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Additions and Corrections

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Synthesis of Fish Antifreeze Neoglycopeptides Using Microwave-Assisted "Click Chemistry".

Pages 2409−2412. Following publication, it was pointed out[1] to the authors that the NMR data originally assigned to compound **1** (Scheme 2, page 2410) were in fact consistent with a furanose. Accordingly, correct structures are depicted in the revised Figure 1, Scheme 2, and Scheme 3 depicted below. For completeness, the authors embarked on a synthesis of the desired galactopyranoside **7** and the Tn antigen mimic **8** using an alternative route, as outlined in Scheme 5. The NMR data are given below.

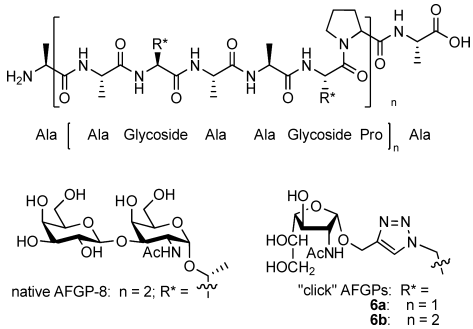
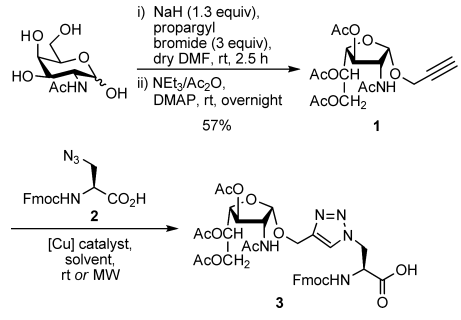
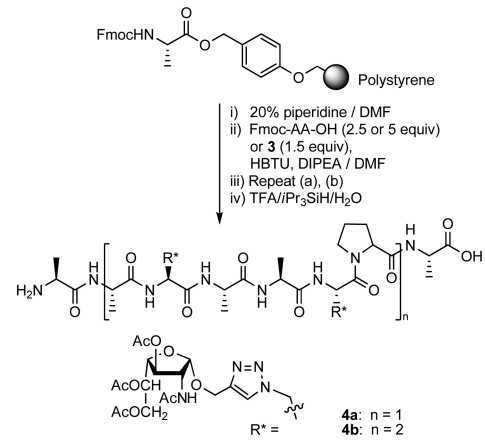


Figure 1. Structure of native AFGP-8 and neoglycopeptides (click analogues).

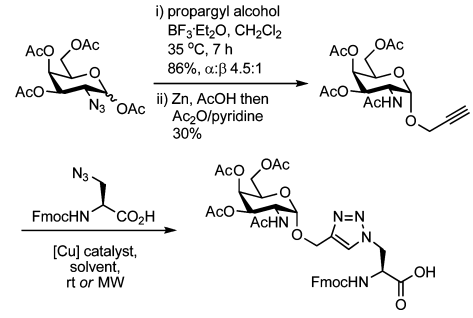
Scheme 2. Synthesis of Neoglycosyl Amino Acid Building Block



Scheme 3. Fmoc-SPPS of **4a** and **4b**



Scheme 5. Synthesis of Neoglycosyl Amino Acid Building Block **8**



The synthesis of 1,3,4,6-tetra-*O*-acetyl-2-azido-2-deoxy-D-galactose was performed according to the literature.[2] Modification of the glycosylation conditions used by Brimble et al.[3] yielded 2-acetamido-3,4,6-tri-*O*-acetyl-2-deoxy-α-D-galactopyranoside (**7**). CuAAC between **7** and azidoalanine under the same conditions applied for the furanose form afforded the galactopyranoside-glycosylated analogue **8** of the Tn antigen.

Propargyl 2-acetamido-3,4,6-tri-*O*-acetyl-2-deoxy-α-D-galactopyranoside (7). ^{1}H NMR (400 MHz, $CDCl_3$) δ 5.74 (1 H, d, J = 9.7 Hz, N*H*), 5.35 (1 H, dd, J = 3.2, 0.9 Hz, 4-C*H*),

5.13 (1 H, dd, $J = 11.4$, 3.3 Hz, 3-C*H*), 5.03 (1 H, d, $J = 3.7$ Hz, 1-C*H*), 4.59 (1 H, ddd, $J = 11.4$, 9.7, 3.7 Hz, 2-C*H*), 4.21−4.26 (1 H, m, 1′-C*H*), 4.13−4.20 (1 H, m, 5-C*H*), 4.03−4.10 (2 H, m, 6-C*H*), 2.47 (1 H, t, $J = 2.4$ Hz, 3′-C*H*), 2.13, 2.01, 1.96 (9 H, s, OCOCH_3), 1.94 (3 H, s, NCOCH_3); ^{13}C NMR (100 MHz, $CDCl_3$) δ 170.6, 170.1, 170.0, 170.0 (CO), 96.4 (CH), 78.0 (C), 75.1 (CH), 67.9 (CH), 67.0 (CH), 69.9 (CH), 61.4 (CH_2), 55.0 (CH_2), 47.2 (CH), 22.9 (CH_3), 20.4 (CH_3), 20.4 (CH_3).

(2*S*)-2-{[(9*H*-Fluoren-9-ylmethoxy)carbonyl]amino}-3-(4-{[(2,3,4,6-tetra-*O*-acetyl-α-D-galactopyranosyl)-oxy]-1 *H*-1,2,3-triazol-1-yl)propanoic Acid (8). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.78−7.71 (2 H, m, Fmoc), 7.63−7.53 (2 H, m, Fmoc and 5″-C*H*), 7.50 (1 H, bs, 5″-C*H*), 7.43−7.25 (4 H, m, Fmoc), 6.63 (1 H, d, $J = 8.1$ Hz, N*H*COCH_3), 6.16 (1 H, d, $J = 5.7$ Hz, N*H*Fmoc), 5.38−5.34 (1 H, m, 4-C*H*), 5.17−5.10 (1 H, m, 3-C*H*), 5.02−4.69 (5 H, 1-C*H*, OCH_2C, 3′-CH_a and 2′-C*H*), 4.68−4.52 (1 H, m, 3′-CH_b), 4.51−4.36 (3 H, m, 2-C*H* and CH_2Fmoc), 4.35−4.25 (1 H, m, 5-C*H*), 4.24−4.17 (1 H, m, C*H*Fmoc), 2.10, 2.03, 1.94 (9 H, s, OCOCH_3), 1.84 (3 H, s, NCOCH_3); ^{13}C NMR (100 MHz, $CDCl_3$) δ 173.2 (CO), 172.2 (CO), 170.8 (CO), 170.6 (CO), 170.3 (CO), 155.9 (CO), 143.6 (C), 143.5 (C), 141.3 (C), 127.8 (CH), 127.1 (CH), 124.9 (CH), 124.8 (CH), 120.0 (CH), 95.9 (CH), 67.8 (CH), 67.2 (CH), 67.0 (CH), 67.0 (CH_2), 61.9 (CH_2), 59.8 (CH_2), 54.1 (CH), 51.0 (CH_2), 48.0 (CH), 47.0 (CH), 22.5 (CH_3), 20.6 (CH_3), 20.6 (CH_3).

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(2) Goddard-Borger, E. D.; Stick, R. V. *Org. Lett.* **2007**, *9*, 3797–3800.
(3) Lee, D. J.; Harris, P. W. R.; Kowalczyk, R.; Dunbar, R.; Brimble, M. A. *Synthesis* **2010,** DOI: 10.1055/s-0029-1218635.