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Solid phase synthesis of iodinated Dmt-D-Ala-Phe-Orn, a μ-opioid peptide

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critical step to obtain the necessary building block of the subsequent synthesis of the iodinated peptide. This was done by the use of the reagent bis(pyridine)iodonium tetrafluoroborate to add iodine to dimethyl tyrosine. Successful iodination of fmoc protected dimethyl tyrosine has been confirmed by ^{1}HNMR, ^{13}CNMR and Maldi-tof. The iodinated Dmt-D-Ala-Phe-Orn was prepared via solid phase synthesis. The protected amino acids were added in sequence from ornithine to I-dimethyl tyrosine to form the full peptide. The final product was successfully characterized via LCMS. The final peptide may be useful for targeting the brain's μ-opioid receptors.