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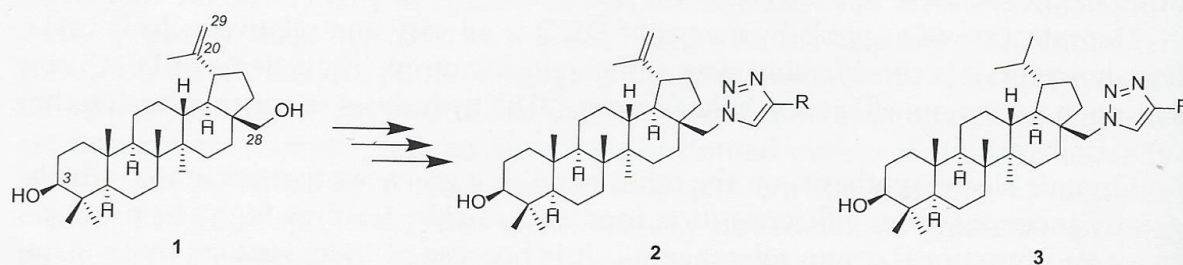
SYNTHESIS OF NOVEL TRITERPENOID-1,2,3-TRIAZOLE CONJUGATES

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Betulin is an abundant naturally occurring triterpene, most commonly found in birch bark. Research shows, that betulin and its derivatives possess wide spectrum of biological activities such as anti-HIV, antiinflammatory and anticancer [1, 2]. Use of betulin is limited by its low solubility in water. Therefore, to improve properties of betulin, structural modifications with new biological activity simultaneously improving solubility in water are being made [3].



Scheme 1. Synthesis of lupan-3 β -ol and betulin-1,2,3-triazole conjugates

In this work, betulin (2) and lupan-3 β -ol (3) conjugates were obtained in 5 step synthesis from betulin (1). Betulinaldehyde was obtained by chemoselective primary alcohol oxidation followed by reaction with hydroxylamine hydrochloride that provided betulinaldoxime. Following catalytic hydrogenation under certain conditions gave amines with or without reduced double bond between C(20) and C(29). From the obtained amines respective azides were synthesised in diazotransfer reactions using trifluoromethanesulfonic azide. The latter were employed in Cu(I) catalyzed 1,3-dipolar azide-alkyne cycloaddition reactions to obtain betulin and lupan-3 β -ol-triazole conjugates.

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