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The challenges of developing and commercializing microfluidic devices for In vitro diagnostics applications

Peng Li

Rheonix, USA

Abstract

The Chemistry and Reagent Device (CARD) technology is a microfluidic platform developed by Rheonix to enable automation of a wide range of in vitro diagnostics applications with various work flow on a single plastic disposable cartridge. The cartridge is programmed to automatically manipulate reagents internally with its active fluidic network of pumps, valves, channels and bioreactors. In this presentation, the CARD technology principles, application development, productization challenges and FDA registration effort of a SNP genotyping product will be discussed. The highlight of this presentation is that in addition to the technological novelty, market and product manufacture related practicality will drive the commercialization success.

Biography

Dr. Peng Li is currently an Application Scientist at Rheonix, Inc., where he works closely with biologists and engineers to develop sample-in result-out microfluidics-based molecular diagnostic devices. He serves as an Executive Editor for the Journal of Bioengineering and Biomedical Sciences. He has authored and co-authored 15 papers in peer-reviewed journals and conference proceedings and he currently holds 2 US provisional patents in the area of microfluidics. He is also a reviewer of several reputed journals including Lab on a Chip, Applied Physics Letter, Nanotechnology, etc.