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U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health



National Institutes of Health Commercialization Assistance Program (NIH-CAP)

Company Profile

Industry Sector: Bioproduction

Company Overview: DRVision Technologies LLC is a pioneer in the application of machine learning and pattern recognition technologies to practical image-based inspection applications. The DRVision team has a history of product breakthroughs in semiconductor, life science and clinical diagnostic markets. Currently, DRVision software is inside a leading semiconductor macro wafer inspection system sold by Nikon Corporation. DRVision sells a highly innovative, “teachable” microscopy image analysis called SVCCell, that is also distributed by Nikon under the “CL-Quant” and “CQ BioAnalysis” trade names. DRVision has strong and broad patents covering these areas with 44 issued US patents and many in process. Nikon America Inc. is a 30% minority owner of DRVision.

Target Market(s): Patient specific cell generation systems for basic research, drug discovery and personalized clinical diagnostics and drug testing.

Key Value Drivers

Technology*: A tool for automatic, label free selection of induced pluripotent stem cell (iPSC) colonies at early time points during reprogramming. The tool makes use of kinetic image pattern recognition techniques applied to phase contrast image sequences showing patient cells undergoing reprogramming to stem cells.

Competitive Advantage: Currently there is no method to consistently pick fully reprogrammed iPSC colonies at early time points. Alternative approaches require expert, manual selection at the end of reprogramming (3 – 4 weeks) or using stem cell surface markers. Our technology allows for the automatic selection after ten days, which greatly reduces the cost and labor of iPSC production. There is large pressure on the industry from funding agencies to bring costs down.

Plan & Strategy: Seeking partners with strengths in system automation and incubation to create a fully automated selection system. We think success will the cell line production industry (for basic research and drug discovery) will lead to future clinical opportunities in personalized cell generation.

*Technology funded by the NHLBI and being commercialized under the NIH-CAP

Management

James Lee, Ph.D., President

Dr. Lee was the technical founder and CTO of NeoPath, Inc., a company that created the world’s only FDA approved fully automated cervical cancer screener; the AutoPap. Dr. Lee was with NeoPath before its start-up in 1989, through IPO, secondary offering, until its acquisition by AutoCyte (now BD) in 1999. He has 81 issued US patents and about 100 technical publications. At DRVision he led the introduction for the New Algorithm Station for Nikon’s Automated Macro Inspection product. This multi-million dollar system now has over 100 placements.

DRVision has a strong management team with 200+ years combined image analysis experience:

Sam Alworth, M.B.A, M.S., Director of Marketing
Chi-Chou Huang M.S., Applications Software Manager
Tuan Phan, Software Manager
Louis Piloco, Systems Engineering Manager

Product Pipeline

- SVCCell colony analyzer application module (available now)
- iPS colony selection tool beta (available now)
- iPS colony selection tool product (near future)
- iPS colony selection product w/ expansion monitoring (near future)
- iPS colony selection product for clinical applications (future)