This article was downloaded by:

On: 29 January 2011

Access details: Access Details: Free Access

Publisher Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information: http://www.informaworld.com/smpp/title~content=t713618290

The Synthesis of the Trnas Anticodon Loop Fragment ("U-Turn") with Modified Uridines as the Components

E. Sochacka^a; A. Malkiewicz^a

^a Institute of Organic Chemistry, Technical University, Lódź, Poland

To cite this Article Sochacka, E. and Malkiewicz, A.(1990) 'The Synthesis of the Trnas Anticodon Loop Fragment ("U-Turn") with Modified Uridines as the Components', Phosphorus, Sulfur, and Silicon and the Related Elements, 51: 1, 375

To link to this Article: DOI: 10.1080/10426509008040902

URL: http://dx.doi.org/10.1080/10426509008040902

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.informaworld.com/terms-and-conditions-of-access.pdf

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

THE SYNTHESIS OF THE TRNAS ANTICODON LOOP FRAGMENT ("U-TURN") WITH MODIFIED URIDINES AS THE COMPONENTS

E.SOCHACKA and A.MALKIEWICZ Institute of Organic Chemistry, Technical University, Zwirki 36, 90-924 Lódź, Poland

To continue studies on dynamics of tRNAs anticodon loop fragments conformation (1) the series of oligomers 1-5 has been synthesized.

5'-O-MMTr, 2'-O-THP blocked uridine was phosphorylated with 2-chlorophenyl phosphorodichloridate and condensed with the 2',3'-O-methoxymethylene protected modified uridines (ca 85% yield). Trifluoroacetyl was used as the additional blockage of mnm 5 s 2 U and cmnm 5 s 2 U exoamino function. The fully blocked oligomers were deprotected to 1-5 (75% isolated yield) by treatment with N 1 ,N 1 ,N 3 ,N 3 -tetramethylguanidium p-nitrobenzaldoxime (or 0.085N Et $_4$ NOH in CH $_3$ CN/H $_2$ O for cmnm 5 s 2 U bearing oligomer), followed by 0.02N hydrochloric acid in dioxane/water (1:1) system and their homogeneity was confirmed by the spectral, hplc and enzymatic digestion data. The next series of 1-5 "2-oxo-analogs" can be also obtained by the simple S $^2 \rightarrow 0^2$ transformation on the oligomer level (2).

- (1) H. Sierzputowska-Gracz, E. Sochacka, A. Małkiewicz, K. Kuo, Ch. W. Gehrke, P. F. Agris, J. Am. Chem. Soc. 109, 7171 (1987).
- (2) Y. S. Prasada Rao, J. D. Cherayil, Biochem. J. <u>143</u>, 285 (1974).