



## Practical Methods for *In Vitro* Toxicology

Sponsored By:

Institute for In Vitro Sciences

30 W. Watkins Mill Rd, Gaithersburg, MD 20878

### Agenda for January 16-19, 2018

<b>Day 1 – January 16, 2018</b>		<b>1:00pm-7:00pm</b>
1:00	<b>Shuttle from the Marriott to IIVS</b>	
1:15	<b>Arrive at IIVS</b>	
<b>Gettysburg Room – Introduction to In Vitro Testing</b>		
1:20-1:50	<b>Orientation, Introduction, and Goals</b> <i>Lindsay Krawiec, IIVS</i>	
1:50-2:30	<b>The Evolution of In Vitro Methods</b> <i>Lindsay Krawiec, IIVS</i>	
2:30-3:00	<b>Practical Approaches to Cell-Based Assay Design &amp; Execution</b> <i>Hans Raabe, IIVS</i>	
3:00-3:30	<b>GLPs for In Vitro Studies</b> <i>Amanda Ulrey, IIVS</i>	
3:30-3:45	<b>Break</b>	
3:45-4:15	<b>Global Acceptance of Alternative Methods</b> <i>Erin Hill, IIVS</i>	
<b>Gettysburg Room – Novel Technologies</b>		
4:15-4:45	<b>Human Tissue Models for Better Therapies: Organ-on-a Chip Technology</b> <i>Anthony Saleh, Mimetas</i>	
4:45-5:15	<b>Pragmatic Use of 3D Lung Models to Evaluate Exposure-induced Adverse Effects that May Contribute to Pulmonary Disease</b> <i>Holger Behrsing, IIVS</i>	
<b>Laboratory</b>		
5:15-5:30	<b>Laboratory Tour and Orientation</b> <i>Victoria Diersen, IIVS</i>	
5:30-7:00	<b>Happy Hour Reception hosted by IIVS – in the Atrium</b>	
7:00	<b>Shuttle to Marriott</b>	

Day 2 – January 17, 2018		8:00am-4:30pm
8:00	<b>Shuttle from Marriott to IIVS</b>	
8:15	<b>Arrive at IIVS</b>	
<b>Gettysburg Room – Skin Sensitization Test Methods</b>		
8:20-9:05	<b>Skin Sensitization: Overview of Assays, ITS, AOP &amp; the KeratinoSens Assay</b> <i>Allison Hilberer, IIVS</i>	
9:05-9:25	<b>Human Cell Line Activation Test for the Prediction of Skin Sensitizing Chemicals</b> <i>Megan Lamm, IIVS</i>	
9:25-10:05	<b>In Chemico Skin Sensitization: Direct Peptide Reactivity Assay &amp; PhotoDPRA</b> <i>Greg Mun, IIVS</i>	
10:05-10:15	<b>Break</b>	
<b>Gettysburg Room – Introduction to Phototoxicity Testing</b>		
10:15-10:45	<b>Neutral Red Uptake Phototoxicity Assay in Balb/c 3T3 Mouse Fibroblasts</b> <i>Allison Hilberer, IIVS</i>	
10:45-11:15	<b>Question and Answer &amp; 3T3 Phototoxicity Video</b>	
<b>Laboratory</b>		
11:15-11:30	<b>Pipettor Review</b> <i>Megan Lamm, IIVS</i>	
11:30-12:30	<b>Neutral Red Uptake Phototoxicity Assay in Balb/c 3T3 Mouse Fibroblasts</b> <i>Devin Sheehan and Asha Shravanti Pidathala, IIVS</i> <ul style="list-style-type: none"> <li>• Thawing/counting BALB/c 3T3 cells (demonstration)</li> <li>• Seeding 3T3 cells in 96-well plates</li> </ul>	
12:30-1:30	<b>Catered Lunch</b>	
1:30-3:00	<b>Neutral Red Uptake Phototoxicity Assay in Balb/c 3T3 Mouse Fibroblasts</b> <ul style="list-style-type: none"> <li>• Dilution of test articles &amp; Dosing of 96-well plate cultures</li> <li>• UVA/Dark Exposure &amp; Rinsing of 96-well plate</li> <li>• Addition of Neutral Red &amp; Reading of the plates</li> </ul>	
3:00-3:15	<b>Break</b>	
<b>Gettysburg Room – Cell-Based Assays</b>		
3:15-3:45	<b>In Vitro Assays to Detect Live &amp; Dead Cells: New Methods to Detect Cell Stress Events Leading to Toxicity</b> <i>Fangmiin Charlie Sheen, Promega</i>	
3:45-4:30	<b>3T3 Phototoxicity Assay: Case Studies</b> <i>Allison Hilberer, IIVS (Lab Binder)</i>	
4:30	<b>Shuttle to Hotel</b> Open evening – Enjoy shopping and dining at your convenience	

<b>Day 3 – January 18, 2018</b>		<b>8:00-8:00pm</b>
8:00	<b>Shuttle from Marriott to IIVS</b>	
8:15	<b>Arrive at IIVS</b>	
<b>Gettysburg Room – Introduction to Dermal Test Methods</b>		
8:20-8:50	<b>Validated In Vitro Assays Used for Dermal Safety Assessment</b> <i>Gertrude-Emilia Costin, IIVS</i>	
8:50-9:20	<b>Reconstructed Skin Micronucleus Assay (RSMN)</b> <i>Greg Mun, IIVS</i>	
9:20-9:50	<b>Non-regulatory In Vitro Assays Used for Dermal Safety and Efficacy Testing</b> <i>Gertrude-Emilia Costin, IIVS</i>	
9:50-10:10	<b>Question &amp; Answers</b>	
10:10-10:25	<b>Break</b>	
<b>Laboratory</b>		
10:30-12:00	<b>Skin Irritation Test Protocol using MatTek EpiDerm™ Reconstructed Human Epidermis</b> <i>Norah Sadowski, Rebecca Pham, and Brandan Nokes IIVS</i> • Placing 3-D tissue models into culture & Dosing of tissues	
12:00-1:00	<b>Catered Lunch</b>	
1:00-2:00	<b>Skin Irritation Test Protocol using MatTek EpiDerm™ Reconstructed Human Epidermis</b> • Rinsing and inspection of treated tissues • Transfer of tissues for 42-hour post-treatment expression incubation • MTT reduction test and Freeze-Killed Tissue Controls • Addition of MTT	
2:00-2:30	<b>Corrositex™ demonstration: Rebecca Pham, IIVS</b> <b>Corrosivity in 3-D construct demonstration: Asha Shravanthi Pidathala, IIVS</b>	
2:30-3:30	<b>Skin Irritation Test Protocol using MatTek EpiDerm™ Reconstructed Human Epidermis</b> • Transfer tissues to isopropanol to begin MTT extraction & Read plates	
3:30-3:45	<b>Break</b>	
<b>Gettysburg Room – Case Study</b>		
3:45-4:30	<b>3D RhE Case Studies: Skin Irritation &amp; Corrosion</b> <i>Nathan Wilt, IIVS (Lab Binder)</i>	
4:30-4:45	<b>Shuttle to Marriott</b>	
6:15-6:30	<b>Shuttle to dinner hosted by IIVS</b>	
6:30-8:00	<b>Dinner at Il Porto – 245 Muddy Branch Road Gaithersburg, MD 20878</b>	
8:00	<b>Shuttle back to Marriott</b>	

<b>Day 4 – January 18, 2018</b>		<b>8:00am-4:30pm</b>
8:00	<b>Shuttle from Marriott to IIVS</b>	
8:15	<b>Arrive at IIVS</b>	
<b>Gettysburg Room - Introduction to In Vitro Ocular Irritation Testing</b>		
8:20-9:05	<b>Ocular Irritation Testing Methods: BCOP Assay</b> <i>Allison Hilberer, IIVS</i>	
9:05-9:35	<b>EpiOcular™ Assays: Protocols, Performance &amp; Experience</b> <i>Nathan Wilt, IIVS</i>	
9:35-10:05	<b>Introduction to Integrated Approaches to Testing and Assessment</b> <i>Hans Raabe, IIVS</i>	
10:05-10:15	<b>Questions &amp; Answers &amp; BCOP video</b>	
10:15-10:30	<b>Break</b>	
<b>Laboratory</b>		
10:30-11:30	<b>Ocular Alternatives Laboratory (BCOP)</b> <i>Nana Boakye, Adam Gamson and Timothy Herpel, IIVS</i> <ul style="list-style-type: none"> <li>• Isolation &amp; mounting of corneas and filling of chambers</li> <li>• Pre-incubation of corneas exposure of corneas to test agents</li> </ul>	
11:30-12:30	<b>Catered Lunch</b>	
12:30-1:30	<b>Ocular Alternatives Laboratory (BCOP)</b> <ul style="list-style-type: none"> <li>• Exposure of corneas to test agents</li> <li>• Rinsing off test material from corneas</li> <li>• Post Exposure</li> </ul>	
1:30-1:45	<b>Break</b>	
1:45-2:30	<b>Ocular Alternatives Laboratory (BCOP)</b> <ul style="list-style-type: none"> <li>• Measurements of opacity and fluorescein penetration</li> <li>• Reading of plates and data interpretation</li> </ul>	
<b>Gettysburg Room – Case Study &amp; Round Table Discussion</b>		
2:30-3:00	<b>BCOP Data Case Studies</b> <i>Nathan Wilt, IIVS (Lab Binder)</i>	
3:00-3:30	<b>Using In Vitro Methods in the Comprehensive Safety Assessment Process</b> <i>John Harbell, JHarbell Consulting LLC</i>	
3:30-4:00	<b>Course summary, open discussion, completion of the course evaluation, presentation of the certificates and close of workshop</b>	
4:00-4:30	<b>Break-Out Groups</b>	
4:30	<b>Departures</b>	

