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#### **Executive Leadership Team:**

Timothy M. Mitchell  
*President*

James M. McKim, Ph.D., DABT  
*Founder & Chief Science Officer*

Colleen M. Toole, Ph.D.  
*Director of Project Management*

Karen L. Rutherford, BS  
*Director of Laboratory Operations*

Susan Crookston, CMA, CFM  
*Controller & Director of Finance*

#### **Business Development Contacts:**

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#### **CeeTox helps bring safer products to market.**

CeeTox, Inc. is the leading company in the field of *in vitro* toxicology and safety testing. Our specialty is the development and deployment of cutting edge *in vitro* models with the ability to identify and accurately predict safety or toxicity issues.

We help our clients quickly understand the safety profiles of new products allowing them to move those with the lowest risk for toxicity and hence the highest probability of regulatory and commercial success to market faster.

CeeTox offers individual assays and assay panels specific to the needs of these industries:

- Personal Care
- Cosmetic
- Pharmaceutical
- Chemical
- Medical Device

Our assays comply with the applicable requirements of GLP, OECD, REACH, US EPA and the EU Cosmetic Directive.

CeeTox was founded on the principle that multi endpoint, systems biology based *in vitro* assay panels could be employed to understand the mechanisms of general and organ specific toxicity and used to create models highly predictive of human toxicity.

Using a vast database of compounds, CeeTox has developed proprietary algorithms that accurately interpret our *in vitro* assay panels and predict *in vivo* toxicity.

Located in Kalamazoo, the heart of Michigan's burgeoning biotechnology and life sciences corridor, CeeTox is led by an experienced management team with advice from a Scientific Advisory Board of internationally-renowned scientists and thought leaders in the fields of toxicology and microbiology.

We combine our scientific expertise with an intense desire to serve and provide value to our clients. This translates to the fastest turn around times possible with the highest level of service we can deliver. In short, we offer

**...exceptional science, great service and a fair price.**



Leading the Field of *In Vitro* Toxicology



### Scientific Advisory Board:

Alan M. Goldberg, Ph.D.

*Professor of Toxicology and Director of the Center for Alternatives to Animal Testing (CAAT), The Johns Hopkins University, Bloomberg School of Public Health*

A. Wallace Hayes, Ph.D. DABT

*Visiting Professor, Harvard School of Public Health; Secretary-General of IUTOX (Intl. Union of Toxicology)*

John M. McCall, Ph.D.

*President of PharMac LLC; Co-Chair of the Translational Module Advisory Panel for the NINDS, National Inst of Neurological Disorders and Stroke*

### CeeTox Patents:

The CeeTox<sup>®</sup> Panel and CardioTox<sup>®</sup> Panel processes are fully patented in the US and Europe. Four additional patents pending.

- **Dermal Irritation and Corrosion** screens use 3D human epidermal skin models to screen for potential irritation or corrosion of individual ingredients, combinations and finished products.
- **Ocular Corrosion and Irritation** screens use 3D human corneal models to screen for potential corrosion and irritation of individual ingredients, combinations and finished products.
- **Percutaneous Absorption** assay assesses the potential of the test article to be absorbed through the skin into underlying tissues.
- **PhotoTox<sup>™</sup>** assesses dermal phototoxicity, or the potential of the test sample to induce cytotoxicity when exposed to light.
- **Endocrine Disruption Screens**, developed in conjunction with the US EPA, assess a chemical's ability to disrupt the human endocrine system.
- **Dermal Sensitization** (*SenCeeTox<sup>™</sup>*) is a proprietary method to assess skin sensitization or allergic reaction. It highly correlates to and can predict LLNA EC3 values. Current validation efforts are underway to prove the correlation and predictive power of the method to HRPT data. (*SenCeeTox<sup>™</sup>* patent pending).
- **In Vitro AcuteOralTox-LD<sub>50</sub>** predicts the single dose LD50 value and category of toxicity with a high degree of concordance to known in vivo values.
- **Respiratory Toxicity** screens use 3D human-derived tracheal / bronchial epithelial models to assess respiratory toxicants.
- **AcuteTox<sup>™</sup>** is an inexpensive rapid screen that generally predicts a compound's ability to produce acute toxicity in a 14-day repeat-dose rat study.
- **CTOX<sup>™</sup> Panel**, is a high content, multi-endpoint assessment of general systemic toxicity that provides an estimated blood concentration (Ctox) where toxicity would be expected to occur in a 14-day repeat dose rat study. It also provides important information on mechanisms of toxicity and subcellular targets.
- **CardioTox<sup>®</sup> Panel** includes predictive assays which assess tissue-specific markers in comparison to other toxicity profiles and assign a risk value for toxicity to the heart.
- **Renal Toxicity Panel** screens a compound's ability to cause kidney toxicity.
- **Hepatotoxicity Panel** screens a compound's ability to cause liver toxicity.
- **DDI** or drug-to-drug interactions are assessed by analysis of CYP P450 inhibition and induction along with other changes in pharmacokinetic parameters.