Lab on a Chip

Devices and applications at the micro- and nanoscale

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See Hongxia Li, Honglin Li *et al.*, pp. 783–798.
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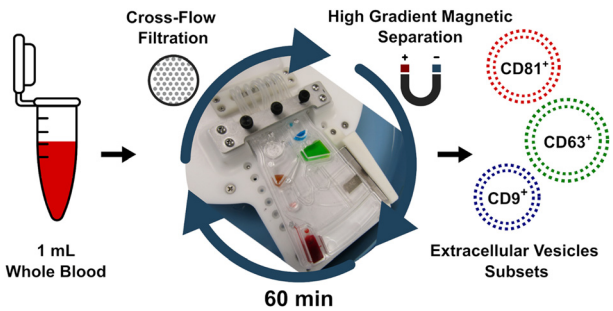
EV-Blade: an automated centrifugal-pneumatic cartridge for size- and affinity-based exosome isolation from whole blood

Lucas Poncelet, Keith J. Morton, Matthew Shiu, Gaétan Veilleux, Chantal Richer, Liviu Clime, Daniel Sinnett and Teodor Veres*



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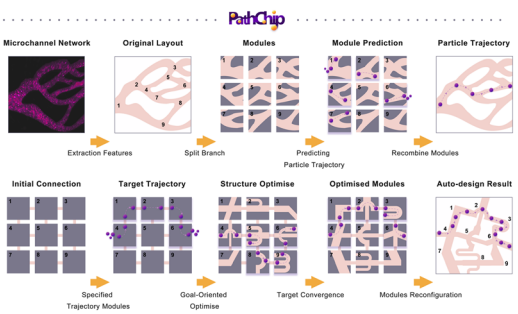
Deep learning-driven microfluidic chip architecture design for intelligent particle motion control

Hongxia Li,* Xuhui Chen, Du Qiao, Xue Zhang, Jiang Zhang, Jianan Zou, Danyang Zhao, Xuhong Qian and Honglin Li*



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Elemental answers

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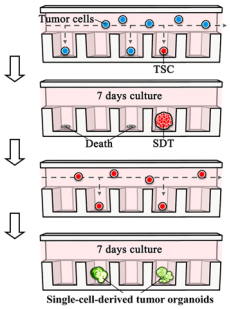
Microfluidic single-cell culture represents a versatile approach for tumor stem cell expansion and tumor organoid generation

Jueming Chen, Xiaogang Wang, Weijie Ye, Hui Kang, Siyan Xiao, Jiayu Li, Lihui Wang,* Dongguo Lin* and Dayu Liu*



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Enabling the recirculation of leukocytes in a high-throughput microphysiological system (MPS) to study immune cell-vascular tissue interactions

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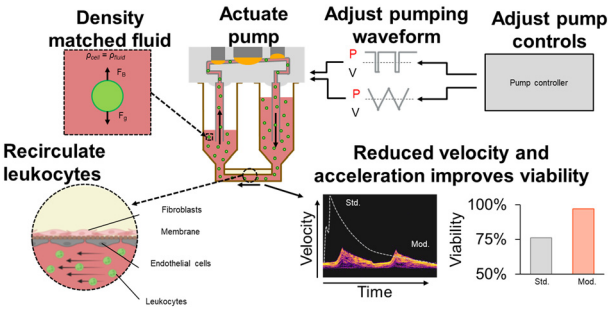

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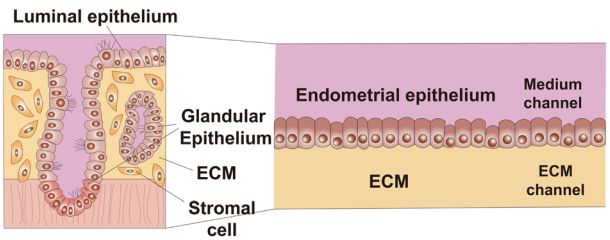
Formation of an endometrial epithelial monolayer in a microfluidic device with human tissue-derived endometrial organoids

Seung-cheol Shin, Yale Hahm, Yeju Jeong, Yup Kim, Junsik Park, Ji Hun Yang, Jin-A Kim, Jihee Won,* Seok Chung* and Jung-Yun Lee*



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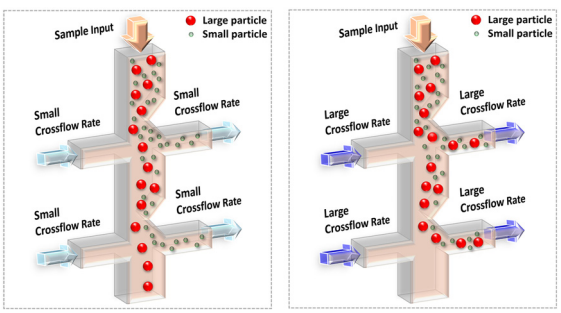
Tunable single-column deterministic lateral displacement device by adjustable crossflow

Miftahul Jannat Rasna* and James C. Sturm



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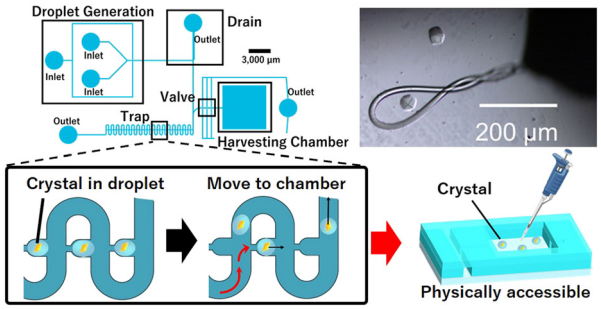

Direct access and recovery feature of solid precipitates embedded in a microfluidic device

Masashi Kobayashi, Risa Fujita, Faisal bin Nasser Sarbaland, Masahiro Furuya and Daiki Tanaka*

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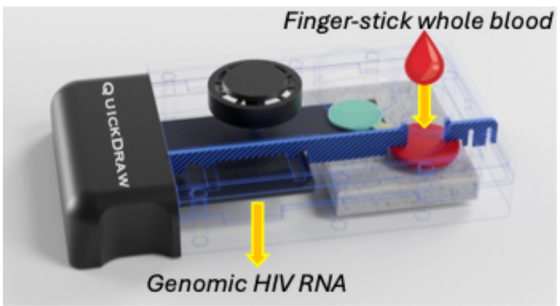

QuickDraw: detecting HIV in whole blood using an integrated paper-based consumable that enables direct amplification of purified RNA from paper

Alexander L. Evans, Alexandra K. Sogn, Andrea C. Mora, Moses N. Arthur, Justin R. Leach, Sebastian I. Bosch, Shruthika Araselvan, Jeffrey W. Beard, Stephen Dewhurst, Charles R. Mace* and Benjamin L. Miller*

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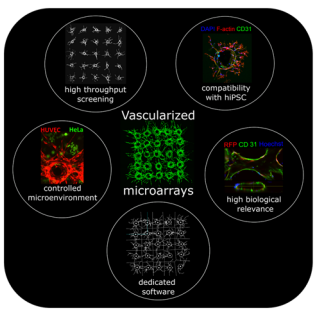

A comprehensive toolkit for manipulation and analysis of sprouting capillary networks based on magnetic ordering of multiple EC-coated microcarriers and their use in tissue modelling and drug testing

Katarzyna O. Rojek, Antoni Wrzos, Fabio Maiullari, Konrad Giżyński, Maria Grazia Ceraolo, Claudia Bearzi, Roberto Rizzi, Piotr Szymczak and Jan Guzowski*

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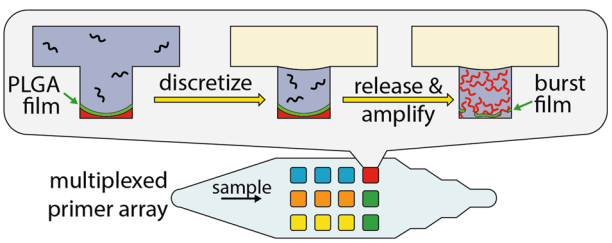

Poly(lactic-*co*-glycolic acid) for reagent storage and controlled release in thermoplastic microfluidics

Jaesung Lee, Evan H. Benke, Ian M. White and Don L. DeVoe*

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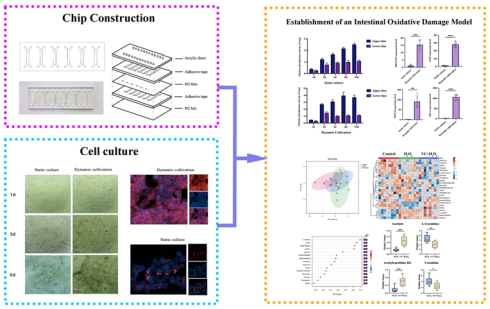
A dynamically cultured intestinal epithelial barrier model with metabolomics assessment for evaluating oxidative injury

Jiayi Yan, Jingyan Gao, Xinyi Jin, Jiacheng Cheng, Wentao Su, Chunqing Ai, Fanhua Kong and Shuang Song*



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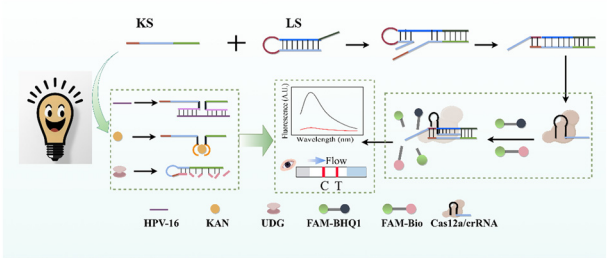
An allosteric key strand controlled adaptable CRISPR/Cas12a biosensing platform for point-of-care testing of multiple types of targets

Juan Li, Tong Shao, Xin-Jiao Cao, Ya-Xin Wang* and De-Ming Kong



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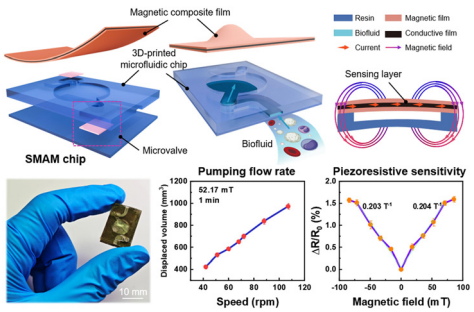
3D-printed self-sensing magnetically actuated microfluidic chip for closed-loop drug delivery

Peilong Li, Yunfan Li, Jiajie Zhan, Deng Wang, Ruyu Zhang and Feng Liu*



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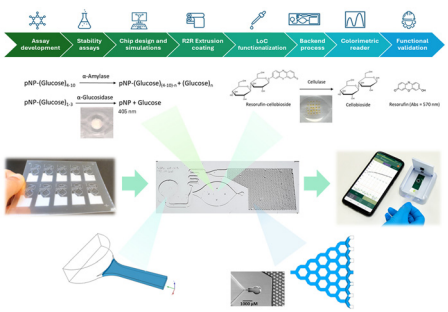
Lab-on-a-chip for enzyme activity monitoring in industrial solid-state fermentation processes compatible with R2R fabrication

Verónica Mora-Sanz,* Alvaro Conde, Elisabeth Hengge, Conor O'Sullivan, Andoni Rodriguez, Caroline Hennigs, Maciej Skolimowski, Nastasia Okulova, Jan Kafka, Bernd Nidetzky, Ana Ayerdi, Matija Strbac, Martin Smolka, Goran Bijelic and Nerea Briz*



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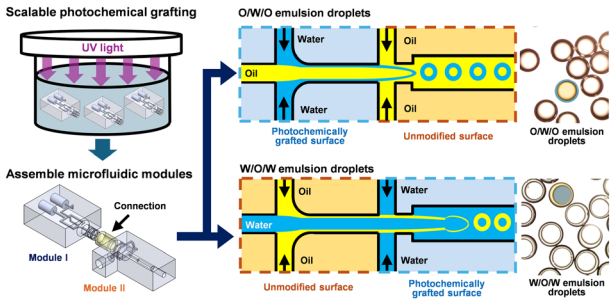

Surface modification of 3D printed microfluidic devices by photochemical grafting

Guohao Yang, Seonghun Shin, Seongsu Cho, Jinkee Lee* and Ryungeun Song*

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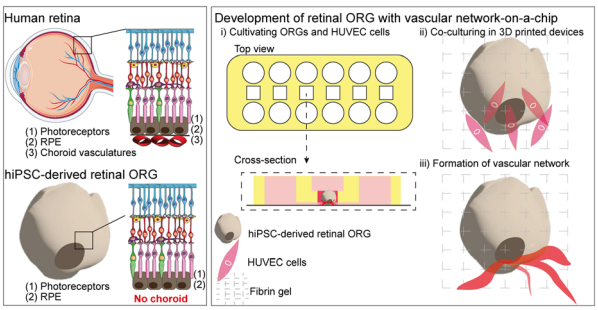

Development of a 3D-printed microfluidic chip for retinal organoid–endothelial co-culture

Rodi Kado Abdalkader,* Shigeru Kawakami, Yuuki Takashima and Takuya Fujita

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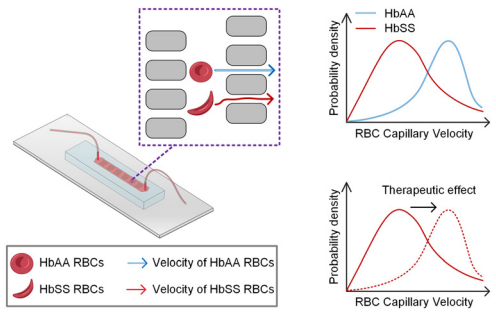

Microfluidic capillary transit velocity as a functional measure for sickle cell disease and *in vitro*-derived red blood cells

Solomon Oshabaheebwa, Utku Goreke, Yuxuan Du, Christopher L. Wirth, Zoe Sekyonda, Bryan L. Benson, Payam Fadaei, Yusang B. Ley, Nathan M. Perez, Petros Giannikopoulos, David N. Nguyen, Michael A. Suster, Pedram Mohseni* and Umut A. Gurkan*

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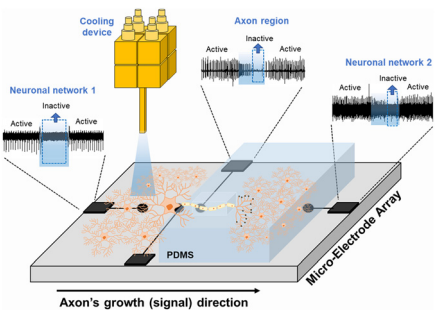

Microfluidics-guided localized low-temperature modulation of axonal signal propagation

Jaehyun Kim, Eunseok Seo, Na Yeon Kim, Bong Geun Chung, Jungchul Lee, Taesung Kim, Seung-Woo Cho, Gun-Ho Kim,* Sung Soo Kim* and Jungyul Park*

CORRECTION

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Correction: A tumor spheroid array chip for high-fidelity evaluation of liposomal drug delivery through the EPR effect

Yedam Lee, Sujin Kim, Hyeyeon Koh, Yeonwoo Park, Jung Y. Han* and Jihoon Ko*