

Shanghai Health Study
Update to Shell Sponsors and Stakeholders
February 27, 2006

Background

The Shanghai Health Study (SHS), sponsored by the Benzene Health Research Consortium (BHRC) of which Shell Chemicals is a member, is a multi-stakeholder health study in Shanghai, China, which aims to better define potential human health hazards and risks associated with exposure to benzene. This study is unprecedented as an industry initiated program in its aspiration to fully characterize population based haematopoietic diseases using state of the art pathology diagnostic techniques and the World Health Organization classification criteria for these diseases. Beyond individual study objectives, the SHS program funded the establishment of a successful and significant diagnostic facility on behalf of the greater Shanghai community.

Current Status

2005 Annual Meeting: The 3rd annual meeting was held in Nov 2005. Attendees included sponsors (BP, Chevron, ConocoPhillips, ExxonMobil, Shell Chemicals), principal investigators, Scientific Review Panel, and Ethics Review Panel. The investigators presented an update on the 3 studies:

1. Case Control studies of acute myeloid leukemia (AML) and Non-Hodgkin's lymphoma (NHL)
 2. Disease Progression of haematopoietic diseases
 3. Molecular Epidemiology of cytogenetic abnormalities
- Case accrual is ahead of schedule for the case control and disease progression studies with indications that protocol numbers will be achieved by YE06.
 - The diagnostic laboratory supporting the study has been moved, administratively, to a different department (Institute of Biomedical Sciences) within Fudan University. This should facilitate the on-going operation of the lab post Shanghai Health Study in its role to provide diagnostic support to Shanghai-area hospitals.
 - 3 papers resulting from study methodologies and results have been accepted for publication.

HIGHLIGHT: Benzene Symposium sponsored by Dr. Jerry Rice, Scientific Review Panel chair, was held at Georgetown University. Purpose of the symposium was to update government regulatory agencies and academia.

A new health effect, benzene-induced myelodysplastic syndrome, has been linked to long-term, high level exposure to benzene. Shell in the US filed a TSCA 8(e) on this finding and also revised the Benzene MSDS to include the effect.

Exposure Assessment: Continue to have challenges in getting level of exposure data that was originally proposed in the study protocols. Focus is on extra effort and methodology development to do sector analysis.

Path Forward

- 2006: Case accrual complete
 - 2006 Annual Meeting
 - Planning for successful closure of study
- 2007: Data analysis
 - Publications
 - Laboratory, tissue bank, and database transitioned to Fudan University
 - 2007 Annual Meeting
- 2008: Publications continue
 - Study closing event
 - International Benzene Symposium (not a SHS project, but study will be presented)

Shell Representatives to BHRC

- | | |
|----------------------|------------------------|
| Oversight Committee: | Patsy Clegg, Chair |
| Technical Committee: | Stuart Cagen, Co-Chair |
| | Shan Tsai |
| Budget Committee: | Stuart Cagen, Chair |
| Communications: | Sarah Colletti |