

CLAIMS

1. An isolated, non-naturally occurring cell-penetrating peptide (CPP) comprising the amino acid sequence:

RRSRTARAGRPGRNSSRPSAPR [SEQ ID NO: 1]

and sequences which have at least 60% similarity to SEQ ID NO: 1.

2. The CPP of claim 1 that has at least 65%, 70%, 75%, 80%, 85%, 90%, 95% or 98% similarity at the amino acid level to SEQ ID NO: 1
3. The CPP of claim 1 that is modified by one or more of the following: use of non-canonical amino acids, fatty acids, detectable labels, oligonucleotides, cholesterol, and reactive groups
4. The CPP of claim 1 that is conjugated to a molecule of interest.
5. The CPP of claim 4 wherein the molecule of interest is chosen from the following: a therapeutic agent, an oligonucleotide, a further peptide or protein, a reactive group, a fatty acid, cholesterol, or a detectable label.
6. The CPP of claim 4 wherein the conjugation is carried out using: a covalent link, or a non-covalent interaction.
7. A modified cell comprising the CPP of claim 1 or CPP conjugated to a molecule of interest of claim 4.
8. Use of a CPP of claim 1, CPP conjugated to a molecule of interest of claim 4 or modified cell of claim 7 in the manufacture of a medicament or diagnostic agent.
9. Use of a CPP of claim 1, CPP conjugated to a molecule of interest of claim 4 or modified cell of claim 7 as a medicament or diagnostic agent.
10. A kit comprising (i) a CPP of claim 1, CPP conjugated to a molecule of interest of claim 4 or modified cell of claim 7; and (ii) instructions for use.