

## Cancer and Environmental Mixtures Meeting

Organizers: Martyn Smith (UC Berkeley) and Lauren Zeise (OEHHA)

Aug 21-22, 2018

545 Li Ka Shing Center, 1951 Oxford St., UC, Berkeley, CA

### Agenda

Tuesday, August 21, 9 am – 5:30 pm

*Discuss use of the KCs in hazard identification and their harmonization with the hallmarks of cancer.*

9.00am      **Hazard ID**

Speakers: Kathryn Guyton, Catherine Gibbons (remotely), Martha Sandy, Hideko Sone (15 mins each). Discuss issues in the use of the KCs at IARC, EPA/NTP, Cal EPA and Internationally in Japan.

10.00      Discussion: How to advance KC approach in risk assessment, led by Lauren Zeise.

10.30      *Break*

10.45      **Harmonization**

Speakers: Bill Goodson, Dean Felsher, Cliona McHale (15 mins each).

11.30      Discussion: How to harmonize KCs with the Hallmarks of cancer, led by Martyn Smith

12.00      *Lunch – Informal discussion of mornings activities*

1.00 pm      Discussion (continued): How to harmonize KCs with the Hallmarks of cancer, led by Martyn Smith

1.30 pm      **HT Testing and Biomarkers.** Discuss how a set of in vitro assays and biomarkers could be designed to measure the effects of chemicals and chemical mixtures on the harmonized set of KCs and hallmarks.

Speakers: Nicole Kleinstreuer (+ Keith Houk), Mark Fielden, Luoping Zhang, Weihsueh Chiu (remotely) (10-20 mins each)

2.30 pm      *Break*

2.45 pm      Discussion: How to develop a CarciCAST and set of biomarkers to predict cancer hazard, led by Nicole Kleinstreuer

4.00 pm      **Predicting Carcinogenicity using Data Science**

Speaker: Linda Rieswijk (20 min)

4.30 pm      Discussion: General discussion of the day's conclusions, led by Martyn Smith

5.00 pm      *Adjourn*

6.00 pm      Dinner at Hong Kong East Ocean

Wednesday, August 22, 9 am – 1 pm

*Discuss how a mixture of several chemicals could be engineered to produce cancer at low doses in experimental animals and how would such a mixture be designed and tested.*

9.00 am      **Testing Carcinogenic Mixtures**

Speakers: Leroy Lowe, Cynthia Rider, Michele La Merrill, Thomas Webster (remotely) (15 mins each)

10.00      Discussion: How to test Halifax concept, led by Leroy Lowe

11.00 am    *Break*

11.15      Wrap-up and Conclusions: led by Martyn Smith

12.00 pm    *Lunch and adjourn.*

**Cancer and Environmental Mixtures Working Group Committee Members:**

<b>Name</b>	<b>Affiliation</b>	<b>Email</b>
Mark Fielden	Amgen, SSF	mfielden@amgen.com
Thomas Webster*	Boston University	twebster@bu.edu
Catherine Gibbons*	EPA	Gibbons.Catherine@epa.gov
Keith Houck***	EPA	houck.keith@epa.gov
Tina Bahadori***	EPA	Bahadori.tina@Epa.gov
Leroy Lowe	Getting to Know Cancer, Halifax, Canada	leroy.lowe@gettingtoknowcancer.org
Kathryn Guyton	IARC, France	GuytonK@iarc.fr
Hideko Sone	NIES, Japan	hsone@nies.go.jp
Nicole Kleinstreuer	NTP	nicole.kleinstreuer@nih.gov
Cynthia Rider	NTP	cynthia.rider@nih.gov
Lauren Zeise**	OEHHA	Lauren.Zeise@oehha.ca.gov
Martha Sandy**	OEHHA	Martha.Sandy@oehha.ca.gov
Dean Felsher	Stanford University	dfelsher@stanford.edu
Weihshueh Chiu*	Texas A&M University	WChiu@cvm.tamu.edu
Martyn Smith	UC Berkeley	martynts@berkeley.edu
Luoping Zhang	UC Berkeley	luoping@berkeley.edu
Cliona McHale	UC Berkeley	cmchale@berkeley.edu
Linda Rieswijk	UC Berkeley	lrieswijk@berkeley.edu
Michele LaMerrill	UC Davis	mlamerrill@ucdavis.edu
William Goodson	CPMC, San Francisco	whg3md@att.net

\*\*Attended 8/21 only; \*Remote participation on 8/21-22; \*\*\*Did not participate in 8/21-22 meeting

California Pacific Medical Center Research Institute in San Francisco