Biomimetic synthesis and structural refinement of the macrocyclic dimer aminoglycoside 66-40C—the remarkably selective self-condensation of a putative aldehyde intermediate in the submerged culture medium producing sisomicin Stephen Hanessian* and Juan Pablo Maianti

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*Compound 4* 1 1 D: Hanessian

1,3,2',6'-Tetraazido-sisomicin (4)
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*Compound 6*  1  l  D:  Hanessian

1,3,2'-Triazido-3'-N-Cbz-sisomicin 6'-aldehyde (6)
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*Compound 7*  1  l  D: Hanessian

1,3,2'-Triazido-3'-N-Cbz-6',6'-dimethoxy-sisomicin (7)
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*Compound 8*  2  1  D: Hanessian

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*Aminoglycoside 66-40 C (2)"  3  1  D: Hanessian
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Aminoglycoside 66-40C (2) hydrolysis  21  1  D:  Hanessian
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1,3,2'-Triazido-6',6'-dimethoxy-sisamine (10)
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5',6'-Dimethoxy-sisamine (S2)

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"Compound S2" 3 1 D: Hanessian

5',6'-Dimethoxy-samine (S2)

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6',6'-Dimethoxy-sisamine (S2)

Chemical Formula: C_{14}H_{27}N_{3}O_{6}
Exact Mass: 333.18999

\[ [M + Na]^+ = 356.17866 (4.04 \text{ ppm}) \]
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3-6'-Bis-imino-sisamine dimer (12)
Biomimetic synthesis and structural refinement of the macrocyclic dimer aminoglycoside 66-40C—the remarkably selective self-condensation of a putative aldehyde intermediate in the submerged culture medium producing sisomicin Stephen Hanessian* and Juan Pablo Maianti

*Compound 12* 4 1 D: Hanessian

[Image of a graph or spectrum related to the study]
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3-6' - Bis-imino-sisamine dimer (12)

Chemical Formula: C_{26}H_{38}N_{2}O_{9}

Exact Mass: 538.27511

$[M + H]^+ = 539.28239$ (-3.66 ppm)

$[M + Na]^+ = 561.26378$ (4.35 ppm)
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