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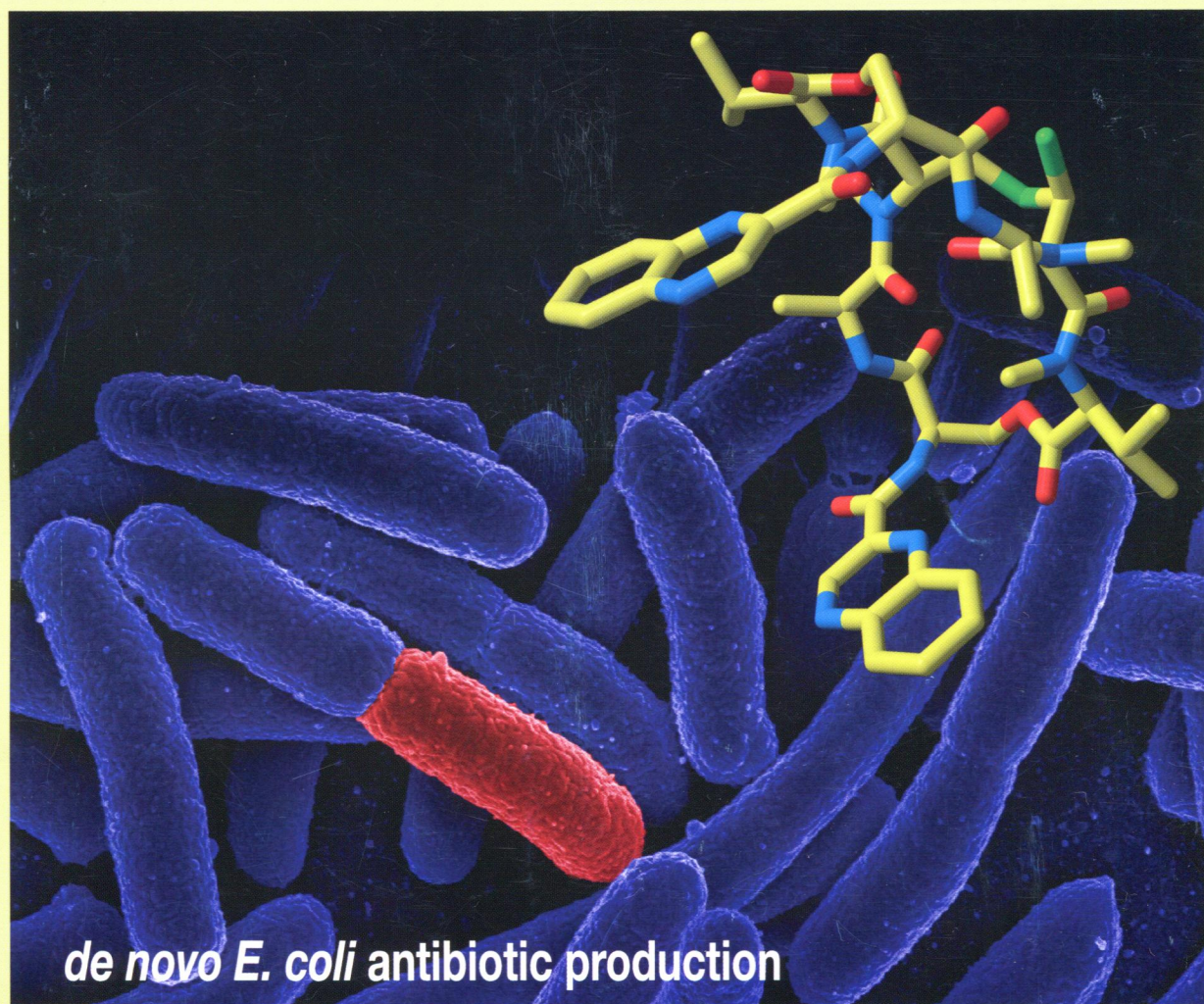
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de novo E. coli antibiotic production

Effective Use of Heterologous Hosts for Characterization of
Biosynthetic Enzymes Allows Production of Natural Products and
Promotes New Natural Product Discovery

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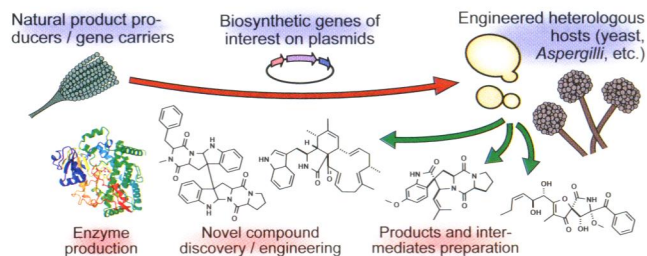
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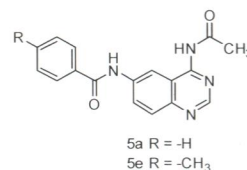


Communication to the Editor

Design and Synthesis of Novel Quinazoline Derivatives and Their Evaluation as PI3Ks Inhibitors

O. M. El-Said, M. M. Hamed, S. Laufer, and A. H. Abadi

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% residual activity of PI3Ks at 10 μM

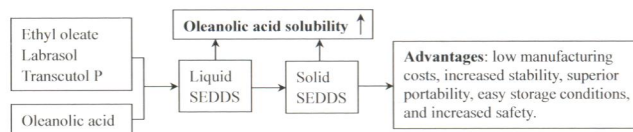
Compound	PI3K γ	PI3K α	PI3K β	PI3K δ	PI3K-C2 α	PI3K-C2 β	PI3K-C2 γ	Vps34
5a	72	71	89	78	81	87	47	90
5e	83	86	124	81	94	93	45	95

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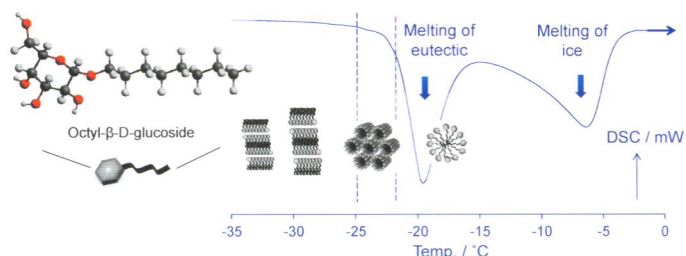
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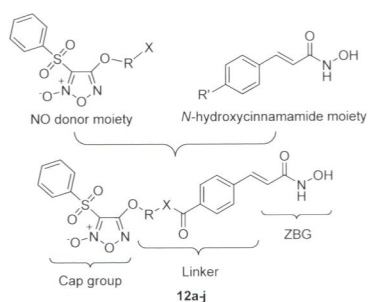
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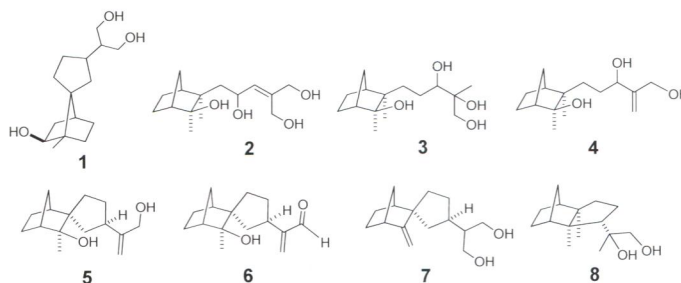
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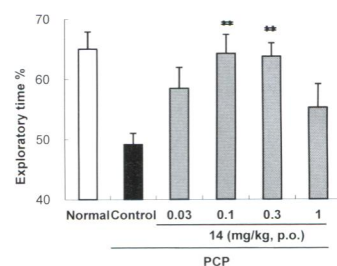
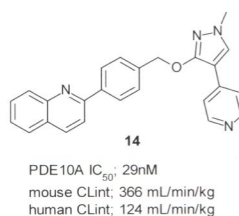
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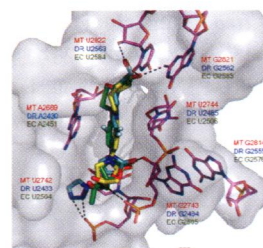


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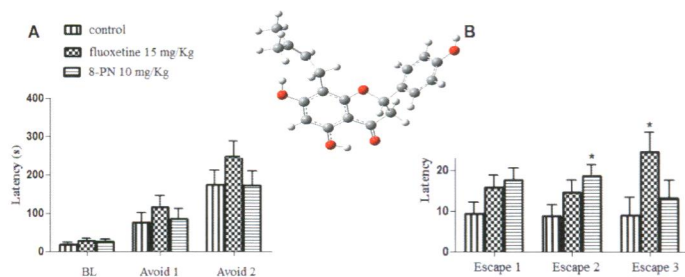
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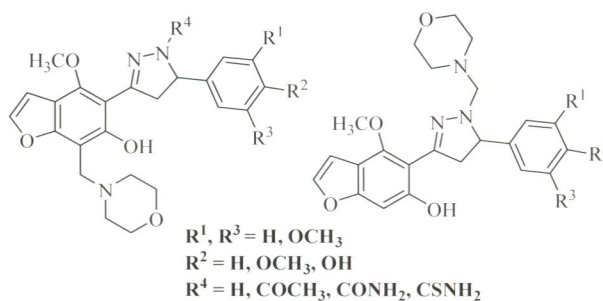
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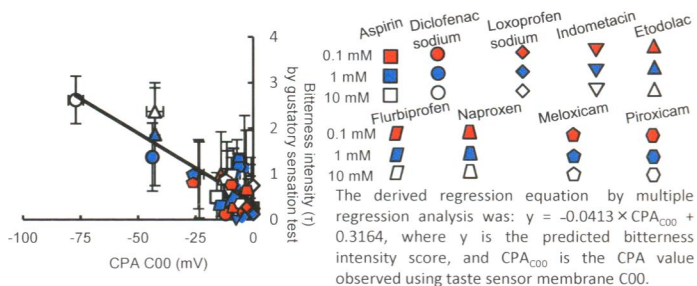
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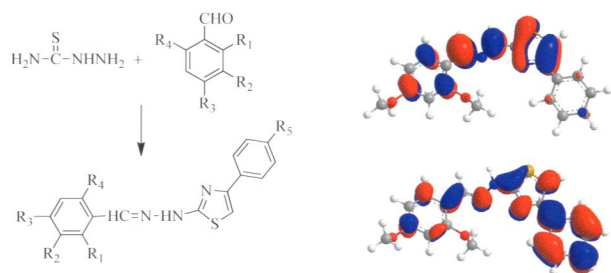
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3a–3p (R=H, OH, OCH₃, Br, Cl, NMe₂) HOMO-LUMO isosurfaces of 3g

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About the cover: The cover shows the crystal structure of the antitumor quinoxaline antibiotic echinomycin over the electron micrograph of *Escherichia coli*. The graphic based on images from the NIAID biodefense image library (*Escherichia coli*: <http://www3.niaid.nih.gov/biodefense/Public/Images.htm>) and the RCSB Protein Data Bank (echinomycin crystal structure 1PFE: <http://www.rcsb.org/pdb>). The echinomycin image was generated using MolScript and Raster3D. See the review by Watanabe on page 1153 of this issue.