SIGMA-ALDRICH®

SIGMA-ALDRICH®
YOUNG CHEMISTS
SYMPOSIUM

13° SAYCS

RICCIONE, 28-30 Ottobre 2013

Hotel Atlantic, Lungomare della Libertà 15

Comitato Organizzatore
D. Spinelli
M. Mostacci
P. Franceschelli
G. Micheletti
M. Piscopietto
A. Romano
N. Zanna
POSTER

PI

ASYMMETRIC SYNTHESIS OF LINEZOLID THROUGH CATALYZED HENRY REACTION.

Angela Accardo,\textsuperscript{a,b} Antonio Palumbo Piccionello,\textsuperscript{a,b} Andrea Pace,\textsuperscript{a,b} Paola Pierro,\textsuperscript{a,b} Silvestre Buscemi,\textsuperscript{a}

\textsuperscript{a}Dipartimento di Scienze e Tecnologie Biologiche, Chimiche e Farmaceutiche (STEBICEF), Università degli Studi di Palermo, Viale delle Scienze Ed. 17, 90128 Palermo, Italy.

\textsuperscript{b}Istituto Euro Mediterraneo di Scienza e Tecnologia, Via Emerico Amari 123, 90139 Palermo, Italy.

angelaaccardo@iemest.eu

Linezolid 1 is an antibacterial oxazolidinone approved by FDA in 2000 for the treatment of fastidious bacterial infections.\textsuperscript{1} The asymmetric synthesis of Linezolid-like molecules make use of the chiral pool approach, through the so-called Manninen reaction.\textsuperscript{2} This strategy requires the use of BuLi, low temperature and a long elaboration of the acetamide chain. Curiously, the only catalyzed approach toward the asymmetrical synthesis of Linezolid was just recently reported, and belongs to the use of proline-derived catalysts in aldol reactions as the key step.\textsuperscript{3} This procedure is quite interesting except for the low yield.

\begin{center}
\includegraphics[width=0.5\textwidth]{image.png}
\end{center}

Here we report a new synthesis of Linezolid, based on a Cu(II)-catalyzed asymmetric Henry reaction. The target compound was obtained in good overall yield, and enantiomeric excess.

References

