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Functional Tissue Engineering

Research emphasis:

After 30 years of experience in inventing and commercializing portable, automated biosensors, I am focusing on tissue-on-chip systems. My research interests also include cell imaging, drug delivery, and microfluidics. My approach is one of systems engineering and collaborative endeavors rather than developing my own personal laboratory initiatives. I have extensive experience with patenting my inventions and technology transfer.

Application :

- Tissue on chip
- Tissue regeneration
- Microfluidics
- Diagnostics

Collaboration potential:

- Systems design
- Point of care diagnostics
- Microfluidics
- Optical analyses

4 Selected publications

Tang, J., D. Shen, J. Zhang, F.S. Ligler, and K. Cheng (2015) Bispecific antibodies, nanoparticles, and cells: bringing the right cells to get the job done. *Expert Opin.Biol.Ther.* 15, 1251-1255.

Pacardo, D.B., F.S. Ligler, and Z. Gu (2015) Programmable nanomedicine: synergistic and sequential drug delivery systems. *Nanoscale* 7, 3381-3391.

Daniele, M.A., D.A. Boyd, A.A. Adams, and F.S. Ligler (2015) Microfluidics: microfluidics strategies for design and assembly of microfibers and nanofibers with tissue engineering and regenerative medicine applications. *Adv.Healthcare Mater.* 4, 11-28.

Daniele, M.A., K. Radom, F.S. Ligler, and A.A. Adams (2014) Microfluidic fabrication of multiaxial microvessels via hydrodynamic shaping. *RSC Adv.* 4, 23440-23446.