



# HiPep Laboratories Product Infomation

HiPep Laboratories offers innovative and unique products concerning research tools in the field of drug-discovery and development including library constructions. Numerous products (most of them are originally prepared by us) are exhibiting in our web-site <http://hipep.jp/eng/>

Many products are offers upon customers needs.

## Flow for new drug development

Identification of target molecules

Construction of compound libraries

Identification and characterization of target molecules for drugs

Identification of novel drug candidates

Screening

Optimization

Preclinical tests  
Toxicity tests

Clinical trial

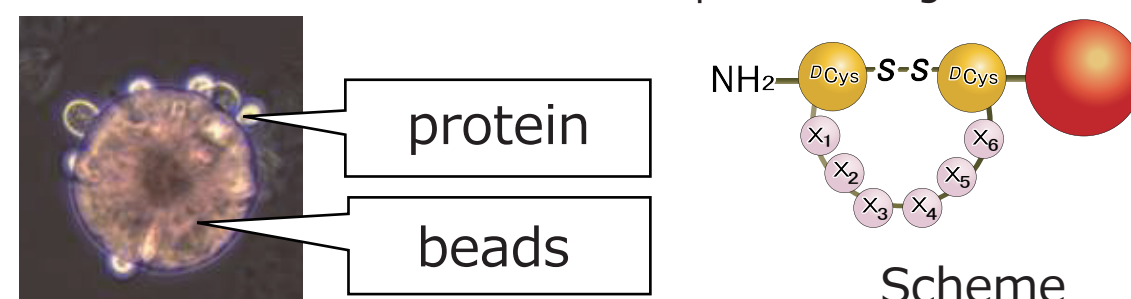
product catalogs and technical information can be downloaded from our web-site.

HiPep Laboratories

## Peptides immobilized on gel-type polymer support

Cyclic peptides (diversity: ca 200 millions) immobilized on gel-type beads, one peptide on one bead, consisting of 19 natural and 5 non proteinogenic amino acids. Discovery of target recognizing elements. Explore recognized sequences.

ex. Human cancer cell surface protein recognition

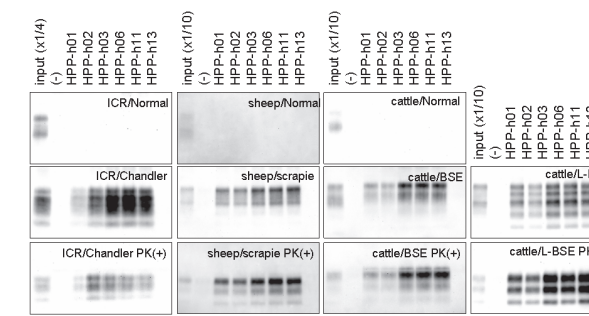


## Prion protein related peptide library

R&D tools for therapeutics and/or diagnostics agents. These peptides can discriminate structural changes of prion proteins.

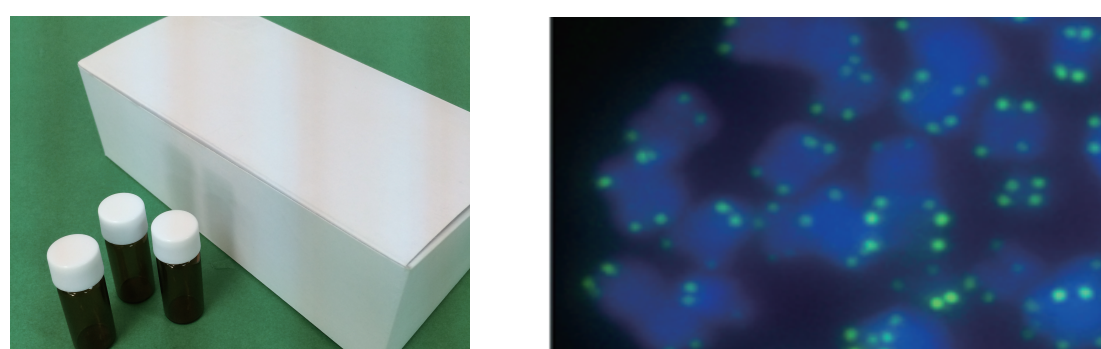
The novel assay method for prion strains had been developed.

The interactions of designed peptides and infectious prion has been investigated.



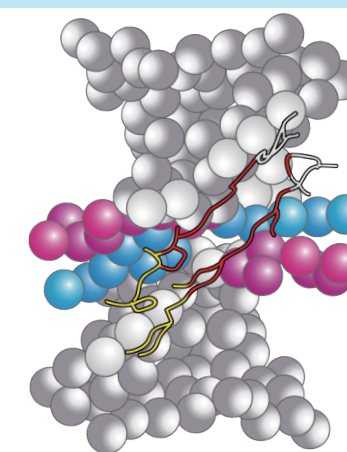
## Telomere staining probe

PIPA (Product Name HPTH59) is the optimal probe for telomere visualization ,commercialized ! The fluorescent labeled HPTH59 is nuclease resistant and enters into cell nuclei without any delivery systems and direct visualization and quantitation of telomere is possible. Denaturation is not required.



## DNA-recognition by PIPAs

Novel therapeutic agents as gene silencers or DNA-specific probes/ DNA-visualization (diagnostics).



- ①Stable in cells or bodies
  - ②Specifically binds to the target ds DNA
  - ③Enter into cell nucleus without any DDS
  - ④Flexible Design against any gene.
  - ⑤No-toxicities
  - ⑥Targeting: not possible by small molecules or antibodies
- \*GMP production is underway.

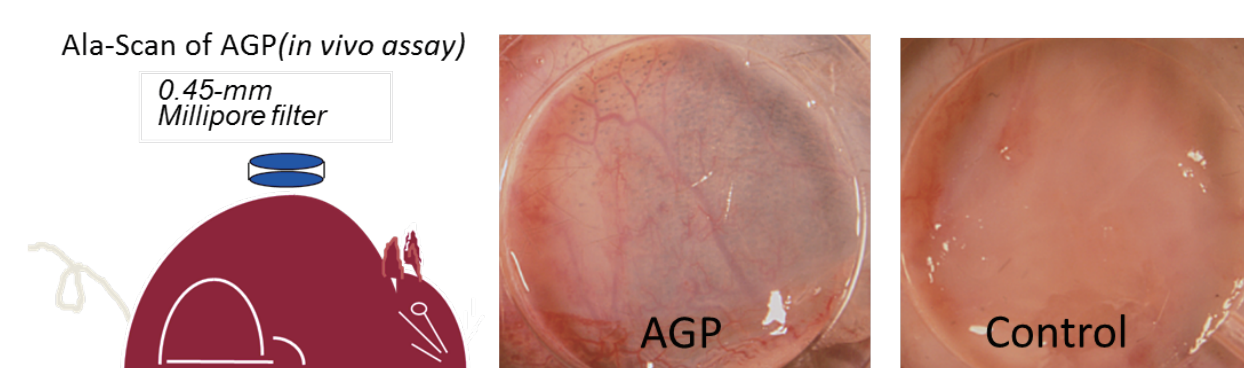
## Mimosine

Mimosine, non-proteinogenic amino acid & Mimosyl Peptides as ingredients for cosmeceuticals or pharmaceuticals. A large scale extraction, purification, physicochemical characterization of high quality Mimosine from plant Leucaena de Wit has been established.



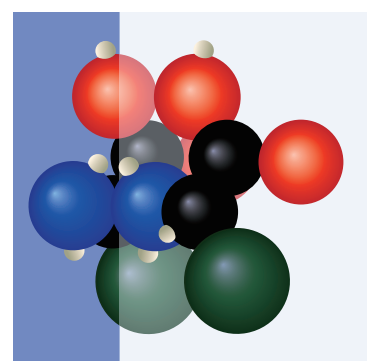
## Peptide (AGP)

Angiogenic peptide (AGP) had been discovered which can be applied to regenerative medicine (PAT in JP, US and EU).



## Contract based Research, Syntheses, Characterization by using in house developed materials/devices and world top level instruments

- Libraries: Design, Synthesis and Construction of Peptide/ Polyamide derivatives, and Bioconjugates: Design, syntheses and characterizations: High quality peptides containing not only natural amino acids but also non-proteinogenic amino acids, Glycopeptides, Lipopeptides, Cyclic peptides, Phosphopeptides, Sulfated peptides, Glutathione derivatives (metabolites), Pyrrole-imidazole polyamides, Peptide Nucleic Acids, Protein syntheses by chemical ligation, Cell penetrating peptides, Peptide-Vehicles for DDS
- Analyses: Amino acid composition, Determination of residual organic solvents/acids, water contents, Chiral analyses = GMP-GLP approved
- Characterization: LCMS, MS/MS, MALDI-TOF-MS/MS
- Microarray printing services: Utilizing the most advanced facilities and expertise on patented concepts with novel substrates made from amorphous carbon and/or high quality glass substrate slides (operated in the class 100 clean room)
- Biochip detection service: Fluorescent scanner or a fluorescent microscopy, further MALDI-TOF-MS



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