

# Lab on a Chip

Devices and applications at the micro- and nanoscale  
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## IN THIS ISSUE

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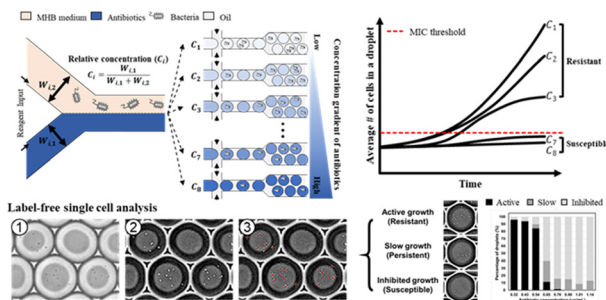
**Cover**  
See Chang-Soo Lee *et al.*,  
pp. 5274–5289.  
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from *Lab Chip*, 2024, 24,  
5274.

## PAPERS

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### Label-free single-cell antimicrobial susceptibility testing in droplets with concentration gradient generation

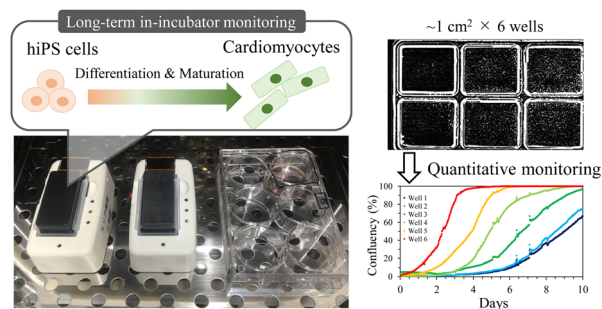
Jae Seong Kim, Jingyeong Kim, Jae-Seok Kim, Woosong Kim and Chang-Soo Lee\*



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### Compact lens-free imager using a thin-film transistor for long-term quantitative monitoring of stem cell culture and cardiomyocyte production

Taishi Kakizuka, Tohru Natsume and Takeharu Nagai\*





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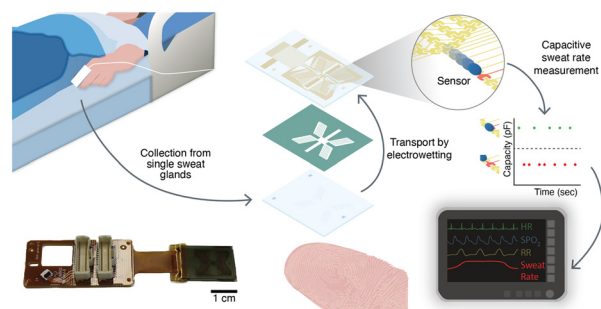
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### Discretised microfluidics for noninvasive health monitoring using sweat sensing

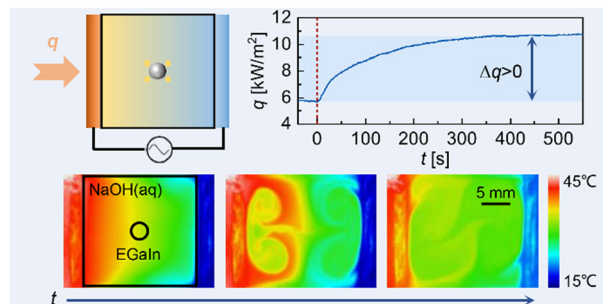
Emma J. M. Moonen, Walther Verberne, Eduard Pelssers, Jason Heikenfeld and Jaap M. J. den Toonder\*



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### An enhanced heat transfer method based on the electrocapillary effect of gallium-based liquid metal

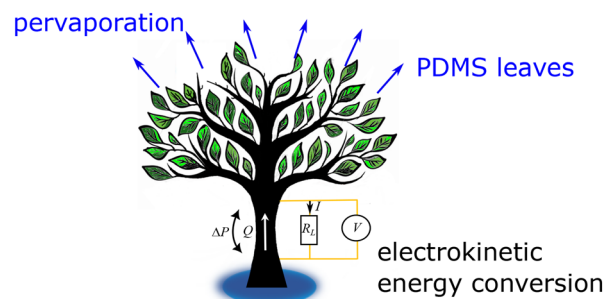
Liyu Dai, Xiaomin Wu,\* Yiqing Guo, Huimin Hou, Zhifeng Hu, Yukai Lin and Zhiping Yuan\*



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### Pervaporation-driven electrokinetic energy harvesting using poly(dimethylsiloxane) microfluidic chips

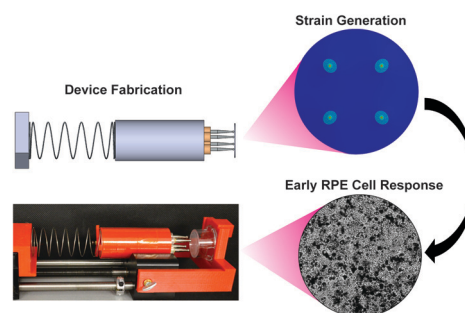
Hrishikesh Pingulkar, Cédric Ayela and Jean-Baptiste Salmon\*



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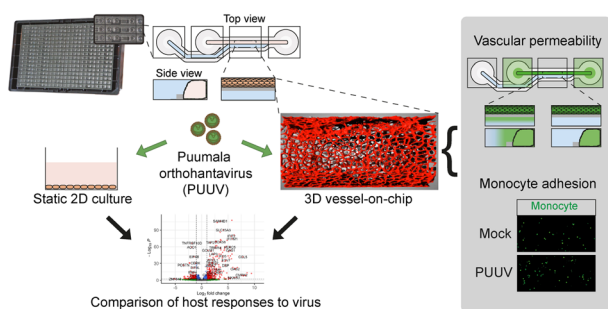
### Applying low levels of strain to model nascent phenomenon of retinal pathologies

Chase Paterson and Elizabeth Vargis\*





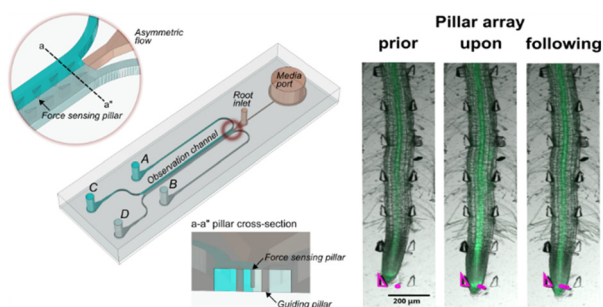
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### A three-dimensional vessel-on-chip model to study Puumala orthohantavirus pathogenesis

Danny Noack, Anouk van Haperen, Mirjam C. G. N. van den Hout, Eleanor M. Marshall, Rosanne W. Koutstaal, Vincent van Duinen, Lisa Bauer, Anton Jan van Zonneveld, Wilfred F. J. van IJcken, Marion P. G. Koopmans and Barry Rockx\*

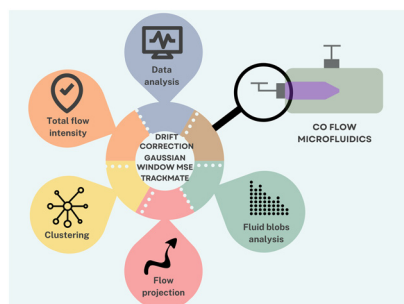
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### Observing root growth and signalling responses to stress gradients and pathogens using the bi-directional dual-flow RootChip

Claudia Allan, Yiling Sun, Stephen C. Whisson, Michael Porter, Petra C. Boevink, Volker Nock\* and Claudia-Nicole Meisrimler\*

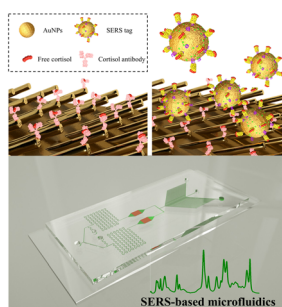
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### An imaging scheme to study the flow dynamics of co-flow regimes in microfluidics: implications for nanoprecipitation

Wali Inam, Anton Vladoyka, Joanna W. Pylvänäinen, Junel Solis, Dado Tokic, Pasi Kankaanpää and Hongbo Zhang\*

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### SERS-based pump-free microfluidic chip sensor for highly sensitive competitive immunoassay of cortisol in human sweat

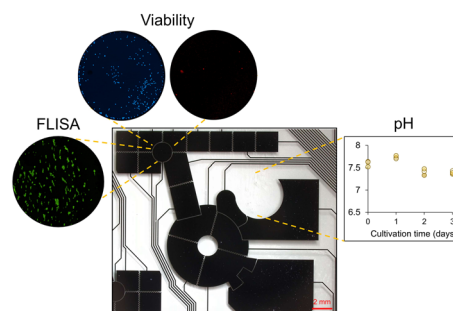
Siyue Xiong, Chushu Zhu, Chengxuan Wang, Peitao Dong\* and Xuezhong Wu



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### A multimodal digital microfluidic testing platform for antibody-producing cell lines

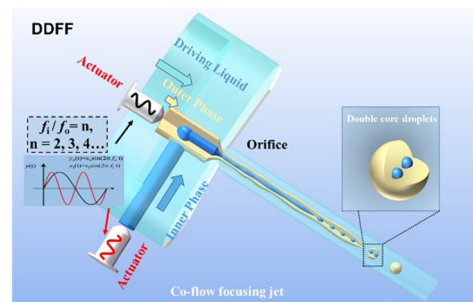
Jeremy T. Lant, Jurgen Frasheri, Taehong Kwon, Camille M. N. Tsang, Bingyu B. Li, Sheldon Decombe, Alexandros A. Sklavounos, Samin Akbari and Aaron R. Wheeler\*



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### Advancing scalable and controllable multi-core droplet generation with double disturbance flow focusing

Chen Li, Kai Mu, Fangsheng Huang,\* Zhiqiang Zhu\* and Ting Si



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### A nanobody-based microfluidic chip for fast and automated purification of protein complexes

Phebe De Keyser, Mitch de Waard, Ignaas S. M. Jimidar, Sandrien Verloy, Steven Janvier, Valentina Kalichuk, Thomas Zögg, Alexandre Wohlkönig, Els Pardon, Jan Steyaert and Gert Desmet\*

