

WSA 2002 Proposed Project Plan

N01104

Project Name:	Hemoglobin adducts of aromatic amines (N01104)
Objective:	To critically evaluate the validity of literature reports on aromatic amine hemoglobin adducts as a means of assessing exposure in nonsmokers reporting exposure to ETS
Deliverable(s):	Publication
Reason for Doing this Work:	A number of studies examined the relationship between 4-aminobiphenyl hemoglobin adduct levels and reported exposure to environmental tobacco smoke (4 studies are positive, and 4 are negative). The approach outlined below would allow to determine whether ETS exposure contributes significantly to the level of 4-ABP adducts in nonsmokers.
Program Area: (Select One)	<input type="checkbox"/> Cancer <input type="checkbox"/> CVD <input type="checkbox"/> COPD <input type="checkbox"/> Repro <input checked="" type="checkbox"/> ETS <input type="checkbox"/> Smoking Behavior <input type="checkbox"/> Clinical Testing <input type="checkbox"/> Communication <input type="checkbox"/> Acceptability Assessment <input type="checkbox"/> R.H. Evaluation <input type="checkbox"/> R.H. Guidance <input type="checkbox"/> Non-Clinical Testing <input type="checkbox"/> Non-Clinical Research
Project Leader:	M. Schorp

Tactics and Milestones:		Target Date:
Continuation from 2001		
➤ Complete assessment of absorption, distribution, metabolism, elimination and adduct formation by applying a source-to-dose probabilistic model:		December 31, 2002
1. Use RASS analytical data and Massachusetts SS yields to estimate 4-ABP concentrations in ETS Derive ETS-RSP/4-ABP ratios 3. Plot 4-ABP distribution curves from ratio above using 16-cities data and CORESTA restaurant data 4. Estimate the biologically effective dose of 4-ABP in smokers and nonsmokers (use TES study results to validate estimate) 5. Perform Monte Carlo simulation to obtain probability density functions for 4-ABP-Hb adducts in nonsmokers exposed to ETS levels as encountered in the 16-cities environments and restaurant environments 6. Determine whether or not modeled 4-ABP-Hb adduct levels in nonsmokers are significantly contributing to adduct levels above background		
➤ Prepare and submit manuscript with the source-to-dose modeling results to MRB for publication		February 30, 2003
Internal Resource Allocation (WSA, INBIFO)		External Resource Allocation (other PMUSA, external vendors)
M. Schorp 300h A. Tricker 50h Stabbert 50h Andriot 50h		Don Leyden 300h