Ratmir Derda  
Chemical Biology

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Research keywords: Genetically-encoded libraries, peptide derivatives, cyclic peptides, fragment-based design, phage-display, organic synthesis, bio-conjugation, small-molecule arrays, SPOT synthesis, ligand development and optimization, medicinal chemistry, chemical biology, chemical inducers of differentiation.

R&D capabilities: Genetically-encoded screening, lead discovery.

Techniques and instrumentation: Modified phage-display, deep sequencing, array synthesis.

Examples of industrial collaborations and commercialization:

• Development of genetically-encoded chemically-modified peptide libraries

Derda Lab has service contract with Ferring Pharmaceuticals to use genetically-encoded library synthesis technology to develop and screen custom genetically-encoded libraries for Ferring.

• Target-specific lead identification

Derda Lab initiated contract with Vertex Pharmaceuticals focused on early lead discovery of ligands for a specific receptor target provided by the company.

• Arrays of peptides and peptide derivatives

Derda Lab established a non-profit (cost-recovery) service SyntArray that manufactures and distributes Teflon-patterned, paper-based arrays for organic synthesis and peptide synthesis. For more information see www.syntarray.com

Licensing opportunities: representative patents and invention reports:

   Potential applications: Lead discovery via genetically-encoded selection

   Potential applications: Lead optimization via array screening