



***In Vitro* Toxicity Testing Sub-Group  
(IVT SG)  
Annual Report**

**Online CORESTA Congress**

**October 12 - November 12, 2020**



# SG Composition

- ❖ **SG Coordinator: Kei Yoshino (JT)**
- ❖ **SG Secretary: David Thorne (BAT)**
- ❖ **SG Membership**
  - **Altria Client Services, BAT, Battelle, Charles River Laboratories, CNTC, Covance, Enthalpy Analytical, Imperial Brands, JTI, JTI/Oekolab, JUUL Labs, KT&G, Labstat, Millipore Sigma, PMI, RAI, Vitrocell, JT, Charles River Laboratories, ITC, Zhejiang University**



# History of this Group (1/3)

## ❖ ***In Vitro* Toxicity Testing of Tobacco Smoke Task Force (2002 - 2010)**

- To prepare a report covering the rationale and strategy for conducting *in vitro* toxicity testing of cigarette smoke
- To identify key procedures based upon internationally recognized guidelines, adapted to accommodate the nature and unique properties of tobacco smoke
- **Focused on “cigarette smoke condensate” (CSC) - the total particulate matter (TPM) from mainstream smoke.**
- **The Rationale and Strategy for Conducting *In Vitro* Toxicology of Tobacco Smoke (2004)**
- **An inter-laboratory study (Ames, NRU, and Micronucleus assay: 2004)**
- **A preliminary inter-laboratory study to compare the whole smoke exposure systems (2007)**



## History of this Group (2/3)

### ❖ The second phase of the *In Vitro* Task Force (2011 - 2014)

- To conduct a proficiency testing programme to evaluate cigarette smoke using a common experimental protocol and the Task Force's recommended test battery.

#### ➤ Proficiency test : 3

### ❖ *In vitro* Toxicity Testing of Tobacco Smoke Sub-Group (2015 - 2016)

- To conduct a proficiency testing programme to evaluate cigarette smoke using common experimental protocols and the Task Force's recommended test battery.
- To compile and review information on *in vitro* whole smoke methodology.
- To critique and review published papers and other available information on tobacco-related toxicity and suggest suitable work for further biological research and/or proficiency tests.

#### ➤ Inter-laboratory Proficiency test: 4



## History of this Group (3/3)

- ❖ **In vitro Toxicity Testing of ~~Tobacco Smoke~~ Sub-Group (2016 - )**
  - To compile and review information on *in vitro* toxicity testing and apply learnings to further biological research.
  - To organise and conduct periodically proficiency testing of tobacco and tobacco related products.



# Outline of IVT SG's work

- ❖ **Inter-laboratory Proficiency Test**
- ❖ **Compile and review information on *in vitro* toxicity testing and apply learnings to further biological research**
  - **Review and update the past report**
  - **Develop/propose testing strategy for E-cigarette/HTP**
  - **Air-Liquid interface test conditions**
- ❖ **Independent Genetox Workshop in US**
  - **“Recommendations for the Generation & Use of *In Vitro* Assay Data for Tobacco Product Regulations”**



- ❖ **Spring meeting was cancelled.**
- ❖ **Inter-laboratory Proficiency Study**
  - ***In vitro* Micronucleus Assay**
- ❖ **Methods review: NRU protocol investigation with BEAS-2B & Balbc/3T3 cells**
  - **Results shared**
- ❖ **Independent Genetox Workshop in US**
  - **3<sup>rd</sup> workshop (February 24 – 26, 2020)**



# On-going and Future work

- ❖ **Inter-laboratory Proficiency Study**
  - **Ames Assay**
- ❖ **Rational and Strategy for *in vitro* Toxicity Testing of e-Vapor Products**
  - **Proposals on testing strategy**
- ❖ **Publication deriving from IVTSG System Parameter Survey**
  - **Summary of Air-Liquid Interface system parameters**
- ❖ **Independent Genetox Workshop in US**
  - **4<sup>th</sup> workshop (November, 2020): on-line**
  - **5<sup>th</sup> workshop (April, 2021): TBD**





# Next Meeting

❖ **Fall meeting 2020: TBD, online meeting**