$^1$H NMR spectra and RP-HPLC chromatograms for all compounds.

$^1$H NMR of 1

$^1$H NMR of 1
**N-Bromoacetyl-L-homoserine lactone (2).**

\[
\text{ppm (f1)}
\]

\[
1^1\text{H NMR of 2}
\]
$N$-Azidoacetyl-$L$-homoserine lactone (3).
N-1-Oxo-4-pentyn-1,-homoserine lactone (4).
**Supporting Information**

**N-(4-Iodobenzoyl)-L-homoserine lactone (7).**

Purity: > 95 %, \( R_t = 6.16 \) min

**\(^1\)H NMR of 7**
Supporting Information

N-(3-Iodobenzoyl)-l-homoserine lactone (8).

Purity: > 95 %, \( R_t = 6.15 \) min

\(^1\)H NMR of 8
**N-(4-Trimethylsilylethynylbenzoyl)-L-homoserine lactone (9).**

Purity: > 95 %, $R_t = 8.19$

**$^1$H NMR of 9**
N-(3-Trimethylsilylethynylbenzoyl)-L-homoserine lactone (10).

Purity: > 95 %, \( R_t = 8.19 \) min

\( ^1 \text{H} \) NMR of 10
\[ \text{N-}(4\text{-Ethynylbenzoyl})\text{-L-homoserine lactone (11)}. \]

Purity: > 95 %, \( R_t = 5.46 \) min

\[ \text{H NMR of 11} \]
N-(3-Ethylnobenzoyl)-L-homoserine lactone (12).

Purity: > 95%, R_t = 5.47 min

'H NMR of 12
N-(4-Azidobenzoyl)-L-homoserine lactone (13).

**Purity:** > 95 %, \( R_t = 5.49 \) min

**H NMR of 13**
N-(3-Azidobenzoyl)-L-homoserine lactone (14).

Purity: > 95%, \( R_t = 5.58 \) min

\(^1\)H NMR of 14
4-Azidoanisole.

$^1$H NMR of 4-Azidoanisole
4-Azidophenol

$^1$H NMR of 4-Azidophenol
4-Azidoaniline.

$^1$H NMR of 4-Azidoaniline
3-Azidobenzaldehyde.

$^1$H NMR of 3-Azidobenzaldehyde
3-Azidoaniline

$^1$H NMR of 3-Azidoaniline
5-Azidoindole.

$^1$H NMR of 5-Azidoindole
Supporting Information

Triazole I-A.

[Chemical structure image]

Purity: > 95 %, \( R_t = 4.27 \) min

[Graph showing chromatogram]

\[ ^1H \text{ NMR of I-A} \]

[Graph showing NMR spectrum]

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Triazole I-B.

Purity: 84 %, $R_t = 5.03$ min

$^1$H NMR of I-B
Triazole I-C.

Purity: 82 %, $R_t = 5.74$ min

$^1$H NMR of I-C
**Supporting Information**

**Triazole I-D.**

**Purity**: 86%, $R_t = 6.38$ min

**$^1$H NMR of I-D**

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Triazole I-E.

\[ \text{I-E} \quad \text{Purity: 69\%, } R_t = 3.86 \text{ min} \]

\[ \text{\textsuperscript{1}H NMR of I-E} \]

ppm (f1)
Stacy et al.
Supporting Information

Triazole I-F.

Purity: 79%, $R_t = 5.09$ min

$^1$H NMR of I-F
Stacy et al.
Supporting Information

Triazole I-G.

Purity: 92%, \(R_t = 5.62\) min

\(^1\)H NMR of I-G
Triazole I-H.

Purity: 92 %, $R_t = 6.23$ min

$I$-H NMR of I-H
Triazole I-I.

Purity: >95 %, \( R_t = 5.21 \) min

\(^1\)H NMR of I-I
Triazole I-J.

Purity: > 95\%, R_t = 7.13

1H NMR of I-J
Triazole I-K.

Purity: > 95 %, $R_t = 5.99$

$^1$H NMR of I-K
Triazole I-L.

Purity: > 95 %, $R_t = 5.64$

$^1$H NMR of I-L
Triazole I-M.

Purity: >95%, $R_t = 6.38$

$^1$H NMR of I-M
Triazole I-N.

Purity: > 95 %, $R_t = 5.78$

$^1$H NMR of I-N
Triazole I-O.

Purity: > 95 %, $R_t = 4.91$

$^1$H NMR of I-O
**Triazole II-A.**

**Purity:** > 95 %, \( R_t = 5.20 \) min

**1H NMR of II-A**
**Triazole II-B.**

- **Purity:** > 95%, $R_t = 3.28$

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**$^1$H NMR of II-B**

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Triazole II-C.

Purity: > 95\%, \(R_t = 5.62\) min

\(^1\)H NMR of II-C
**Triazole II-D.**

- **Purity:** > 95%, $R_t = 4.75$

---

**$^1$H NMR of II-D**
Triazole II-E.

Purity: > 95 %, $R_t = 4.19$

1H NMR of II-E
Stacy et al.
Supporting Information

Triazole II-F.

Purity: 89%, \( R_t = 3.49 \) min

**1H NMR of II-F**
Triazole III-A.

Purity: > 95 %, $R_t = 6.14$

$^1$H NMR of III-A
Triazole III-B.

Purity: > 95%, $R_t = 6.28$

$^1$H NMR of III-B
Triazole III-C.

Purity: > 95\%, R_t = 6.63

\[ ^1H \text{NMR of III-C} \]
Triazole III-D.

Purity: > 95%, $R_t = 6.74$ min

$^1$H NMR of III-D
Triazole III-E.

Purity: 92 %, $R_t = 5.40$ min

$^1$H NMR of III-E
Triazole III-F.

Purity: 91%, $R_t = 6.84$ min

$^1$H NMR of III-F
Triazole III-G.

Purity: > 95 %, $R_t = 5.40$ min

$^1$H NMR of III-G
Stacy et al.

Supporting Information

Triazole III-H.

![Image of Triazole III-H](chart)

**1H NMR of III-H**

Purity: > 95 %, \( R_t = 5.56 \) min
Triazole III-I.

**Purity:** > 95%, $R_t = 6.49$ min

**1H NMR of III-I**
Triazole III-J.

Purity: >95 %, $R_t = 6.60$

$^1$H NMR of III-J
Triazole IV-A.

Purity: > 95%, \( R_t = 5.75 \) min

\(^1\)H NMR of IV-A
Triazole IV-B

Purity: > 95%, Rt = 5.84 min

'H NMR of IV-B
Triazole IV-C.

Purity: > 95 %, $R_t = 6.40$

$^1$H NMR of IV-C
Triazole IV-D.

Purity: > 95 %, \( R_t = 6.47 \) min

\(^1\)H NMR of IV-D
Triazole IV-E.

Purity: > 95\%, \( R_t = 7.03 \) min

\(^1\)H NMR of IV-E
Triazole IV-F.

Purity: > 95 %, R_t = 7.08

1H NMR of IV-F
Triazole IV-G.

Purity: > 95 %, $R_t = 7.61$

$^1$H NMR of IV-G
Triazole IV-H.

**Purity:** > 95%, *R*<sub>t</sub> = 7.66 min

**1H NMR of IV-H**
Triazole IV-I.

Purity: > 95 %, $R_t = 5.46$

$^1$H NMR of IV-I
Triazole IV-K.

Purity: > 95 %, \( R_t = 6.45 \) min

\(^1\)H NMR of IV-K
Stacy et al.

Supporting Information

Triazole IV-L.

Purity: > 95 %, \( R_t = 6.52 \) min

\(^1\text{H NMR of IV-L}\)
Triazole IV-M.

Purity: > 95 %, $R_t = 6.98$

$^1$H NMR of IV-M
Triazole IV-N.

Purity: > 95 %, $R_t = 7.05$

$^1$H NMR of IV-N
Triazole IV-O.

Purity: > 95\%, Rt = 7.49 min

**H NMR IV-O**
Triazole IV-P.

Purity: > 95%, R = 7.54

$^1$H NMR of IV-P
Triazole IV-Q.

Purity: > 95%, $R_t = 6.59$

$^1$H NMR of IV-Q
Triazole IV-R.

Purity: > 95%, \( R_t = 6.66 \) min

\(^1\text{H} \) NMR of IV-R

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Triazole IV-S.

Purity: > 95%, $R_t = 6.82$

$^1$H NMR of IV-S
Purity: > 95 %, $R_t = 6.91$

$^1$H NMR of IV-T
**Triazole IV-U.**

Purity: > 95 %, $R_t = 7.33$

**$^1$H NMR of IV-U**
Triazole IV-V.

Purity: > 95%, $R_t = 7.40$

$^1$H NMR IV-V
**Triazole IV-W.**

Purity: 92%, $R_t = 8.11$ min

**$^1$H NMR of IV-W**
Triazole IV-X.

Purity: 90%, $R_t = 8.17$ min

$^1$H NMR of IV-X
Triazole IV-Y.

Purity: > 95 %, $R_t = 7.52$

$^1$H NMR of IV-Y

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Triazole IV-Z.

Purity: > 95%, R<sub>t</sub> = 7.60

1H NMR of IV-Z
Triazole IV-AA.

Purity: > 95\%, \text{R} = 4.26

\textbf{H NMR of IV-AA}
Triazole IV-AB.

Purity: > 95 %, $R_t = 4.32$

$^1$H NMR of IV-AB

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Triazole IV-AC.

Purity: > 95 %, $R_t = 6.30$

$^1$H NMR of IV-AC
Triazole IV-AD.

Purity: > 95%, \( R_t = 6.39 \) min

\[ \text{H NMR of IV-AD} \]
Triazole IV-AE.

Purity: > 95%, $R_t = 6.81$

$^1$H NMR of IV-AE
Triazole IV-AF.

Purity: 84%, \( R_t = 6.89 \) min

\(^1\)H NMR of IV-AF
Bis-homoserine lactone V-A.

Purity: 81%, $R_t = 5.27$ min

$^1$H NMR of V-A
Bis-homoserine lactone V-B.

Purity: > 95 %, $R_t = 5.39$ min

$^1$H NMR of V-B
**Bis-homoserine lactone V-C.**

Purity: > 95 %, $R_t = 5.41$

**$^1$H NMR of V-C**

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Bis-homoserine lactone V-D.

Purity: > 95 %, $R_t = 5.53$ min

$^1$H NMR of V-D
Bis-homoserine lactone V-E.

Purity: 81 %, \( R_t = 6.39 \) min

\(^1\)H NMR of V-E
Bis-homoserine lactone V-F.

Purity: 94%, $R_t = 6.59$ min

$^1$H NMR of V-F
Bis-homoserine lactone V-G.

Purity: 85 %, $R_t = 4.50$ min

$^1$H NMR of V-G
Tris-homoserine lactone V-H.

Purity: > 95%, $R_t = 4.96$

$^1$H NMR of V-H
Tris-homoserine lactone V-I.

Purity: > 95%, $R_t = 5.16$

$^1$H NMR of V-I
References and notes