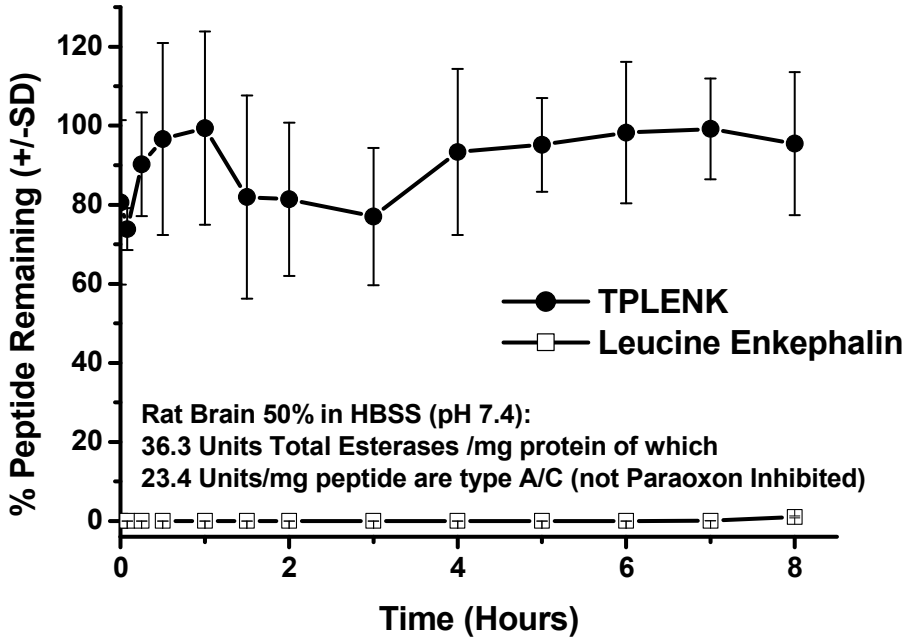
Supporting Information

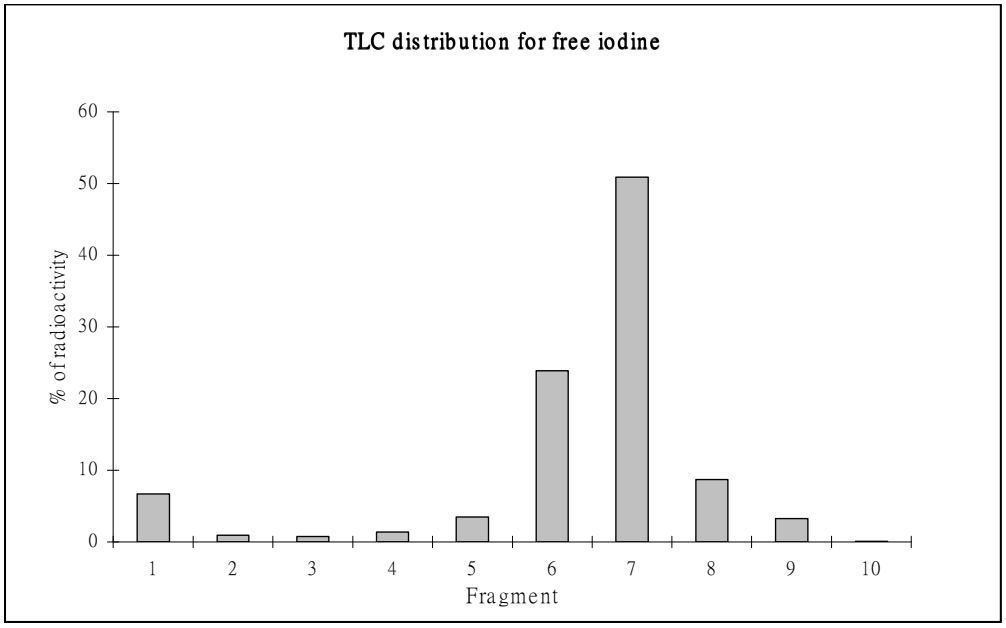
A Prodrug Nanoparticle Approach for the Oral Delivery of a Hydrophilic Peptide - Leucine^5-Enkephalin - to the Brain

SI Figure 1



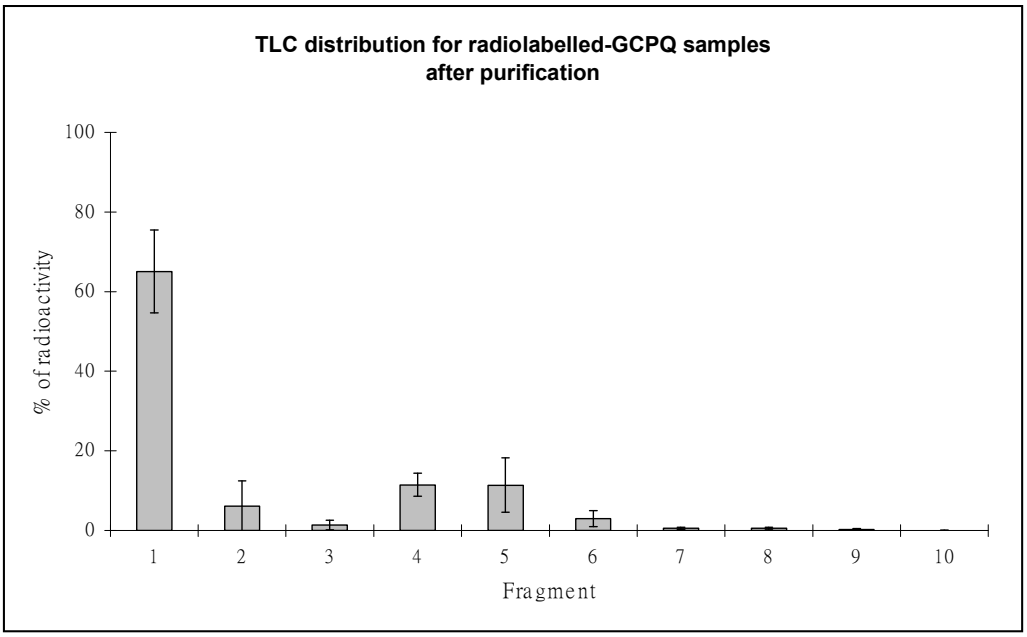
SI Figure 1: The bioconversion of TPLENK (0.61 mg mL-1) into leucine^5-enkephalin in the presence of 50%v/v brain homogenate containing DMSO (1% v/v), protein content of 50%v/v brain homogenate = 54.5 $\pm$ 17.4 mg mL^{-1}, esterase content of the 50%v/v brain homogenate = 36 Units mg^{-1} of protein. TPLENK is not converted to leucine^5-enkephalin.

SI Figure 2a



SI Figure 2a: Thin layer chromatography analysis of unpurified radiolabelled GCPQ. GCPQ was radiolabelled as detailed in the Experimental Methods section. Stationary phase = Aluminium backed TLC plates (20 x 20 cm) Silica gel 60 F254, layer thickness 200μm, pore size 60Å, mobile phase = ethyl acetate: toluene (8:2). Detection method = Fluorescent indicator, 254nm. The polymer remains at the origin (Fraction 1) and most of the free iodine is found in Fractions 6 and 7.

SI Figure 2b



SI Figure 2b: Thin layer chromatography of analysis of purified radiolabelled GCPQ after purification by column chromatography. GCPQ was radiolabelled and purified as detailed in the Experimental Methods section. Stationary phase = Aluminium backed TLC plates (20 x 20 cm) Silica gel 60 F254, layer thickness 200μm, pore size 60Å, mobile phase = ethyl acetate: toluene (8:2). Detection method = Fluorescent indicator, 254nm. The polymer remains at the origin (Fraction 1) and most of the radiolabel is found in Fraction 1.