



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)

/ Publications of IISER Mohali (/jspui/handle/123456789/4)

/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/4472>

Title:	Direct Lactamization of β -Arylated δ -Aminopentanoic Acid Carboxamides: En Route to 4-aryl-2-Piperidones, Piperidines, Antituberculosis Molecule Q203 (Telacebec) and its Analogues
Authors:	Tomar, Radha (/jspui/browse?type=author&value=Tomar%2C+Radha) Bhattacharya, Debabrata (/jspui/browse?type=author&value=Bhattacharya%2C+Debabrata) Babu, Srinivasarao Arulananda (/jspui/browse?type=author&value=Babu%2C+Srinivasarao+Arulananda)
Keywords:	Antituberculosis Molecule Lactamization β -Arylated δ -Aminopentanoic Acid
Issue Date:	2022
Publisher:	Wiley
Citation:	Asian Journal of Organic Chemistry, 11(2), 2100736
Abstract:	We report the synthesis of 4-aryl-2-piperidone, 4-arylpiperidine motifs, antituberculosis molecule Q203 (Telacebec) and its analogues. Direct lactamization of β -C-H arylated N-phthaloyl δ -aminopentanoic acid carboxamides yielded 4-aryl-2-piperidone (4-aryl- δ -valerolactam) scaffolds. The required β -C-H arylated N-phthaloyl δ -aminopentanoic acid carboxamides were assembled via the Pd(II)-catalyzed, 8-aminoquinoline-aided, sp ³ β -C-H activation and arylation method. The β -C-H arylated N-phthaloyl δ -aminopentanoic acid carboxamides containing both 8-aminoquinoline and N-phthaloyl protecting groups directly underwent the hydrazine-mediated lactamization to afford 4-aryl-2-piperidones. 4-Aryl-2-piperidone scaffolds were then converted into N-functionalized 4-aryl-2-piperidones, 4-arylpiperidines, which are structurally closer to bio-active 4-aryl-2-piperidone and piperidine motifs. A synthetic route for assembling antituberculosis molecule Q203 and its analogues from the corresponding 4-aryl-2-piperidones was also shown.
Description:	Only IISERM authors are available in the record
URI:	https://doi.org/10.1002/ajoc.202100736 (https://doi.org/10.1002/ajoc.202100736) http://hdl.handle.net/123456789/4472 (http://hdl.handle.net/123456789/4472)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format
Need To Add...Full Text_PDF. (/jspui/bitstream/123456789/4472/1/Need%20To%20Add%e2%80%a6Full%20Text_PDF.)		15.36 kB	Unknown

[View/Open \(/jspui/](#)

[Show full item record \(/jspui/handle/123456789/4472?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/4472/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.