

## P53

### 1,2,3-Triazoles as leaving groups: $S_NAr$ reactions of 2,6-bistriazolylpurines with O-, C-, P- and Se-nucleophiles

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#### Abstract

Many azolylpurine derivatives possess a wide spectra of biological activities and useful photophysical properties. In 2013, we have introduced 2,6-bistriazolylpurine derivative as a useful intermediate for  $S_NAr$  reactions with various N- and S-nucleophiles.

Herein, we describe an extension of developed method using 1,2,3-triazole at C6 position of purine as a leaving group in  $S_NAr$  reactions between 2,6-bistriazolylpurine derivatives and O-, C-, P- and Se-nucleophiles. As O-nucleophiles primary and secondary alcohols were used for nucleophilic substitutions, giving products up to 83% yield. For the C-C bond formation at C6 position of purine malonitrile, dimedone, ethyl cyanoacetate and diethyl malonate were used as C-nucleophiles in the presence of NaH.  $S_NAr$ -Arbuzov reaction between 2,6-bistriazolylpurine derivatives and alkyl phosphites was applied for the C-P bond formation and C6-phosphonated 2-triazolylpurine derivatives were obtained up to 82% yield. Selenium containing purine derivatives were synthesized in  $S_NAr$  reactions between bistriazolylpurines and alkyl/aryl diselenides in the presence of reducing agent. 10 examples of 6-selanyl-2-triazolylpurine nucleosides were obtained in yields up to 82%. For last 20 years the interest in organoselenium compounds has increased due to their various biological properties and potential application in materials chemistry.

The synthetic routes towards C6-substituted 2-triazolylpurine nucleosides will be discussed.

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#### Image

