

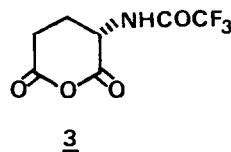
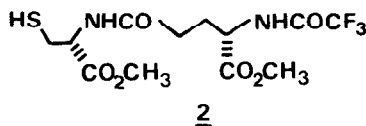
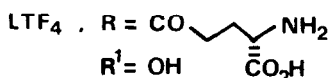
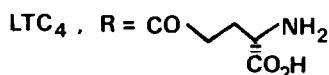
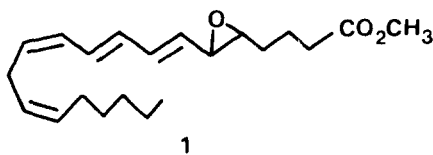
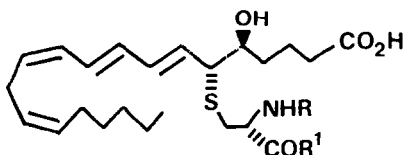
A TOTAL SYNTHESIS OF LEUKOTRIENE F₄ (LTF₄)

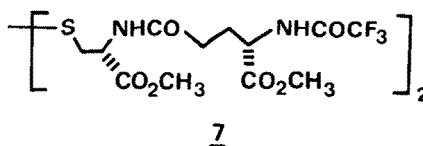
Frank Ellis, Lester S Mills and Peter C North*

Chemistry Research, Glaxo Group Research Ltd, Ware
 Hertfordshire SG12 0DJ, England

Abstract The synthesis of LTF₄ via the reaction of (±)-leukotriene A₄(LTA₄), methyl ester 1 with the protected glutamylcysteine 2 is reported

The leukotrienes LTC₄, D₄ and E₄ are a recently discovered family of arachidonic acid metabolites which are thought to be involved in certain hypersensitivity reactions including allergic asthma ¹ It was recently disclosed² that incubation of LTE₄ with γ-glutamyl transpeptidase, in the presence of glutathione, produces a new leukotriene (LTF₄) possessing a γ-glutamylcysteine residue The biological activity of this new leukotriene was, however, not given We now wish to report a total synthesis of LTF₄ via the reaction of (±)-leukotriene A₄, methyl ester³ 1 with the protected glutamylcysteine 2, thus making this new leukotriene accessible for further study The ease of synthesis of 2 is particularly noteworthy, and the methods described herein should be applicable to other areas of peptide chemistry in which the formation of a γ-glutamyl peptide bond is required





REFERENCES AND NOTES

- (Received in UK 5 July 1982)