

Extension of Studies on Benzene Toxicity in Shanghai, China

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Background on Cinpathogen, Inc¹.

Professors Liming Bao and Richard Irons established Cinpathogen, Inc. at the request of Fudan University to provide a Western interface for the International Clinical and Molecular Research Center in the Institutes of Biomedical Sciences at Fudan University. Dr. Irons has entered into formal agreements with Fudan University through Cinpathogen to coordinate and manage the ICMRC as the Chinese entity responsible for the continuation and completion of the Shanghai Health Study. The long term mission of Cinpathogen is to support development of the ICMRC as a sustainable home for JCML operations so that it can continue to partner state of the art research with patient health care in China. This entity is the vehicle and therefore the most viable path forward for continuity of the lab after completion of the SHS, an original priority of the consortium. This vehicle maximizes administrative stability for continuing the SHS at Fudan University as well as a greater chance to retain staff and therefore complete the study.

Modified Deliverables

Case Control and Disease Progression Studies

- Continued laboratory operations and diagnosis of Hematopoietic and Lymphoid Neoplasms (WHO, 2001) for participating hospitals in Shanghai.
 - AML, MDS, AA, BID, BP through 6/30/07
 - NHL through 12/31/07
- Verified study diagnoses of approximately:
 - 500-600 cases of AML
 - 400-500 cases of NHL
- Continued follow-up of patients to assess Disease Progression through 6/30/07
- Assessment of Benzene Exposure for above cases and a matched (2x) set of controls with documented informed consents and questionnaire administration for all cases and controls.
- Review and consideration of several data sources for exposure assessment including the IPHS data set, Yang Pu database, the Chinese literature, real-time monitoring in selected factories and simulations to arrive at credible benzene exposure estimates.

- Development of an Exposure Assessment matrix using the above data sources for all study cases and controls. The matrix will consider job, industry and time period in developing exposure estimates to benzene.
- Continuation of QA procedures for documentation within the scope of the existing protocol and budget and cooperation with an independent QA auditor.
- Migration of data RE. diagnosis, confounders and EA to CC study PI.

Molecular Epidemiology Study

- Quantitative IH analysis of benzene, toluene, xylenes for workers in 5 factories in which benzene is present.
- Continuation of the development and validation of methods for the analysis of benzene metabolites.
- Application of the above methodology to the statistical analysis of a subset of workers in these 5 factories for exposure response relationships with blood parameters as indicated in the protocol.
- Continuation of measurement of hematologic parameters and genetic polymorphisms for workers in these 5 factories

Time Frame: Jan 2007- Jun 2008

We plan to provide these deliverables as outlined above based on a timeline agreed upon in cooperation with the QA/QC team.

Budget

The following estimates for budget categories are based upon conditions as they existed as of March 26, 2007. These estimates are anticipated to vary as conditions require within the workscope of the project.

Personnel²: **\$1,500,000**

Detail:

US based (professional & administrative) (4 FTE): 800,000

Salary (Avg annual)	Benefits (30%)	Total (Avg)
\$154,000	\$46,000	\$200,000

Hourly rate (\$200,000/1740 hr) = \$115/hr/FTE

Chinese based (professional, administrative, technical, clerical) (46 FTE): 700,000

Salary (Avg annual)	Benefits (30%)	Total (Avg)
\$11,705	\$3,512	\$15,217

Hourly rate (\$15,217/1740 hr) = \$8.75/hr/FTE

Travel: **\$300,000**

Computer costs (networking, technical support etc): **\$75,000**

Expendible Materials/Supplies (including clinical reagents): **\$850,000**

General/Administrative/Operations³: **\$1,285,650**

Indirect Costs (US and China @ 30%): **\$1,203,200**

Subtotal: **\$5,213,850**

Anticipated UCDHSC extension contract⁴: **\$1,346,000**

Total: **\$6,559,850**

¹Cinpathogen is a US corporation registered in Delaware and based in Boulder, Colorado, USA and Shanghai, China.

²Includes relocation expenses.

³Includes laboratory, administration, subject & hospital costs, logistics.

⁴ Clarification of UCDHSC budgetary component for the extension: In August 2005, the updated budgetary agreement UCDHSC was funded through June 2007. The UCDHSC budget for the extension is anticipated to be: \$2,763,700 less \$1,417,700 in hand = \$1,346,000 which is the amount being asked for in the extension. This includes EMBSI (\$1,461,096) and U. Cincinnati (\$122,904) subcontracts.