

SUBSTITUTED DIARYLSULFIDES AND THEIR ANTIPLATELET ACTIVITY

Josef Jampílek^a, Martin Doležal^b, Eliška Brojerová^c, Lubomír Opletal^c, and Daniel Jun^d

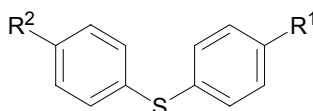
^aZentiva a.s., U kabelovny 130, 102 37 Prague, Czech Republic

^bDepartment of Pharmaceutical Chemistry and Drug Control,

^cDepartment of Pharmaceutical Botany and Ecology, Faculty of Pharmacy in Hradec Králové, Charles University in Prague, 500 05 Hradec Králové, Czech Republic

^dDepartment of Toxicology, Military Medical Academy, PO BOX 35/T,
500 01 Hradec Králové, Czech Republic

A number of intermediates based on substituted phenylsulfanylphenyl derivatives were obtained when preparing potential antileukotrienic agents [1-3]. These intermediates were tested for their antiplatelet activity as potential cyclooxygenase-I (COX-I) inhibitors.



R¹: -CHO, -COCH₃, -COOH, -CH₂COOH, -CH(CH₃)COOH, -C(CH₃)₂COOH,
-C(CH₃)(O)CHCOOC₂H₅, -C(CH₃)(O)CHCOOH, -CH=C(CH₃)COOH, -CH₂CH(CH₃)COOH
R²: -OCH₃, -OH

The above-mentioned compounds were evaluated using an *in vitro* antiplatelet assay in human platelet-rich plasma [4]. Arachidonic acid was used as an inductor of the aggregation process. Acetylsalicylic acid was used as a positive control. The results were expressed as EC₅₀ values. Some substances showed very interesting activity.

The project was supported by the Ministry of Education of the Czech Republic (No. LN00B125) and by the League Against Cancer (funded from Terry Fox Run).

[1] Jampílek, J.; Doležal, M.; Kuneš, J.; Víchová, P.; Jun, D.; Hanika, J.; O'Connor, R.; Clynes, M.: *J. Pharm. Pharmacol.* **2004**, *56*, 783.

[2] Jampílek, J.; Doležal, M.; Kuneš, J.; Víchová, P.; Jun, D.; Raich, I.; O'Connor, R.; Clynes, M.: *Curr. Org. Chem.* **2004**, *8*, 1235.

[3] Jampílek, J.; Doležal, M.; Kuneš, J.; Raich, I.; Liška, F.: *Chem. Pap.* **2005**, *59*, in press.

[4] Born, G.V.R.: *Nature* **1962**, *194*, 927.