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Next-Generation millisecond manufacture of genetic vaccines and lipid/polymer-based vaccines

Nadia Tagnaouti
Precision NanoSystems Inc., Canada

Lipid nanoparticles, liposomes and polymer-based nanoparticles are widely used to deliver vaccines. Here we present a platform for the millisecond fast manufacturing of genetic vaccines and lipid/polymer-based vaccines. We will also describe how, by fine-tuning the size, composition and surface moieties of vaccine particles, you can optimize efficacy and immune response. Examples of lipid- and polymer-based nanoparticle systems manufactured with the NanoAssemblr platform will be described. Finally, we will show how this robust platform allows you to manufacture large batches of vaccines in GMP environment to meet both the needs of large-scale production and small-scale personalized cancer vaccines.

Biography

PNI's mission is to accelerate the development of transformative medicines. PNI's proprietary technologies solve critical challenges in discovering, developing and manufacturing nanotechnology delivered drugs. PNI is working with leading pharmaceutical, biotechnology, and academic groups to develop novel nanomedicines and bring these cutting edge therapeutics to patients. Precision NanoSystems Inc. In neuroscience, translating computational genomics insights into practice is hindered by difficulties in transfecting neurons. To tackle this, the Hornstein Lab at the Weizmann Institute of Science have published a protocol describing functional genomics screens with primary neurons in 384-well format. They've employed Precision NanoSystems' Neuro9™ transfection technology because it shows no observable toxicity and can be pipetted directly to cell culture making it ideal for automated fluid handling.

ntagnaouti@precision-nano.com

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