

## 2-PHOSPHORYLPHENOLS. SYNTHESIS, PROPERTIES AND PROSPECTS FOR PRACTICAL APPLICATION

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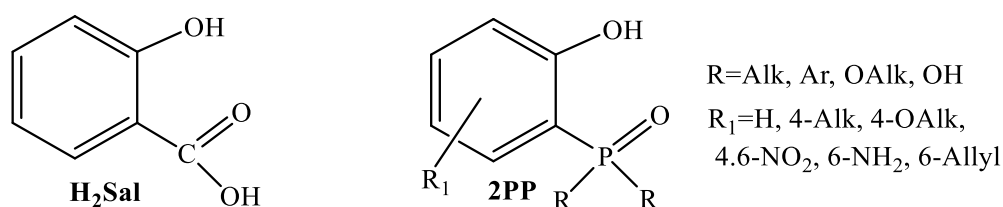
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The synthesis of new organic compounds and studies of their physicochemical and biological properties provide an effective approach to the creation of functional materials and drugs. 2-Phosphorylphenols (**2PP**) (Fig.1) are poorly studied analogues of salicylic acid (**H<sub>2</sub>Sal**), a well-known chelating and biologically active agent, in which the carbonyl (C=O) group is replaced by a phosphoryl group (P=O).



**Figure 1.** Structural formulas of (**H<sub>2</sub>Sal**) and the studied 2-phosphorylphenols **2PP**  
The report presents the results of the synthesis of **2-PP**, derivatives of phosphine oxides and phosphonic acids, including their further modification by introducing various functional groups. In addition, the main patterns between the structure of the synthesized **2-PP** derivatives, protophilic properties, stability of their coordination compounds with bioactive cations Fe<sup>2+</sup>/Fe<sup>3+</sup>, Cu<sup>2+</sup>, Zn<sup>2+</sup> and biological properties (cytotoxicity, accumulation in tumor and healthy cells, the ability to influence processes associated with oxidative stress) are revealed. The prospects for using the obtained **2-PP** derivatives as components of new materials and drugs are discussed.