

# Custom Ligand Discovery and Development

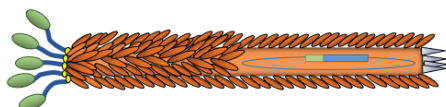
## *Accelerating Research and Discovery Programs*

SRI Biosciences provides collaborative research and client-focused custom ligand discovery and development services for targeted drug discovery, molecular imaging, *in vitro* diagnostics, and selective ligand identification research projects. Our scientists are dedicated to the design and development of novel diagnostic and immunotherapeutic approaches and make their expertise available for optimizing the drug discovery process.

### Expertise and technologies include:

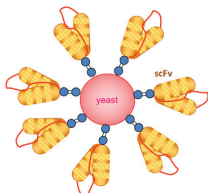
- Production of custom libraries, including:
  - Phage- or yeast-displayed ligand libraries
  - Oligonucleotide aptamers
  - Peptoid and synthetic peptide libraries
- Assessment of isolated ligands for
  - Target affinity & specificity
  - Binding on large panels of cell lines & primary human samples
  - *In vivo* biodistribution of ligand and small animal imaging
  - Serum stability and pharmacodynamic properties
- Design, synthesis, and assay of
  - Variants of selected ligands for structure-activity relationships & optimization
  - High-quality conjugates of ligands to fluorophores, drugs, proteins, nucleic acids, & nanoparticles
  - Purified peptides & peptoids as monomers or synthesized on multimeric scaffolds
  - Radiolabeled ligands

### Phage-Display Technology



- Design & construction of libraries: SRI-developed technology minimizes amplification bias and increases library diversity and quality
- Panning of a variety of targets, including in animals: purified proteins, inorganic materials, small molecules, and whole cells
- Isolation of peptides that bind to particular cell types & accumulate in desired subcellular locations

### Yeast-Display Technology



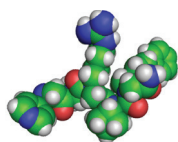
- Screening by magnetic- & flow-sorting with purified proteins, peptides, & glycoproteins
- Selected binding candidates can be time-effectively characterized
- Affinity maturation of ligands or of antibody variable domains

### Custom Oligonucleotide Aptamers



- Design, synthesis, & screening of single-stranded DNA & RNA libraries for aptamer ligands of proteins, carbohydrates, & small organic & inorganic molecules
- Nucleic acid secondary structure mapping, solution structure determination, & characterization of ligand binding sites

### Ligands from One Bead /One Compound Synthetic Peptide & Peptoid Libraries



- Design, synthesis, and assay of combinatorial libraries of peptides, peptoids, & peptide-peptoid conjugates with tailored chemical functionality
- Screening of libraries in many formats, including microarrays, on-bead fluorescence assays, enzyme-inhibition assays, & cell-based screens

## SRI Biosciences™

SRI Biosciences, a division of SRI International, integrates basic biomedical research with drug and diagnostics discovery and preclinical and clinical development. SRI International, a research center headquartered in Menlo Park, California, creates world-changing solutions to make people safer, healthier, and more productive.

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