目的：评价国产奥氮平片在中国健康人体中的药动学及生物等效性。**方法**：采用双周期交叉试验设计，20名健康男性受试者单次口服国产和进口奥氮平片5 mg，采用LC-MS/MS测定奥氮平血药浓度，计算两制剂的主要药动学参数和生物利用度，并进行生物等效性评价。**结果**：国产和进口奥氮平片的主要药动学参数如下：t_{max}分别为(4.25±1.33)和(4.55±1.10) h，C_{max}分别为(9.62±1.79)和(9.69±2.18) ng·mL^{-1}，$t_{1/2}$分别为(31.71±6.87)和(32.46±5.67) h，AUC_{0-t}分别为(327.19±60.55)和(324.39±70.84) ng·h·mL^{-1}，$AUC_{0-\infty}$分别为(354.44±74.58)和(350.70±80.94) ng·h·mL^{-1}。受试制剂的相对生物利用度F_{0-t}为102.93±18.22%，$F_{0-\infty}$为103.30±20.75%，经统计分析，各药动学参数均无显著性差异(P>0.05)。**结论**：两种奥氮平制剂在体内过程相当，两制剂人体生物等效，临床上可以替换使用。

关键词：奥氮平；液相色谱-串联质谱；生物等效性

作者简介：俞凌燕，女，硕士，药师，研究方向：药动学和体内药物分析
*通讯作者：楼洪刚，男，副主任药师，研究方向：药动学；Tel: (0571-)87783759, Email: louhg2000@126.com

肿瘤药理学：

The Synthesis and Bioactivity Evaluation of Pyrazolo[3,4-d]pyrimidineDerivatives

Yu-Ying Huang[1], Chun-Hsi Chang[1], Fung Fuh Wong[1]*
[1]Graduate Institute of Pharmaceutical Chemistry, China Medical University,
No. 91,Hsueh-Shih Rd. Taichung, Taiwan 40402, R.O.C.

Abstract: An efficient one-pot, three-component synthesis of pyrazolo[3,4-d]pyrimidines has developed, utilizing 5-aminopyrazoles, formamide in presence of coupling agents $POCl_3$ or PBr_3.Their growth inhibitory results against cancer cells indicated that 3-(4-Chlorophenyl)-1-phenyl-1*H*-pyrazolo[3,4-d]pyrimidine possessed the better effectively inhibit the growth of NCI-H226 and NPC-TW01 two cells (18 and23μM). The newly developed method was also able to apply toward the electron rich heterocyclic substrate such as 5-aminopyrimidine and 2-aminopyrazines. This new synthesis methodology involved amidination, imination, and oxidative cyclization three sequence steps.

Keywords: Pyrazolo[3,4-d]pyrimidines, Pyrazoles, Formamidines, Amidination, Heterocyclization

*Corresponding author. Tel.: +886 4 22053366 ext. 5603; Fax: +886 4 22078083.
E-mail address:wongfungfuh@yahoo.com.tw, ffwong@mail.cmu.edu.tw (F. F. Wong).