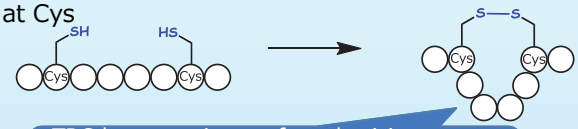
Peptide Synthesis -Selection of cyclic peptides-

Most of bioactive compounds interact with target proteins, showing activity. Controlling their conformation enables them to have tight interaction with target proteins and show strong activity. TRC has technology for cyclic peptides, which can control the conformation of bioactive peptides.

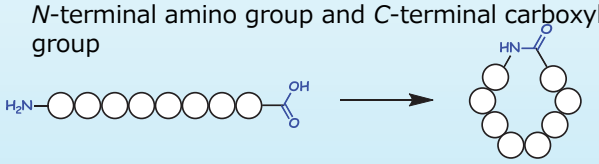
Selection of cyclic peptides

- Cyclization via disulfide bond formation of sulfhydryl group at Cys

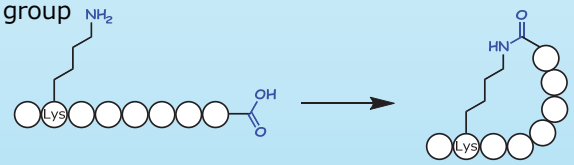


TRC has experience of synthesizing peptides with two or three disulfide bonds (insulin, defensin, etc.).

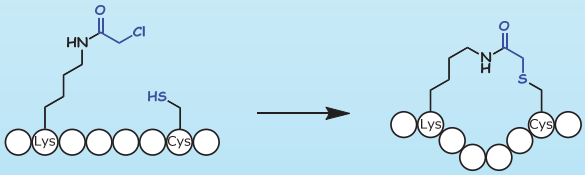
- Cyclization via amide bond formation between *N*-terminal amino group and *C*-terminal carboxyl group



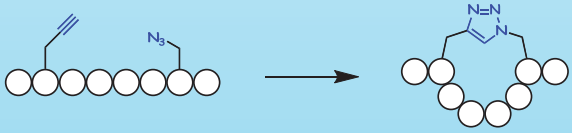
- Cyclization via amide bond formation between lysine side-chain amino group and *C*-terminal carboxyl group



- Cyclization via thioetherification

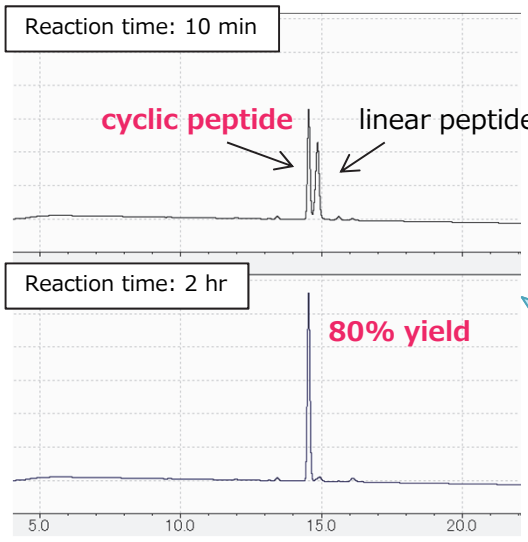


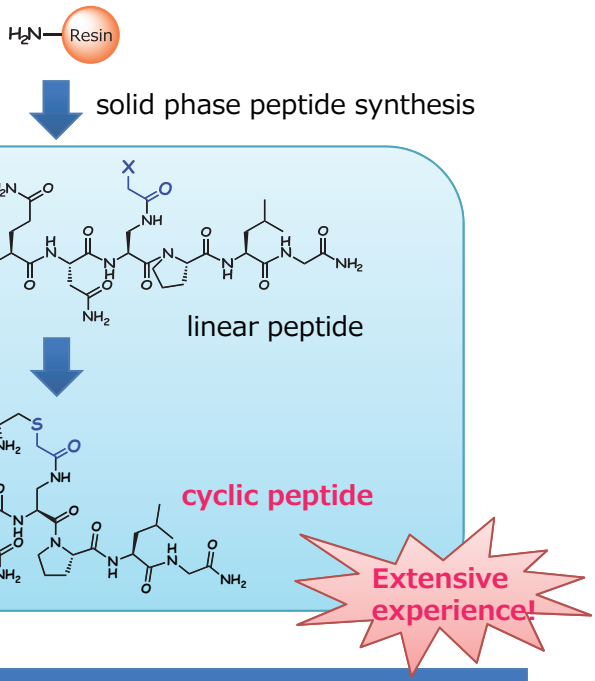
- CuAAC (copper(I)-catalyzed azide alkyne cycloaddition)



- You can choose any ring size
- You can select any cyclization site
- These cyclic peptides can be chemically modified

Cyclic peptides via thioether bond formation





TRC has technology for synthesis of thioether cyclic peptides with high purity and yield.

Toray Research Center, Inc.