Study Synopsis

Title	Bioequivalence Study of Sertraline Hydrochloride 50 mg Tablet in Healty Thai Male Healthy Volunteers
Sponsor	The Government Pharmaceutical Organization
Clinical laboratory	Naresuan University
Analytical laboratory	Bioequivalence Test Center, Faculty of Pharmaceutical Sciences, Naresuan University
EC approval	Naresuan University Institutional Review Board
Principal investigator	Asst.Prof.Nattawut Saelim Department of Pharmacy Practice Faculty of Pharmacy, Naresuan University
Co-investigator	Dr.Jran sayastit, MD. Faculty of medicine, Naresuan University
Analytical investigator	Asst.Prof. Nantaka Khorana Department of Pharmaceutical Chemistry and Pharmacognosy Faculty of Pharmacy, Naresuan University
Objectives	To compare the rate and extent of absorption of generic product of Sertraline Hydrochloride 50 mg tablet (Sertraline-GPO, Government Pharmaceutical Organization) with the innovator product (Zoloft®, Pfizer).
Study design	A randomized, two treatment, two-period, two sequence, single dose crossover design with three weeks wash out period in 26 healthy Thai male volunteers
Test product	Sertraline 50 mg tablet (Sertraline-GPO), Lot no. S510403 Mfd. 21/11/08, Exp. 21/11/10 Manufactured by GPO, Thailand
Reference product	Zoloft® 50 mg tablet, Lot no. 814720093 Mfd. 03/08, Exp. 03/13 Manufactured by Pfizer
Study subjects	Twenty six healthy Thai male volunteers with aging between 18-45 years
Admission and	Prior to all dosing events, volunteers were fasted overnight at least 8

confinement	hours prior to study drug administration. On study day, a standardized light lunch was provided 4 hours post-dose.
Drug administration	One 50 mg tablet of Sertraline was orally administered to all volunteers with water (240 mL) in the fasted state during 2 separate periods.
Study period	Period I: 11-13 January 2009 Period II: 31 January-3 February 2009
Washout period	Three weeks from the first drug administration
Safety assessment	All adverse events, physical examination, laboratory tests and vital signs were recorded and evaluated.
Blood sampling schedule	In each period, a total of 17 blood samples (6 mL each) were collected up to 96 hours post-dose. The total volume of blood draw was 180 mL for each subject.
Clinical sample storage	The resulting plasma was transferred into cryovial tube and stored at -80ºC until anaylsis.
Bioanalytical methodology	Sertraline plasma concentration was assayed using a validated HPLC method.
Pharmacokinetic Parameters	Primary pharmacokinetic parameters (C_{max}, AUC_{0-t}, $AUC_{0-\alpha}$) and secondary pharmacokinetic parameters (T_{max}, k_{el}, $t_{1/2}$) were determined from the plasma concentration data of analytes.
Confidence Intervals	90% CI for geometric mean of test/reference ratio (ln-transformed data) C_{max}: 94.74 – 106.82 AUC_{0-t}: 97.04 – 108.33 $AUC_{0-\alpha}$: 98.51 – 110.85
Conclusions	The peak and total systemic exposure of Sertraline 50 mg were similar between the 2 formulations. The 90% confidence intervals for the test/reference ratio were 94.74 – 106.82% for C_{max}, 97.04 – 108.33% for AUC_{0-t} and 98.51 – 110.85% for $AUC_{0-\alpha}$ (ln-transformed data). Since 90% confidence intervals for the parameters C_{max}, AUC_{0-t} and $AUC_{0-\alpha}$ were within the bioequivalence range of 80-125%, it can be concluded that the Sertraline 50 mg tablet (Sertraline-GPO, Test formulation) is bioequivalent to Zoloft® 50 mg tablet (Reference formulation) under fasting condition.