Claims:

1. A complex comprising non-enzymatic self cleaving moiety covalently bound to a medicinal agent, said self cleaving moiety comprising the general structure

A-B-;

wherein

A is an amino acid or a hydroxyl acid;

B is an N-alkylated amino acid; wherein said self cleaving moiety is linked to said medicinal agent through formation of an amide bond between B and an amine of said medicinal agent, wherein the chemical cleavage half life ($t_{1/2}$) of A-B from said medicinal agent is at least about 1 hour to about 1 week in standard PBS solution under physiological conditions.

2. The complex of claim 1 wherein one of A or B represents a non-coded amino acid.

3. The complex of claim 1 wherein

said medicinal agent is a bioactive peptide; and

A, B, or the amino acid comprising the amino group of said medicinal agent to which A-B is linked is a non-coded amino acid.

4. The complex of any of claims 1, 2 or 3 wherein a depot polymer is linked to the side chain of A or B.

5. The complex of claim 4 wherein the depot polymer is selected from the group consisting of polyethylene glycol, dextran, polylactic acid, polyglycolic acid and a copolymer of lactic acid and glycolic acid.

6. The complex of claim 5 wherein the molecular weight of said depot polymer is selected from a range of about 20,000 to about 120,000 Daltons.

7. The complex of claim 5 wherein the depot polymer is
a polyethylene glycol having a molecular weight selected from the range of 40,000 to 80,000 Daltons.