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3′-*O*-Substituted 5-(perylen-3-ylethynyl)-2′-deoxyuridines as tick-borne encephalitis virus reproduction inhibitors

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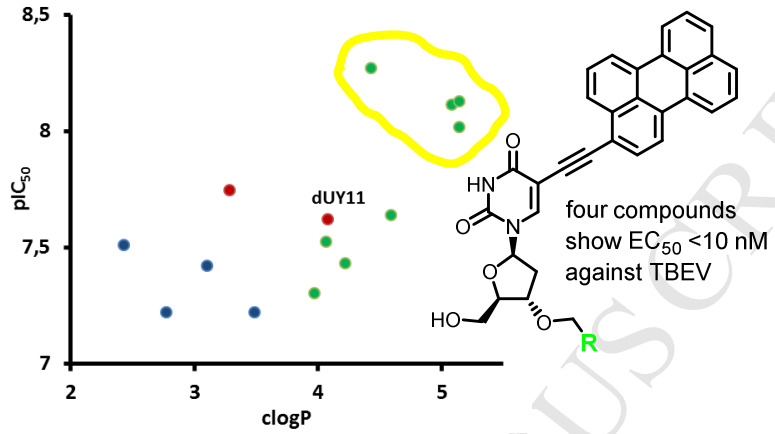
Graphical Abstract

A series of 3′-O-derivatives of antiviral perylene nucleoside **dUY11** were prepared using ‘click’ chemistry and showed high activity against tick-borne encephalitis virus (TBEV).



Highlights:

- 3′-*O*-Azidomethyl-5-(perylen-3-ylethynyl)deoxyuridine was prepared and functionalized further using ‘click’ chemistry.
- Four 3′-O-derivatives showed enhanced activity against tick-borne encephalitis virus (TBEV).
- The anti-TBEV activity of compounds somewhat correlates with their lipophilicity.
- The most active compounds showed better solubility in water–DMSO.