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SYNTHESIS OF NEW *EPI*-MANOYLOXIDE DERIVATIVES WITH AZIDE AND *gamma*-LACTAM FUNCTIONAL GROUPS

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Manoyloxides have the carbon skeleton of the natural diterpenoid forskolin, which is a relevant secondary metabolite isolated from *Coleus forskohlii* with a myriad of therapeutic activities based on its ability to penetrate the cell membranes and stimulate the enzyme adenylyl cyclase. Other natural products belonging to the *ent*-series like ribenol and varodiol share the same tricyclic structure of manoyloxides and both have been reported in structure-activity relationship studies, providing derivatives with antimicrobial properties. These facts prompts following synthetic studies aimed to the generation of other manoyloxides derivatives with more and diverse functional groups.

We report in the current communication the free radical carboazidation of epimeric manoyloxide leading to azide-functionalized epimanoyloxide and converted successfully to a related *gamma*-lactame. The lactamization step occurred spontaneously on catalytic hydrogenation of carboazidation product. The structure of the title product was demonstrated by spectroscopic means and showed a flexible nitrogen-centered chirality, which is characteristic for such hybrid heterocycles.

The *gamma*-lactame is regarded as a surrogate of GABA derivatives and proved to be an efficient pharmacophore in our recent studies. Following investigations are in progress in order to reveal the cytotoxicity mechanism displayed by similar terpenic *gamma*- lactams.

Keywords: antimicrobial properties, *gamma*-lactame *Coleus forskohlii*, manoyloxides, spectroscopic methods,