





# Volume 38, Issue 1, February 2010

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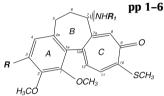
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#### **Preliminary Communication**

Derivatives of thiocolchicine and its applications to CEM cells treatment using  $^{19}{
m F}$  Magnetic Resonance  $ex\ vivo$ 

Dorota Bartusik,\* Boguslaw Tomanek, Erika Lattová, Hélène Perreault, Jack Tuszynski and Gino Fallone

Thiocolchicine derivatives used to treatments of Human T-Lymphoblastoid (CEM) cells cultured in hollow fiber bioreactor (HFB) device.



$$\begin{split} R &= (-\text{OCH}_i), \, R_1 = (-\text{COCH}_i) \\ R &= (-\text{OH}_i), \, R_1 = (-\text{COCH}_i) \\ R &= (-\text{OCH}_i \text{CH}_i), \, R_1 = (-\text{COCH}_i) \\ R &= (-\text{OCH}_i \text{CH}_i), \, R_1 = (-\text{COCH}_i) \\ R &= (-\text{OCH}_i), \, R_1 = (-\text{OCH}_i) \\ R &= (-\text{OCH}_i \text{CH}_i), \, R_1 = (-\text{H}_i) \\ R &= (-\text{OCH}_i \text{CH}_i), \, R_1 = (-\text{H}_i) \\ R &= (-\text{OCH}_i \text{CH}_i), \, R_1 = (-\text{COCH}_i \text{NH}(\text{COCF}_i)) \\ R &= (-\text{OCH}_i \text{CH}_i), \, R_1 = (-\text{COCH}_i \text{NH}(\text{COCF}_i)) \\ R &= (-\text{OCH}_i \text{CH}_i), \, R_1 = (-\text{COCH}_i \text{NH}(\text{COCF}_i)) \end{split}$$

#### **Regular Articles**

Electronic circular dichroism of monomethyl [ $^{16}$ O,  $^{17}$ O,  $^{18}$ O]-phosphate and [ $^{16}$ O,  $^{17}$ O,  $^{18}$ O]-thiophosphate revisited

Jian-Jung Pan, Boris A. Kashemirov, Joanne Lee, Charles E. McKenna,\* Frank J. Devlin and Philip J. Stephens \*

(S)  $\begin{bmatrix} 180 \\ 170 \end{bmatrix}$  OCH<sub>3</sub> Electronic Circular Dichroism?

Substrate specificity of SIRT1-catalyzed lysine  $N^\epsilon$ -deacetylation reaction probed with the side chain modified  $N^\epsilon$ -acetyl-lysine analogs

pp 17-25

pp 7-16

Nuttara Jamonnak, Brett M. Hirsch, Yi Pang and Weiping Zheng \*

Peptides containing  $\iota$ -N°-acetyl-lysine ( $\iota$ -AcK) or its analogs (shown below) were prepared and employed to study the substrate specificity of SIRT1-catalyzed lysine N°-deacetylation reaction.

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# Synthesis, characterization, electrochemical studies and antitumor activity of some new chalcone analogues containing ferrocenyl pyrazole moiety

pp 26-32

Zoran Ratković, Zorica D. Juranić, Tatjana Stanojković, Dragan Manojlović, Rastko D. Vukićević, Niko Radulović and Milan D. Joksović \*

#### Synthesis and NMR properties of the first boron analogues of uracil

pp 33-36

Tomasz Ruman,\* Karolina Długopolska and Wojciech Rode

Synthesis of 4-hydroxyborauracil and 4-hydroxy-3-methylborauracil, the first boron analogues of uracil, and comparison of their <sup>1</sup>H and <sup>13</sup>C NMR properties with those of uracil, are presented. The analyses of NMR-monitored boron compound-alcohol and boron compound-amine interactions pointed to the existence of sp<sup>3</sup>-hybridized, B,B-bis-methoxyborauracils and pyridine-/n-butylamine-borauracils ate-complexes in solution

### L-Glyceraldehyde 3-phosphate reductase from Escherichia coli is a heme binding protein

pp 37-41

Kevin K. Desai and Brian G. Miller \*

L-Glyceraldehyde 3-phosphate reductase (Gpr) is capable of binding heme in a hexacoordinate low-spin state.

