Interconnecting Microfluidic Package and Fabrication Method

The field of microfluidics is aimed at developing miniaturized devices that can robustly sense specific properties of a sample utilizing minimal sample volumes. Development of biological and chemical microfluidic sensors is challenging due to the lack of adequate packaging platforms and standardized tubing. Creating connections between various microfluidic devices is cumbersome due to fragile connections that are difficult to make.

Technical Details
This technology seeks to overcome these problems by introducing a method to mass produce interconnecting microfluidic chips. These microfluidic packagings have two or more integrated connectors with standardized sizing that permits the interlocking of the chips. The design incorporates standard size tubing that readily allows for leakproof interlocking between the chips. The manufacturing method utilizes an injection molding process in order to reliably and cost effectively mass produce the chips.

UCF Inventors
Hyoung Cho, Ph.D.

US Issued Patent
7,988,902 B1

See related, “Water Quality Testing in the Palm of Your Hand”
UCF ID# 30257, 30711, 31678

Benefits
• Eliminates the need for complicated and time consuming tubing connections or bonding processes
• Ability to be mass-produced at low cost
• Utilizes smaller sample volumes than existing systems

Applications
• Point-of-care diagnostics
• Forensic chemical analysis
• Screening assays for drug development

Tech Fields
Diagnostics, Sensors, Microfluidics

Keywords
microfluidics, microfluidic chips, sensors

If you or your company are interested in this opportunity, Contact:
Andrea Adkins | 407.823.0138 | Andrea.Adkins@ucf.edu | Tech ID# 31566
UCF Office of Technology Transfer | 12201 Research Parkway, Suite 501, Orlando, FL 32826