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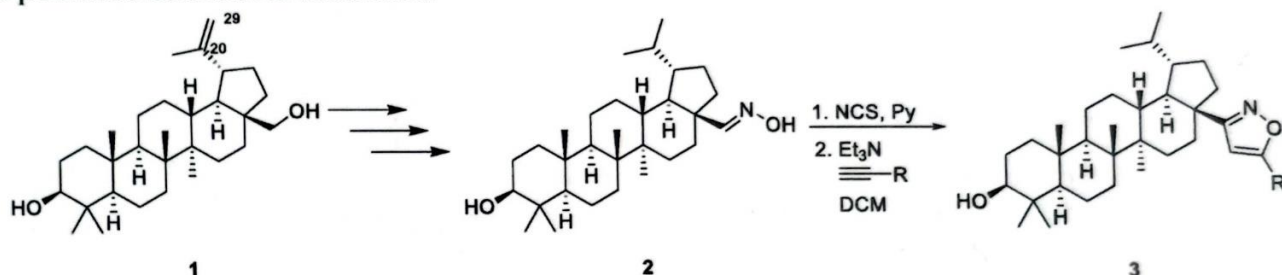
## Synthesis of 17 $\beta$ -Isoxazolyl-28-*nor*-lupan-3 $\beta$ Derivatives

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Betulin **1** is a naturally occurring triterpene found in the bark of birch trees. Its derivatives possess a wide range of biological activity and are therefore studied as potential antiviral and anticancer drugs.<sup>1,2</sup> The aim of our project is to obtain biologically active isoxazoles **3** starting from betulin **1**. For this purpose, betulin is first acylated, then hydrogenated to form a product without the C(20)-C(29) double bond. It is then selectively deacylated and oxidized to obtain an aldehyde, which is converted into an oxime **2**. Compound **2** is then used to obtain the corresponding nitrile oxide in a reaction with *N*-chlorosuccinimide in the presence of pyridine.<sup>3</sup> Finally, using 1,3-dipolar cycloaddition with alkynes, the nitrile oxide is converted into the respective isoxazole derivatives **3** (Scheme 1). These products are now being studied as potential anticancer medicine.



**Scheme 1.** Synthesis of isoxazole derivatives **3**

Supervisor: Dr. chem. J. Lugiņina.

### References

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