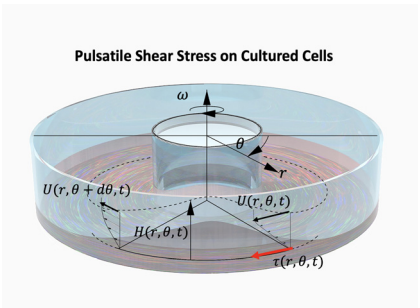
Pulsatile-flow culture: a novel system for assessing vascular-cell dynamics

Neda Salimi-Afjani,* Robert Rieben and Dominik Obrist



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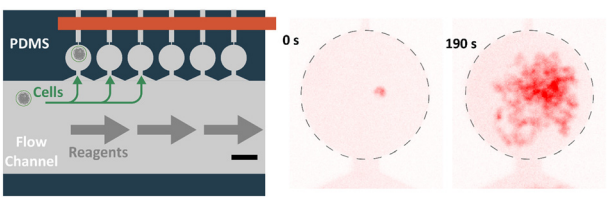
A microfluidic platform for extraction and analysis of bacterial genomic DNA

Alex Joesaar, Martin Holub, Leander Lutze, Marco Emanuele, Jacob Kerssemakers, Martin Pabst and Cees Dekker*



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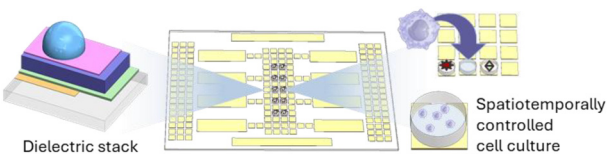
Long-term digital microfluidic chips for regulating macrophage cellular interactions in inflammation

Oksana K. Savchak and Burcu Gumuscu*



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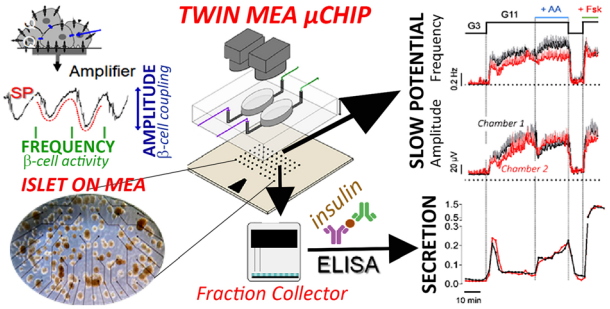
A microfluidic twin islets-on-chip device for on-line electrophysiological monitoring

Marie Lallouet, Loic Olçomendy, Julien Gaitan, Killian Montiège, Marie Monchablon, Antoine Pirog, Dorian Chapeau, Emilie Puginier, Sylvie Renaud, Matthieu Raoux and Jochen Lang*



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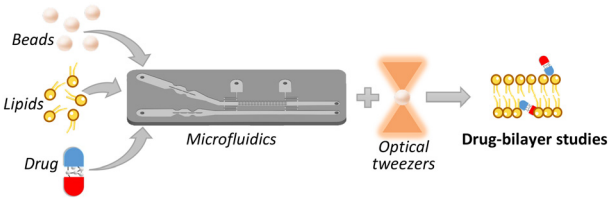
Microfluidic system for efficient molecular delivery to artificial cell membranes

Arash Yahyazadeh Shourabi, Martina Iacona and Marie-Eve Aubin-Tam*



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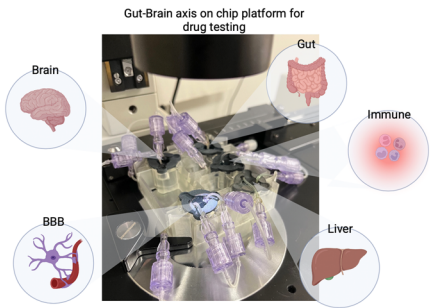
A gut–brain axis on-a-chip platform for drug testing challenged with donepezil

Francesca Fanizza, Simone Perottoni, Lucia Boeri, Francesca Donnaloja, Francesca Negro, Francesca Pugli, Gianluigi Forloni, Carmen Giordano* and Diego Albani



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Suppressing parasitic flow in membraneless diffusion-based microfluidic gradient generators

Vahid Khandan, Ryan C. Chiechi, Elisabeth Verpoorte and Klaus Mathwig*