



**PRELIMINARY PROGRAM – V. 8.1.23**

**76<sup>th</sup> Tobacco Science Research Conference**



**MONDAY MORNING, SEPTEMBER 25, 2023**

**Symposium**

**76<sup>TH</sup> TOBACCO SCIENCE RESEARCH CONFERENCE**

- 8:30 AM     **WELCOME REMARKS**  
Gene Gillman, Juul Labs, Inc  
76th TSRC Conference Chair
- 8:40 AM     ***LOOKING FORWARD - THE CHALLENGES AND  
OPPORTUNITIES AHEAD FOR HARM REDUCTION.***  
Rana Tayyarah, Labstat International  
76<sup>th</sup> Symposium Chair
- 8:45 AM     1 Symposium Speaker 1 - Brent Taylor; Altria Client Services,  
Richmond, VA, USA
- 9:15 AM     2 Symposium Speaker 2 - Todd Cecil; Food and Drug  
Administration, Washington, DC, USA
- 9:45 AM                             ***BREAK***
- 10:15 AM    3 Symposium Speaker 3 - Joe Murillo; Juul Labs, Inc,  
Washington, DC, USA
- 10:45 AM    4 Symposium Speaker 4 - Patricia Kovacevic; Cryomass  
Technologies Inc, Denver, CO, USA
- 11:15 AM    Panel Discussion & Audience Q&A
- 11:45 AM                             ***LUNCH***
- 12:45 PM    Poster Session

- 5 **CHEMICAL, PHARMACOLOGICAL, AND TOXICOLOGICAL ASSESSMENT OF 6-METHYLNICOTINE.** Andrew CHEETHAM<sup>1</sup>, Susan Plunkett<sup>1</sup>, Lynn McFadden<sup>1</sup>, Mariano Scian<sup>1</sup>, Sarah Marking<sup>2</sup>, Bonne Coffa<sup>2</sup>, Preston Campbell<sup>2</sup> and Stan Gilliland III<sup>2</sup>; <sup>1</sup>Enthalpy Specialty Labs, Richmond, VA, USA, <sup>2</sup>Consilium Sciences, Richmond, VA, USA
- 6 **IMOTINE™: A NOVEL NON-NICOTINE COMPOUND WITH CNS ACTIVITY.** Ed CARMINES<sup>1</sup>, Manoj Misra<sup>1</sup> and Sam Benaim<sup>2</sup>; <sup>1</sup>Chemular, Hudson, MI, USA, <sup>2</sup>Novel Compounds, Cheyenne, WY, USA
- 7 **POTENTIAL ENVIRONMENTAL IMPACT OF USE AND DISPOSAL OF A MODERN ORAL NICOTINE POUCH PRODUCT.** Ed CARMINES; Chemular, Hudson, MI, USA
- 8 **EVALUATION OF THE POTENTIAL EXTRACTABLES FROM A CHUBBY GORILLA E-LIQUID BOTTLE.** Ed CARMINES<sup>1</sup>, Lise Fraissinet<sup>1</sup> and Tom Barrett<sup>2</sup>; <sup>1</sup>Chemular, Hudson, MI, USA, <sup>2</sup>Legend Technical Services, St. Paul, MN, USA
- 9 **APPLYING THE TOBACCO PRODUCT MANUFACTURING PRACTICES TO EXISTING MANUFACTURING PROCESSES.** Lillian ORTEGA, Lise Fraissinet, Randy Freund, Chris Woodruff and Kevin Burd; Chemular Inc, Hudson, MI, USA
- 10 **CLEARING THE MARKET OF ILLEGAL ENDS PRODUCTS BEGINS AT THE US PORTS.** Lillian ORTEGA, Kevin Burd, Bryan Burd; Chemular, Inc, Hudson, MI, USA

- 11 **COMPARISON OF METALS CONTENT IN ENDS USING ICP-MS WITH TWO SEPARATE AEROSOL COLLECTION METHODS: FRITTED IMPINGERS AND FEP TUBING.** Donald STOGNER, Emma Willis, Jamil Gray, Carl J. Adams and Salem Chouchane; Eurofins Professional Scientific Services, Winston-Salem, NC, USA
- 12 **METHOD VERIFICATION FOR CARBONYL ANALYSIS OF NON-ROUTINE AEROSOL SAMPLES.** Valerie SCHWARTZ; Juul Labs, Inc, Washington, DC, USA
- 13 **SIMULATION ANALYSIS OF STATISTICAL EQUIVALENCE TESTING OF HARMFUL AND POTENTIALLY HARMFUL CONSTITUENTS (HPHCS).** Qiwei LIANG, Joey Chen, David Cook, Gene Gillman and Ryan Black; Juul Labs, Inc, Washington, DC, USA
- 14 **FORMATION OF SMALL ORGANIC ACIDS DURING ENDS AEROSOL COLLECTION.** Joseph JABLONSKI and Andrew G. Cheetham; Enthalpy Specialty Labs, Richmond, VA, USA
- 15 **TOBACCO SPECIFIC NITROSAMINES AND NICOTINE DEGRADANTS: A METHOD FOR COMBINED ANALYSIS IN ENDS E-LIQUIDS AND AEROSOL.** Alexander PENNINGTON, Nancy Qian, Carol Perry, Dakota Hawkins and Gene Gillman; Juul Labs, Inc, Washington, DC USA
- 16 **SURVEY OF METALS PRESENT IN THE E-LIQUID OF AGED CLOSE POD-BASED AND CIGALIKE ELECTRONIC-CIGARETTES FROM THE NORTH AMERICAN MARKET.** Prasad LAVISETTY, Darybelle Collins, David Cook, Kathy Humphries and Gene I. Gillman; Juul Labs, Inc, Washington, DC, USA

- 17 **A COMPARATIVE STUDY OF ENDS PARTICLE SIZE ANALYSIS WITH ELECTRICAL AND GRAVIMETRIC MEASUREMENTS OF DILUTED AND UN-DILUTED AEROSOLS.** Jake HENKIE, Angel Rodriguez-Lafuente, Amelia Mawdsley, Nathan Nguyen and Clark Robitaille; Labstat International Inc, Kitchener, ON, Canada
- 18 **METHODS FOR ANALYSIS OF SWEETENERS, FLAVOR COMPONENTS AND PROPYLENE GLYCOL IN NICOTINE POUCHES AND SALIVA SAMPLES.** Angel Rodriguez-LAFUENTE, Kenneth Chalcraft, Rebecca Cornelius and Cosmin Stoicoiu; Labstat International, Kitchener, ON, Canada
- 19 **DESOLVATING INTRODUCTION SYSTEM TEMPERATURE OPTIMIZATION FOR LINEAR ZINC, CADMIUM, AND TIN CALIBRATIONS WITH TRIPLE QUAD ICP-MS FOR E-CIGARETTE AEROSOL ANALYSIS.** Naudia GRAY and R. Steven Pappas; Centers for Disease Control and Prevention, Atlanta, GA, USA
- 20 **AROMATIC AMINES IN THE MAINSTREAM SMOKE OF COMMERCIAL CIGARS.** Huihua JI, Zhenyu Jin, Laura Fenton, Stacey Slone and Bing Zhang; University of Kentucky, Lexington, KY, USA
- 21 **THE CONCENTRATIONS OF SELECTED TOXIC METALS IN THREE CATEGORIES OF COMMERCIAL CIGAR PRODUCTS.** Cynthia MCNEES, Priyanka Paul, Sanjay Joshi, Nicole Anderson and Solomon Kariuiki; University of Kentucky, Lexington, KY, USA

- 22 **THE EFFECT OF DESIGN PARAMETERS ON YIELDS OF 33 HARMFUL AND POTENTIALLY HARMFUL CONSTITUENTS (HPHCS) IN MAINSTREAM SMOKE OF LARGE CIGARS.** Scott WASDO, Therese Ku, Samantha Reilly, Tianrong Chen and Charles Feng; United States Food and Drug Administration, Silver Spring, MD, USA
- 23 **THE IMPACT OF SODIUM ALGINATE MODIFIED AGENT ON THE DEGRADATION PERFORMANCE OF CELLULOSE ACETATE USED FOR CIGARETTE.** Fengcheng SHI<sup>1</sup>, Zhou Jian<sup>1</sup>, Huang Xin<sup>1</sup>, Liu Yanju<sup>1</sup>, Zhang Xiaolin<sup>1</sup>, Song Guangfu<sup>1</sup> and Mao Hui<sup>2</sup>; <sup>1</sup>China Tobacco Sichuan Industrial Co, Sichuan Province, Chengdu, China, <sup>2</sup>Sichuan University, Sichuan Province, Chengdu, China
- 24 **CARBONYL ANALYSIS OF CIGARETTE MAINSTREAM SMOKE BY BAG COLLECTION.** Bryan HEARN<sup>1</sup>, Erica Lewis<sup>1</sup>, Cody Sheppard<sup>1</sup>, Clifford Watson<sup>2</sup> and Liza Valentin<sup>2</sup>; <sup>1</sup>Battelle Analytical Services, Atlanta, GA, USA, <sup>2</sup>CDC, Atlanta, GA, USA
- 25 **CHANGE CONTROL CHALLENGES IN THE CONTEXT OF PMTA.** Lise FRAISSINET, Lillian Ortega, Randy Freund, Chris Woodruff and Bryan Burd; Chemular Inc, Hudson, Michigan, USA
- 26 **ELECTRONIC TRIAL MASTER FILE: AN IMPORTANT STEP IN DOCUMENTING CLINICAL TRIAL DATA USED TO SUPPORT A PREMARKET TOBACCO PRODUCT APPLICATION.** Jeff COFFIELD, Jason Henstock and Ken Szeliga; RAI Services Company, Winston Salem, NC, USA
- 27 **PROMOTIONAL MATERIALS FOR A NOVEL HEATED TOBACCO CAPSULE SYSTEM INCREASE BEHAVIORAL INTENTIONS TO TRY AND USE IN ADULT SMOKERS BUT NOT IN NONUSERS, AND DO NOT IMPEDE QUIT INTENTIONS.** Diana MCKINNEY and Elizabeth Becker; Altria Client Services, Richmond, VA, USA

- 28 **PROMOTIONAL MATERIALS FOR A NOVEL HEATED TOBACCO CAPSULE SYSTEM DO NOT ALTER RISK PERCEPTIONS.** Diana MCKINNEY and Elizabeth Becker, Altria Client Services, Richmond, VA, USA
- 29 **VITROCELL® HIGH THROUGHPUT EXPOSURE MODULE 2.0+: DEPOSITION OF WHOLE AEROSOL FROM TWO DIFFERENT TOBACCO PRODUCT TYPES.** Brian KEYSER<sup>1</sup>, Robert Leverette<sup>1</sup>, Kristen Jordan<sup>1</sup>, Adam Seymour<sup>2</sup> and Michael Hollings<sup>2</sup>; <sup>1</sup>RAI Services Company, Winston-Salem, NC, USA, <sup>2</sup>Labcorp Early Development Laboratories, Harrogate, North Yorkshire, UK
- 30 **THE CHANGING LANDSCAPE OF TOBACCO USE AND SWITCHING BEHAVIORS AMONG US ADULTS.** Yisha HE, Lai Wei, Raheema Muhammad-Kah and Edward Largo; Altria Client Services, Richmond, VA, USA
- 31 **AN ABUSE LIABILITY COMPARISON OF TEST AND REFERENCE TOBACCO AND MENTHOL FLAVORED E-LIQUIDS IN THE RELX INFINITY ELECTRONIC NICOTINE DELIVERY SYSTEM (ENDS).** Donald GRAFF<sup>1</sup>, Mitch Nides<sup>2</sup> and Ryan G. N. Seltzer<sup>3</sup>; <sup>1</sup>Cheerain HK Limited, Hong Kong, China, <sup>2</sup>LA Clinical Trials, Burbank, CA, USA, <sup>3</sup>USA, Safety in Numbers, Tucson, AZ, USA
- 32 **SUBJECTIVE EFFECTS ASSOCIATED WITH RELX INFINITY ELECTRONIC NICOTINE DELIVERY SYSTEM (ENDS) USE IN AN 8-WEEK SWITCHING STUDY OF ADULT SMOKERS.** Donald GRAFF<sup>1</sup>, Yuli Xie<sup>2</sup> and Sabrina Ciric<sup>2</sup>; <sup>1</sup>Cheerain HK Limited, Hong Kong, China, <sup>2</sup>Celerion, Inc, Lincoln, Nebraska, USA



- 33 **NON-CLINICAL TOXICOLOGICAL ASSESSMENT OF FLAVORED E-LIQUIDS AND CLOSED SYSTEM POD-BASED ENDS FLAVOR FORMULATIONS.** Manoj MISRA, Ed Carmines and Lise Fraissinet; Chemular, Inc, Hudson, MI, USA
- 34 **COMPARATIVE QUANTITATIVE HEALTH RISK ASSESSMENT (QRA) OF A TEMPERATURE-REGULATED NICOTINE SALT-BASED CONNECTED ENDS PRODUCT WITH REFERENCE CIGARETTE: AEROSOL CANCER AND NON-CANCER RISKS.** Manoj MISRA, Ed Carmines and Lise Fraissinet; Chemular, Inc, Hudson, MI, USA
- 35 **APPLICATION OF THE HUMAN HEALTH RISK ASSESSMENT PROCESS FOR THE EVALUATION OF ELECTRONIC CIGARETTES.** Autumn BERNAL<sup>1</sup>, Charlene Liu<sup>2</sup>, Charles Johnson<sup>3</sup> and Richard Young<sup>3</sup>; <sup>1</sup>Toxcreative, Laguna Hills, CA, USA, <sup>2</sup>RiskWise Solutions, Princeton, NJ, USA, <sup>3</sup>Bibra Toxicology Advice & Consulting, Wallington, UK
- 36 **ABSTINENCE, RELAPSE, AND RELATIVE HARM PERCEPTIONS AMONG SMOKERS AND E-CIGARETTE USERS IN THE POPULATION ASSESSMENT OF TOBACCO AND HEALTH (PATH) STUDY.** Susan MARTELLE, Emery L. Ngamasana and Christie Powell; RAI Services Company, Winston Salem, NC, USA
- 37 **A RANDOMIZED, SINGLE BLINDED, CROSS-OVER STUDY TO EVALUATE THE PHARMACOKINETIC PROFILES OF E-CIGARETTES WITH NICOTINE SALT FORMULATIONS IN UK ADULTS WHO USE E-CIGARETTES.** Yuki TAKESHIGE; JT International, Geneve, Switzerland

- 38 **ASSESSING THE RELATIONSHIP BETWEEN E-CIGARETTES RISK PERCEPTION, INTENTION TO QUIT CIGARETTES, AND CIGARETTE CONSUMPTION: A STRUCTURAL EQUATION MODEL.** Emery NGAMASANA; RAI Services Company, Winston Salem, NC, USA
- 39 **ANALYZING THE RELATIONSHIPS BETWEEN TOPOGRAPHY, E-LIQUID USAGE, AND PHARMACOKINETICS IN JUUL<sub>2</sub> PROTOTYPE DEVICES.** Qiwei LIANG<sup>1</sup>, Lonnie Rimmer<sup>1</sup>, Joey Chien<sup>1</sup>, Nicholas Goldenson<sup>1</sup>, Ryan Black<sup>1</sup>, Saul Shiffman<sup>2</sup> and Douglas Oliveri<sup>3</sup>; <sup>1</sup>Juul Labs, Inc, Washington, DC, USA, <sup>2</sup>Pinney Associates, Bethesda, MD, USA, <sup>3</sup>Independent Consultant
- 40 **LEACHABLE TESTING TO EVALUATE EFFECT OF AN ALTERNATE TRANSPORT MODE ON ENDS POD INTEGRITY.** Felix AYALA-FIERRO, Harish Chevva, Qiwei Liang, Matthew Lyndon, David Cook and Michael J. Oldham; Juul Labs, Inc, Washington, DC, USA

***Session A***  
***CDISC***

***Session Chair:***  
***William A. “Allan” Rees***

***Session B***

***e-Cigarette Chemistry***  
***Session Chair: Karen Carter***

1:55 PM

Welcome Remarks

Welcome Remarks

- 2:00 PM 41 **FDA-CTP AND CDISC DEVELOP TOBACCO RELATED STANDARDS TO ACHIEVE EFFICIENCIES FOR ALL STAKEHOLDERS.** Chrissie CAI<sup>1</sup> and <sup>2</sup>Christine Connolly; <sup>1</sup>FDA Center for Tobacco Products, Beltsville, MD, USA, <sup>2</sup>CDISC, Austin, Texas, USA
- 2:20 PM 42 **CDISC DATA STANDARD.** William A. “Allan” REES; Altria Client Services, Richmond, VA, USA
- 46 **WORKFLOW ASSESSMENT OF POTENTIAL LEACHABLES IN AEROSOL FROM ENDS SYSTEMS.** Karen CARTER; Juul Labs, Inc, Washington DC, USA
- 47 **ANALYTICAL INVESTIGATION OF DATA DEFICIENT SIMULATED LEACHABLES IN ENDS PRODUCTS: CASE STUDY.** Cameron SMITH, Matthew Lyndon, Lena Jeong, Danielle Lehman, J. Brian Jameson, Harish Cheeva, Felix Ayala-Fierro, Karen Carter, David Cook and I. Gene Gillman; Juul Labs, Inc, Washington DC USA

- 2:25 PM      **SPEAKER 1 -**  
Christine Connolly;  
CDISC, Austin, TX,  
USA
- 48      **FLAVORANT  
TRANSPORT  
PREDICTION FROM  
E-LIQUID  
MATRICES.** Bob  
MOISION, Laura  
Striepe, Vincent Nip  
and Huan Wang; Juul  
Labs, Inc, Washington.  
DC, USA
- 2:45 PM      **SPEAKER 2 - Chrissie  
CAI;** Food and Drug  
Administration,  
Washington, DC, USA
- 49      **A MODEL OF THE  
TRANSFER OF  
SPECIES FROM THE  
E-LIQUID TO THE  
AEROSOL DURING  
VAPORIZATION IN  
AN ENDS PRODUCT.**  
David KANE, Gordon  
Holloway, Nagaraja  
Rao, Bob Moision,  
Venessa Tse and  
Norman Fraley; Juul  
Labs, Inc, Washington,  
DC USA
- 3:05 PM      **SPEAKER 3 - Matthew  
HASSINK;** Food and  
Drug Administration,  
Washington, DC, USA
- 50      **IDENTIFICATION  
OF AEROSOL  
COLLECTION  
RELATED  
UNKNOWN IN NTA  
SAMPLES USING  
GC-ORBITRAP.**  
Laura STRIEPE, Bob  
Moision, Vincent Nip,  
Brian Jameson and  
Lena Jeong; Juul Labs,  
Inc, Washington, DC,  
USA

|         |                                 |    |   |
|---------|---------------------------------|----|---|
| 3:25 PM | Panel Discussion & Audience Q&A | 51 | <p><b>THE MODULAR PUFF MACHINE (MPM): A NEW APPROACH TO PUFFING.</b> <u>Nandita SINGH</u>, Bob Moision, Johnathan Marquez, Scott Park and Tom Vo; Juul Labs, Inc, Washington, DC, USA</p> |
|---------|---------------------------------|----|---|

4:00 PM

**BREAK**

**Session A**  
**Toxicology, in vitro, Product Stewardship**  
*Session Chair: Katarina Aleksa*

**Session B**  
**Cigarette Chemistry**  
*Session Chair: Karl Wagner*

4:20 PM      Welcome Remarks

Welcome Remarks

4:25 PM    43    **LESSONS LEARNED FROM THE IN VITRO/IN VIVO TOXICOLOGICAL ASSESSMENT OF THE JUUL SYSTEM.** Michael OLDHAM<sup>1</sup>, Pamela Heard<sup>2</sup>, Leon F. Stankowski Jr<sup>2</sup> and Guy Lalonde<sup>1</sup>; <sup>1</sup>Juul Labs, Inc, Washington DC, USA, <sup>2</sup>Charles River Laboratories, Skokie, IL, USA

52    **HORWITZ-THOMPSON EQUATION AS A BENCHMARK FOR CORESTA COLLABORATIVE STUDY RESULTS.** Michael MORTON; Altria Client Services, Richmond, VA, USA

4:45 PM 44

**A QUANTITATIVE RISK ASSESSMENT APPROACH TO EVALUATE RELATIVE HEALTH RISKS OF ELECTRONIC CIGARETTES VS. COMBUSTIBLE**

**CIGARETTES.** Charlene LIU<sup>1</sup>, Autumn Bernal<sup>2</sup>, Yilang Huang<sup>3</sup>, Chuan Liu<sup>4</sup>, Donald Graff<sup>5</sup> and Xingtao Jian<sup>3</sup>; <sup>1</sup>RiskWise Solution, Princeton, NJ, USA, <sup>2</sup>ToxCreative, Laguna Hills, CA, USA, <sup>3</sup>RELX Technology, Shenzhen, China, <sup>4</sup>Pinevale, Southampton, UK, <sup>5</sup>Cheerain HK Limited, Hong Kong

53 **EFFECT AND INFLUENCE OF PERFORATION METHODS FOR TIPPING PAPER ON THE CONTROL OF THE THERMAL ENERGY OF SMOKE FROM TOBACCO PRODUCTS.**

Michael LINDNER<sup>1</sup>, Cristina Rufener<sup>2</sup> and Tomas Bense<sup>2</sup>; <sup>1</sup> Tann Holding, Traun, Austria, <sup>2</sup>C.I.T. Montepaz, Montevideo, Uruguay

5:05 PM 45

**IN VITRO TOXICOLOGICAL EVALUATION AND COMPARISON OF TOBACCO HEATING PRODUCT AND E-CIGARETTE AEROSOLS AT AIR-LIQUID INTERFACE.**

WANG Hong Juan; China National Tobacco Quality Supervision & Test Center, Zheng Zhou, China

54 **ANALYSIS OF SELECTED SEMI-VOLATILE COMPOUNDS IN MAINSTREAM SMOKE USING AMBERLITE RESIN AS TRAPPER AND ANALYZED BY GAS CHROMATOGRAPHY MASS SPECTROMETRY.**

Suci INDRAYANI, Anggra Hardiansyah, Ari Wieliyani and Ekapria Utama Mulyana; Filtrona's Scientific Services, Surabaya, East Java, Indonesia

5:25 PM

55 **A REVERSE  
PREDICTION  
ALGORITHM OF  
CIGARETTE TAR  
YIELDS BASED ON  
INVERTIBLE  
NEURAL NETWORK.**  
Jian ZHOU<sup>1</sup>, LIU Yanju<sup>1</sup>,  
HUANG Xin<sup>1</sup>, SHI  
Fengcheng<sup>1</sup>, JI  
Xiaoying<sup>1</sup>, LI Xiaopeng<sup>1</sup>,  
ZHANG Xiaolin<sup>1</sup>, ZOU  
Yuanwen<sup>2</sup> and HE  
Gang<sup>3</sup>; <sup>1</sup>China Tobacco  
Sichuan Industrial,  
Chengdu, Sichuan,  
China, <sup>2</sup>Sichuan  
University, Chengdu,  
Sichuan, China,  
<sup>3</sup>Southwest University of  
Science and Technology,  
Mianyang, Sichuan,  
China

***ADJOURN***

**TUESDAY MORNING, SEPTEMBER 26, 2023**

**Session A**

**Regulatory & Public Health**

*Session Chair: Jessica Parker-Zdinak*

**Session B**

**Clinical, Behavioral & Perception Research**

*Session Chair: Ian Fearon*

8:45 AM Welcome Remarks

8:50 AM 56 **UNDERSTANDING CONSUMERS' JOURNEY FROM CIGARETTES TO MODERN ORAL NICOTINE PRODUCTS.** Jessica PARKER-ZDINAK<sup>1</sup>, Sarah Marking<sup>2</sup> and Andrew Joyce<sup>2</sup>; <sup>1</sup>Applied Research and Analysis Company, Richmond, VA, USA, <sup>2</sup>Consilium Sciences, Richmond, VA, USA

Welcome Remarks

65 **BEHAVIORAL INTENTIONS ASSESSMENT OF A DISPOSABLE E CIGARETTE AMONG ADULT CURRENT, FORMER, AND NON SMOKERS IN THE UNITED STATES.** Christopher RUSSELL<sup>1</sup>, Willie J. McKinney<sup>2</sup> and Ian M. Fearon<sup>3</sup>; <sup>1</sup>Russell Burnett Research & Consultanc, Glasgow, UK, <sup>2</sup>McKinney Regulatory Science Advisors, VA, USA, <sup>3</sup>whatIF? Consulting, Harwell, UK



- 9:10 AM 57 **THE CASE FOR A REVISED ABUSE LIABILITY ASSESSMENT FRAMEWORK FOR TOBACCO PRODUCTS.** Andrea VANSICKEL; Altria Client Services, Richmond, VA, USA
- 66 **UNDERSTANDING THE SENSORY ATTRIBUTES UNDERLYING THE ACCEPTANCE OF E-CIGARETTE PRODUCTS, WITH THE AIM TO INCREASE THE ACCEPTANCE OF ALTERNATIVE SMOKING PRODUCTS.** Andrew LIVERMORE<sup>1</sup>, Malori Comer<sup>1</sup> and Laurel Moller<sup>2</sup>; <sup>1</sup>Curion Insights, Red Wood City, CA, USA, <sup>2</sup>Curion Insights, Old Bridge, NJ, USA
- 9:30 AM 58 **STANDARDIZING THE EVALUATION OF APPROPRIATENESS FOR THE PROTECTION OF PUBLIC HEALTH IN PREMARKET TOBACCO PRODUCT APPLICATIONS.** Ryan SELTZER<sup>1</sup>, Ding-Geng Chen<sup>2</sup> and <sup>3</sup>Ian M. Fearon; <sup>1</sup>Safety in Numbers, Tucson, AZ, USA, <sup>2</sup>Arizona State University, Phoenix, AZ, USA, <sup>3</sup>whatIF? Consulting Ltd, Harwell, UK
- 67 **ESTIMATING HUMAN PK PARAMETERS FOR ENDS PRODUCTS FROM CHEMICAL ANALYSES OF THEIR AEROSOLS.** Saul SHIFFMAN<sup>1</sup>, Qiwei Liang<sup>2</sup>, Georgios Karles<sup>2</sup> and Gal Cohen<sup>3</sup>; <sup>1</sup>Pinney Associates, Pittsburg, PA, USA, <sup>2</sup>Juul Labs, Inc, Washington, DC, USA, <sup>3</sup>Intuitive Sciences, Tiburon, CA, USA

9:50 AM 59 **CORESTA TOBACCO HARM REDUCTION WORKSHOP OVERVIEW.** Jason FLORA<sup>1</sup> and Rob Stevens<sup>2</sup>; <sup>1</sup>Altria Client Services, Richmond, VA, USA, <sup>2</sup>RAI Services Company, Winston-Salem, NC, USA

68 **ASSESSING NICOTINE PHARMACOKINETICS OF NEW GENERATION TOBACCO PRODUCTS AND CONVENTIONAL CIGARETTES: A SYSTEMATIC REVIEW AND META-ANALYSIS.** Yue Cao<sup>1</sup>, Chongyi Hu<sup>1</sup>, Jiaxuan Li<sup>1</sup>, Xi Chen<sup>1</sup>, Jianqiang Zhang<sup>1</sup>, Xiaona LIU<sup>1</sup> and Lin Zhang<sup>2</sup>; <sup>1</sup>Smooore Tech Research Institute, Shenzhen, China, <sup>2</sup>Institute of Artificial Intelligence, Hefei Compre, China

10:10 AM

**BREAK**

***Session A***

***Regulatory & Public Health***

*Session Chair: Jessica Parker-Zdinak*

***Session B***

***e-Cigarette Chemistry***

*Session Chair: Brian Jameson*

10:30 AM Welcome Remarks

Welcome Remarks

- 10:35 AM 60 **SUBSTANTIAL EQUIVALENCE OF TOBACCO PRODUCTS: ARE ALL TOBACCO PRODUCTS OF THE SAME TYPE AND CHARACTERIZING FLAVOR SUBSTANTIALLY EQUIVALENT? EXAMPLES OF EQUIVALENCE AND NONEQUIVALENCE AMONG WATERPIPE TOBACCOS.** John LAUTERBACH; Lauterbach and Associates, Deland, FL, USA
- 10:55 AM 61 **MENTHOL-FLAVORED TOBACCO AND NICOTINE PRODUCTS: REGULATORY CONSIDERATIONS.** Arielle SELYA; Pinney Associates, Pittsburg, PA, USA
- 69 **DETERMINATION OF GLYCIDOL IN E-LIQUID AND AEROSOL SAMPLES FOR ENDS PRODUCTS BY GC-MS.** David COOK, Beth Stump, Norman Fraley, Kathy Humphries, I. Gene Gillman and Brian Jameson; Juul Labs, Inc, Washington, DC, USA
- 70 **SELECTED HPHC FORMATION IN JUUL<sub>2</sub> NON-COMMERCIAL DEVICES AS A FUNCTION OF TEMPERATURE.** Hosna MOGADDEDI, Gene Gillman, Bob Moision, Nandita Singh, Venessa Tse, Kevin Pascual, Angela Huang, Valerie Schwartz and Sam Anderson; Juul Labs, Inc, Washington, DC, USA

11:15 AM 62 **MODELLING THE IMPACT OF AN ENDS FLAVOR BAN ON YOUTH USERS AND ADULT CURRENT SMOKERS IN THE UNITED STATES.** Andrea PATTON, Jyoti Goyal, Gabriel Barnard and Neil McKeganey; Centre for Substance Use Research, Glasgow, UK

71 **GLYCIDOL IN ENDS; YIELD PATTERNS OVER POD LIFE AND MEASUREMENTS IN 35 NORTH AMERICAN MARKET PRODUCTS.** Brian JAMESON, Karen Carter, Candice Jongsma, Jiaming Wang, Austin L. Bates, Sifat Ullah, Cameron R. Smith, Lena N. Jeong, David K. Cook and I. Gene Gillman; Juul Labs, Inc, Washington, DC, USA

11:35 AM 63 **EVOLUTION OF YOUTH TOBACCO USE: ANALYZING TRENDS IN E-CIGARETTE CONSUMPTION AND THE RISE OF CBD/THC CONTAINING DEVICES.** Mark CROSSWHITE; McKinney Regulatory Science Advisors, Henrico, VA, USA

72. **ACCELERATED AGING OF PROPYLENE GLYCOL AND GLYCEROL.** Norman FRALEY, Lena Jeong, Matthew Lyndon, Anastasia Lioubmirov, I. Gene Gillman; Juul, Labs, Inc, Washington, DC, USA

11:55 AM 64 **ARE SMOKERS AND YOUNG PEOPLE OVER-SURVEYED? ADDRESSING CONCERNS ABOUT POSSIBLE RESPONDENT FATIGUE AND PRIMING EFFECTS IN PROBABILITY-BASED SAMPLING FOR REGULATORY SURVEY RESEARCH.**

Christopher FLEURY,  
Victoria Hoverman  
and Abby Cohen;  
Ipsos-Insight,  
Washington, DC, USA

73 **ASSESSMENT OF FORMALDEHYDE AND ACETALDEHYDE FORMATION IN E-LIQUID AND DURING PUFFING OF AN ENDS PRODUCT. Manali AGGRAWAL, Bob Moision, Katharine Pearce and Apurva Bhave; Juul Labs, Inc, Washington, DC, USA**

12:15 AM

**LUNCH**

**TUESDAY AFTERNOON, SEPTEMBER 26, 2023**

1:00 PM Posters

74 **E-CIGARETTE REGULATORY NON-COMPLIANCE IN THE UK MARKETPLACE.**  
Malcolm SAXTON; Broughton Life Sciences, Earby, Lancashire, UK

75 **INNOVATIVE SOLUTION TO AN AGE-OLD PROBLEM- CONSIDERATIONS WHEN DEVELOPING AGE- GATED TECHNOLOGY.**  
Lillian ORTEGA, Lise Fraissinet, Ed Carmines, Bryan Burd and Kevin Burd; Chemular, Inc, Hudson, MI, USA

- 76 **NICOTINE EXTRACTION FROM POLYPROPYLENE MODERN ORAL PACKAGING.** Owen BUSSEY, Cody Perry and Serban Moldoveanu; Reynolds American, Winston Salem, NC, USA
- 77 **STABILITY EVALUATIONS OF TOBACCO-FREE NICOTINE-CONTAINING POUCH PRODUCTS.** Sawyer HUBBARD, Candice K. Cunningham and Nolan D. Spann; Reynolds American, Winston Salem, NC, USA
- 78 **RAPID “MOISTURE” DETERMINATION AS AN ALTERNATIVE TO CRM76 FOR MODERN ORAL POUCHES.** Ian TINDALL; Cerulean, Milton Keynes, UK
- 79 **A COMPARISON OF HPHCS IN ON!® PLUS NICOTINE POUCHES TO HPHCS IN CIGARETTES, SMOKELESS TOBACCO INCLUDING SNUS AND AN ORAL NRT PRODUCT.** Regina BALLENTINE, John H. Miller IV, Cathy X. Jin, Jennifer H. Smith, Karl A. Wagner, Regina M. Ballentine, Hannah Grisevich, Chris K. Salmon, Michael S. Williams, Likun Yang, Richard W. Morgan, Vanessa Haase and Tim L. Danielson; Altria Client Services, Richmond, VA, USA
- 80 **QUANTITATIVE MEASUREMENT OF HPHCS IN 16 COMMERCIAL SMOKELESS TOBACCO PRODUCTS.** Selvin EDWARDS and Kenneth M. Taylor; Food and Drug Administration, Silver Springs, Maryland, USA
- 81 **NICOTINE AND FREE- (UNPROTONATED) NICOTINE IN SEVERAL NOVEL SMOKELESS NICOTINE PRODUCTS: HERBAL SNUFF, TOOTHPICKS, LOZENGES, GUM, AND TOBACCO-FREE POUCHES.** Robert TYX, Hang Tran, Liza Valentin-Blasini and Clifford H. Watson; U.S. Centers for Disease Control and Prevention, Atlanta, GA, USA

- 82 **METHOD MODIFICATIONS AND VALIDATION TO EXPAND SCOPE OF CRM NO 95 TO ANALYZE SELECT AROMATIC AMINES IN HEATED TOBACCO PRODUCTS.** Nicholas MCCUTCHEON, Matt Melvin, Weiling Li, Regina Ballentine, Niti H. Shah, and Yezdi Pithawalla; Altria Client Services, Richmond, VA, USA
- 83 **DETERMINATION OF AEROSOL MASS AND FIVE PRIMARY CONSTITUENTS IN AEROSOLS GENERATED FROM HEATED TOBACCO PRODUCTS.** Anthony BROWN<sup>1</sup>, Sandra Ingram<sup>2</sup>, Krystal Soler<sup>2</sup>, Nick McCutcheon<sup>1</sup>, Matt Melvin<sup>1</sup>, Yezdi B. Pithawalla<sup>1</sup> and Weiling Li<sup>1</sup>; <sup>1</sup>Altria Client Services, Richmond, VA, USA, <sup>2</sup>Lancaster Professional Scientific Staffing, Richmond, VA USA
- 84 **QUANTITATIVE DETERMINATION OF BENZO[A]PYRENE IN AEROSOL EMITTED BY HEATED TOBACCO PRODUCTS USING GAS CHROMATOGRAPHY-MASS SPECTROMETRY.** Suci INDRAYANI, Anggra Hardiansyah, Ari Wieliyani and Eka U. Mulyana; Filtrona's Scientific Services, Surabaya, East Java, Indonesia
- 85 **COMPARISON OF HPHCS IN AEROSOL GENERATED FROM A NOVEL HEATED TOBACCO CAPSULE (HTC) PROTOTYPE TO HPHCS IN CONVENTIONAL CIGARETTE SMOKE.** James SKAPARS, Weiling Li, Yezdi Pithawalla, Matt Melvin and Tim Danielson; Altria Client Services, Richmond, VA, USA
- 86 **CREATING AN AI LLM TOBACCO DATABASE.** Kevin BURD<sup>1</sup> and Ryan Selby<sup>2</sup>; <sup>1</sup>Chemular, Hudson, MI, USA, <sup>2</sup>Generative AI Solutions, Vancouver, Canada

- 87 **EFFECT OF TIME IN THE PYROLYSIS OF HEET TOBACCO WITH SBA-15 FIBROUS AND SBA-15 PLATELETS.** Marbel BELTRÁN<sup>1</sup>, Deseada Berenguer<sup>1</sup>, Antonio Marcilla<sup>1</sup> and Michael Cairns<sup>2</sup>; <sup>1</sup>Alicante University, Alicante, Spain, <sup>2</sup>Strathclyde University, Scotland, UK
- 88 **IN VITRO CYTOTOXICITY AND MUTAGENICITY ASSESSMENT OF A NOVEL HEATED TOBACCO CAPSULE (HTC) PROTOTYPE IN COMPARISON TO COMBUSTIBLE CIGARETTES.** Utkarsh DOSHI, Britt Langston and K. Monica Lee; Altria Client Services, Richmond, VA, USA
- 89 **ON-DEVICE TOPOGRAPHY RECORDING IN A PROTOTYPE HEATED TOBACCO CAPSULE (HTC) SYSTEM.** Kevin BALL, Raymond Lau, Zack Blackmon, Jianmin Liu, Yezdi B. Pithawalla and Jeff Edmiston; Altria Client Services, Richmond, VA, USA
- 90 **CHARACTERIZATION OF NICOTINE PHARMACOKINETICS FROM USE OF A NOVEL HEATED TOBACCO CAPSULE PROTOTYPE IN ADULTS WHO SMOKE.** Jianmin LIU, Jingzhu Wang, Jeffery S. Edmiston, Raymond W. Lau and Yezdi B. Pithawalla; Altria Client Services, Richmond, VA, USA
- 91 **CIGARETTE REDUCTION AND SWITCHING BEHAVIOR BY MENTHOL CIGARETTE PREFERENCE AND MENTHOL HEATED TOBACCO PRODUCT USE AMONG ADULTS WHO SMOKE CIGARETTES.** Joshua KARELITZ, Hui Cheng, Elizabeth Becker and Jenna Leighty; Altria Client Services, Richmond, VA, USA



- 92 **TOBACCO USE, PERCEPTIONS, AND CHARACTERISTICS OF ADULTS WHO USE IQOS® IN THE UNITED STATES: FINDINGS FROM A CROSS-SECTIONAL STUDY.** Hui CHENG<sup>1</sup>, Brendan Noggle<sup>1</sup>, Andrea R. Vansickel<sup>1</sup>, Edward G. Largo<sup>1</sup>, Pierpaolo Magnani<sup>2</sup> and Annie Heremans<sup>2</sup>; <sup>1</sup>Altria Client Services, Richmond, VA, USA, <sup>2</sup>Philip Morris Products, Lausanne, Switzerland
- 93 **AN ASSESSMENT OF DEPENDENCE IN ADULT SMOKERS SWITCHING FROM COMBUSTIBLE CIGARETTES TO THE RELX INFINITY ELECTRONIC NICOTINE DELIVERY SYSTEM (ENDS) OVER 8 WEEKS.** Donald GRAFF<sup>1</sup> and Ian M. Fearon<sup>2</sup>; <sup>1</sup>Cheerain HK Limited, Hong Kong, China, <sup>2</sup>whatIF? Consulting Limited, Harwell, UK
- 94 **IN VITRO GENOTOXICITY EVALUATION OF JUUL ENDS, MARKETED ENDS, AND REFERENCE CIGARETTES.** Guy LALONDE<sup>1</sup>, Christina Sulaiman<sup>1</sup>, Pamela Heard<sup>2</sup>, Vyom Sharma<sup>2</sup>, Leon F. Stankowski, Jr.<sup>2</sup> and Michael Oldham<sup>1</sup>; <sup>1</sup>Juul Labs, Inc, Washington, DC, USA, <sup>2</sup>Charles River Labs, Skokie, IL, USA
- 95 **TOXICOLOGICAL POTENTIAL OF TWO JUUL ENDS PRODUCTS RELATIVE TO REFERENCE CIGARETTE 3R4F AND FILTERED AIR IN A 90-DAY NOSE-ONLY INHALATION TOXICITY STUDY.** Guy LALONDE<sup>1</sup>, Rahat Wadhwa Desai<sup>2</sup> and Charles L. Gaworski<sup>3</sup>; <sup>1</sup>Juul Labs, Inc, Washington, DC, USA, <sup>2</sup>Syngenta Canada, Arva, ON, Canada, <sup>3</sup>Kozmin Consulting, Flat Rock, NC, USA

- 96 **A RELATIVELY LOW NICOTINE STRENGTH E-LIQUID THAT REDUCES THE URGE TO SMOKE AS MUCH AS CIGARETTES.** Ed CARMINES<sup>1</sup>, Lise Fraissinet<sup>1</sup>, Karen Carmines<sup>1</sup> and Naama Levy-Cooperman<sup>2</sup>; <sup>1</sup>Chemular, Hudson, MI, USA, <sup>2</sup>Altrees Research Partners, Toronto, Canada
- 97 **YOUTH UNDERESTIMATE THE HEALTH AND ADDICTION RISKS OF TOBACCO PRODUCTS.** Ed CARMINES<sup>1</sup>, Lise Fraissinet<sup>1</sup> and Azure Steele<sup>2</sup>; <sup>1</sup>Chemular, Hudson, MI, USA, <sup>2</sup>M/A/R/C Research, High Point, NC, USA
- 98 **RAPID IN VITRO TOXICOLOGICAL SCREENING USING TOXTRACKER TO DETERMINE THE EFFECT OF REPEATED FREEZE/THAW OF COMBUSTIBLE CIGARETTE EXTRACT.** Katarina ALEKSA<sup>1</sup>, Sean Oh<sup>1</sup>, Ed Carmines<sup>2</sup>, Manoj Misra<sup>2</sup>, Bonnie Coffa<sup>2</sup> and Giel Hendrik<sup>3</sup>; <sup>1</sup>Labstat International, Kitchener ON, Canada, <sup>2</sup>Chemular, Hudson MI, USA, <sup>3</sup>Toxys, Leiden, Netherlands
- 99 **APPLICATION OF A RAPID IN VITRO TOXICOLOGICAL SCREENING (TOXTRACKER®) TO DETERMINE THE EFFECT OF FLAVORS IN SNUS PRODUCTS.** Ed CARMINES<sup>1</sup>, Katarina Aleksa<sup>2</sup>, Sean Oh<sup>2</sup>, Manoj Misra<sup>1</sup>, Bonnie Coffa<sup>1</sup> and Giel Hendriks<sup>3</sup>; <sup>1</sup>Chemular, Hudson MI, USA, <sup>2</sup>Labstat International, Kitchener, ON Canada, <sup>3</sup>Toxys, Leiden, Netherlands
- 100 **NEUTRAL RED UPTAKE TESTING OF ORAL NICOTINE PRODUCTS AFTER EXTRACTION WITH ARTIFICIAL SALIVA.** Mariano SCIAN, Emma Press, Jordan Jones, Lukas Braia, Lonneke Palmer, Joelle Carbonelle, Kirsten Lassiter and Lynn McFadden; Enthalpy Specialty Labs, Richmond, VA, USA

- 101 **EVALUATING SUBGINGIVAL MICROBIOME AFTER SWITCHING FROM CIGARETTES TO NICOTINE POUCHES.** Jianmin LIU<sup>1</sup>, Jingzhu Wang<sup>1</sup>, Jeffery S. Edmiston<sup>1</sup>, Mohamadi A. Sarkar<sup>1</sup>, Maria Gogova<sup>1</sup>, Bruce Paster<sup>2</sup>, Tsute Chen<sup>2</sup>, Hatice Hasturk<sup>2</sup>, Kimberly R. Milleman<sup>3</sup>, Jeff L. Milleman<sup>3</sup> and Abbie L. Yoder<sup>3</sup>; <sup>1</sup>Altria Client Services, Richmond, VA, USA, <sup>2</sup>The Forsyth Institute, Cambridge, MA, USA, <sup>3</sup>Salus Research, Fort Wayne, IN, USA
- 102 **EFFECT OF ORAL NICOTINE PRODUCT USE ON CIGARETTE REDUCTION AND QUITTING IN A 6-MONTH PROSPECTIVE COHORT STUDY OF ADULT SMOKERS.** Elliott MCDOWELL<sup>1</sup>, Jason N. Kennedy<sup>1</sup>, Stacey A. Bell<sup>1</sup>, Michael Feehan<sup>1</sup>, Michelle Humphreys<sup>1</sup>, Jessica Zdinak<sup>2</sup> Sarah Marking<sup>3</sup>, Andrew Joyce<sup>3</sup> Rich Hill<sup>4</sup>, Jo-Ann Quinn<sup>4</sup> and Chris Howard<sup>4</sup>; <sup>1</sup>Cerner Enviza, Kansas City, MO, USA, <sup>2</sup>Applied Research and Analysis Company, Richmond, VA, USA, <sup>3</sup>Consilium Sciences, Richmond, VA, USA, <sup>4</sup>Rogue Holdings, Jacksonville, FL, USA
- 103 **EFFECT OF FRUIT AND MINT FLAVORED ORAL NICOTINE PRODUCT USE ON CIGARETTE REDUCTION AND QUITTING IN A 6-MONTH PROSPECTIVE COHORT STUDY OF ADULT SMOKERS.** Jason KENNEDY<sup>1</sup>, Elliott H. McDowell<sup>1</sup>, Michael Feehan<sup>1</sup>, Stacey A. Bell<sup>1</sup>, Michelle Humphreys<sup>1</sup>, Sarah Marking<sup>2</sup>, Andrew Joyce<sup>2</sup>, Jessica Zdinak<sup>3</sup>, Rich Hill<sup>4</sup>, Jo-Ann Quinn<sup>4</sup> and Chris Howard<sup>4</sup>; <sup>1</sup>Cerner Enviza, Kansas City, MO, USA, <sup>2</sup>Consilium Sciences, Richmond, VA, USA, <sup>3</sup>Applied Research and Analysis Company, Richmond, VA, USA, <sup>4</sup>Rogue Holdings, Jacksonville, FL, USA

- 104 **DESIGN AND EXECUTION OF A NON-SITE-BASED, PROSPECTIVE, MULTI-WAVE COHORT STUDY TO ASSESS PATTERNS OF ORAL NICOTINE PRODUCT USE OVER 6-MONTHS AND ASSOCIATED COMBUSTIBLE CIGARETTE REDUCTION AND QUITTING.** Stacey BELL<sup>1</sup>, Michelle Humphreys<sup>1</sup>, Michael Feehan<sup>1</sup>, Elliott McDowell<sup>1</sup>, Sarah Marking<sup>2</sup>, Andrew Joyce<sup>2</sup>, Jessica Zdinak<sup>3</sup>, Richard Hill<sup>4</sup>, JoAnn Quinn<sup>4</sup> and Chris Howard<sup>4</sup>; <sup>1</sup>Cerner Enviza, Kansas City, MO, USA, <sup>2</sup>Consilium Sciences, Richmond, VA, USA, <sup>3</sup>Applied Research and Analysis Company, Richmond, VA, USA, <sup>4</sup>Rogue Holdings, Jacksonville, FL, USA
- 105 **ASYNCHRONOUS ONLINE FOCUS GROUPS: QUALITATIVE RESEARCH ON REDUCED-RISK NICOTINE PRODUCTS WITH UNDERSERVED OR HARD-TO-REACH POPULATIONS.** Neil SHERWOOD<sup>1</sup> and Cheryl K. Olson; <sup>1</sup>Neil Sherwood Consulting, Nyon, Vaud, Switzerland, <sup>2</sup>McKinney Regulatory Science Advisors, San Carlos, CA USA
- 106 **NON-TARGET ANALYSIS SURVEY OF TOBACCO-FREE NICOTINE POUCHES.** Jacqueline COLLINS and Alexandra M. Martin; Enthalpy Specialty Labs, Richmond, VA, USA
- 107 **ABUSE LIABILITY ASSESSMENT OF VELO NICOTINE POUCHES IN COMPARISON TO COMBUSTIBLE CIGARETTES AND NICOTINE GUM.** MILLY KANOBE, Christie Y. Powell, Sarah A. Ayoku, Alison G. Gibson, Melissa A. Tapia, Kristen G. Jordan, Makena Patrudu, Brian M. Keyser, Jeffrey W. Coffield, and Sarah A. Baxter-Wright; RAI Services Company, Winston Salem, NC, USA

- 108 **OPTIMIZATION OF SEEDING DENSITY OF PRIMARY HUMAN GINGIVAL FIBROBLASTS FOR IN VITRO TOXICITY TESTING.** Xuefei CAO<sup>1</sup>, Utkarsh Doshi<sup>1</sup>, Kyeonghee M. Lee<sup>1</sup> and Manoochehr Khazaei<sup>2</sup>; <sup>1</sup>Altria Client Services, Richmond, VA, USA, <sup>2</sup>Eurofins Lancaster Laboratories, Lancaster, PA, USA

***Session A  
Agronomy***

*Session Chair: Rana Tayyarah*

***Session B  
Clinical, Behavioral &  
Perception Research***

*Session Chair:  
Preston Campbell*

2:10 PM Welcome Remarks

Welcome Remarks

- 2:15 PM 109 **INFLUENCES OF GENETICS AND NITROGEN APPLICATION RATE TO FLUE-CURED TOBACCO AGRONOMIC CHARACTERISTICS AND CHEMICAL CONSTITUENTS.**  
Matthew VANN, NC State University, Raleigh, NC, USA

- 115 **SWITCHING AWAY FROM CIGARETTES ACROSS 24 MONTHS AMONG US ADULT SMOKERS WHO PURCHASED THE JUUL SYSTEM.**  
Nicholas GOLDENSON<sup>1</sup>, Saul Shiffman<sup>2</sup>, Gem M. Le<sup>1</sup> and Ryan A. Black<sup>1</sup>; <sup>1</sup>Juul Labs, Inc, Washington, DC, USA, <sup>2</sup>PinneyAssociates, Pittsburgh, PA,

2:35 PM 110 **POTENTIAL  
ULTRA-LOW  
NICOTINE LIMIT  
IN TOBACCO –  
CAN WE MEET IT?**  
Anne FISHER<sup>1</sup>, Colin  
Fisher<sup>1</sup>, Barunava  
Patra<sup>1</sup>, Huihua Ji<sup>1</sup>,  
Jeffrey Kinney<sup>1</sup>,  
Shengming Yang<sup>2</sup> and  
Stacey Slone<sup>1</sup>;  
<sup>1</sup>University of  
Kentucky, Lexington,  
KY, USA, <sup>2</sup>US  
Department of  
Agriculture, Fargo,  
ND, USA

116 **COMPARING  
ADULT SMOKERS  
WHO SWITCHED  
TO JUUL VS  
CONTINUING  
SMOKERS:  
BIOMARKERS OF  
EXPOSURE AND  
OF POTENTIAL  
HARM AND  
RESPIRATORY  
SYMPTOMS.** Saul  
SHIFFMAN<sup>1</sup>, Douglas  
R. Oliveri<sup>2</sup>, Nicholas  
I. Goldenson<sup>2</sup>, Qiwei  
Liang<sup>2</sup>, Ryan A.  
Black<sup>2</sup> and Snigdha  
Mishra<sup>2</sup>; <sup>1</sup>Pinney  
Associates, Bethesda,  
MD, USA, <sup>2</sup>Juul Labs,  
Inc, Washington, DC,  
USA

2:55 PM 111 **ISOLATION AND SCREENING OF TSNAS DEGRADING STRAIN NI<sub>3</sub> FROM CIGAR TOBACCO LEAVES AND EXPLORATION OF ITS KEY GENES.**  
Ye CHANGWEN;  
Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou, He Nan, China

117 **UTILIZING REAL-WORLD TOPOGRAPHY DATA TO DEFINE SMOKE MACHINE PUFFING REGIMEN FOR ENDS.** Robert UNDERLY and Randy Weirdman; RAI Services Company, Winston-Salem, NC, USA

3:15 PM 112 **CHARACTERIZATION OF FUNGAL COMMUNITY SUCCESSION AT DIFFERENT MILDEW STAGES DURING THE INDUSTRIAL FERMENTATION OF CIGAR TOBACCO LEAVES.**  
Huang KUO;  
Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou, He Nan, China

118 **DESIGN OF A RANDOMIZED MULTI-SITE, OPEN-LABEL, 8-WEEK, ELECTRONIC NICOTINE DELIVERY SYSTEM (ENDS) ACTUAL USE STUDY.** Mandara SHETTY; British American Tobacco, Southampton, Hampshire, UK

3:35 PM

**BREAK**

3:55 PM 113 **IDENTIFICATION  
AND VERIFICATION  
OF CIRCNA  
RELATED TO  
NICOTINE  
BIOSYNTHESIS IN  
NICOTIANA  
TABACUM.** Jingjing  
JIN, Dehui Kong, Lijun  
Meng, Peng Lu, Jiemeng  
Tao, Chen Wang,  
Jianfeng Zhang and  
Peijian Cao; Zhengzhou  
Tobacco Research  
Institute of CNTC,  
Zhengzhou, China

119 **SWITCHING  
EXCLUSIVELY  
FROM SMOKING  
TO USING GLO  
RESULTS IN  
SIGNIFICANT,  
SUBSTANTIAL  
REDUCTIONS IN  
EXPOSURE TO  
CIGARETTE  
SMOKE  
TOXICANTS.** Nathan GALE, David  
Azzopardi, Mike  
McEwan, Filimon  
Meichanetzidis and  
Senthil Vel; B.A.T.  
(Investments) Ltd,  
Southampton, UK



4:15 PM 114 **BACTERIAL WILT DISEASE-INDUCED ADAPTIVE CHANGES OF THE STRUCTURE AND FUNCTION OF TOBACCO MICROBIAL COMMUNITY.**  
Jiemeng TAO<sup>1</sup>, Mengli Gu<sup>1</sup>, Peng Lu<sup>1</sup>, Jingjing Jin<sup>1</sup>, Qiansi Chen<sup>1</sup>, Peijian Cao<sup>1</sup> Shizhou Yu<sup>2</sup> and Zhixiao Yan<sup>2</sup>;  
<sup>1</sup>Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou, China, <sup>2</sup>Guizhou Academy of Tobacco, Guiyang, China

4:35 PM

120 **APPLYING FACTOR ANALYSIS TO UNDERSTAND PRODUCT DIFFERENCES OBSERVED IN CLINICAL STUDIES.**  
Yisha HE, Jingzhu Wang, Lai Wei, Raheema Muhammad-Kah, Jeffery Edmiston, and Edward Largo;  
Altria Client Services, Richmond, VA, USA

121 **EVALUATING ORAL HEALTH AFTER SWITCHING FROM CIGARETTES TO NICOTINE POUCHES.** Jianmin LIU<sup>1</sup>, Jingzhu Wang<sup>1</sup>, Jeffery S. Edmiston<sup>1</sup>, Mohamadi A. Sarkar<sup>1</sup>, Maria Gogova<sup>1</sup>, Kimberly R. Milleman<sup>2</sup>, Jeffery L. Milleman<sup>2</sup> and Abigail L. Yoder<sup>2</sup>; <sup>1</sup>Altria Client Services, Richmond, VA, USA, <sup>2</sup>Salus Research, Fort Wayne, IN, USA

**ADJOURN**

**WEDNESDAY MORNING, SEPTEMBER 27, 2023**

***Joint Session***

***Symposium Panel: Assessment of ENDS Ingredients***

*Session Chair: Michael Oldham*

- 8:45 AM      Session Welcome Remarks
- 8:50 AM 122    **A TIERED APPROACH TO ENDS INGREDIENT ASSESSMENT.** Irene ABRAHAM; JT International, Geneva, Switzerland
- 9:05 AM 123    **ESTABLISHING AN ENDS IN VITRO AND IN VIVO INGREDIENT ASSESSMENT STRATEGY USING A TOOLBOX APPROACH.** Florence VONMOOS and Karsta Luettich; Philip Morris Products, Neuchatel, Switzerland
- 9:20 AM 124    **A PRODUCT STEWARDSHIP ASSESSMENT STRATEGY FOR E-LIQUIDS.** Liam SIMMS; Imperial Brands, Bristol, UK
- 9:35 AM 125    **NEW ASSESSMENT METHODS FOR ENDS INGREDIENTS.** Arno GUTLEB; Invitrolize, Belvaux, Luxembourg
- 9:55 AM 126    **EVALUATION OF SYNTHETIC COOLING AGENTS WS-3 AND WS-23 IN 90-DAY INHALATION TOXICITY STUDIES IN SPRAGUE DAWLEY RATS.** Richard SAVORY; B.A.T. (Investments) Ltd, Southampton, UK
- 10:10 AM 127    **TOXICOLOGICAL ASSESSMENT OF ELECTRONIC NICOTINE DELIVERY SYSTEMS USING SEVERAL 2D AND 3D IN VITRO CYTOTOXICITY AND GENOTOXICITY ASSAYS.** Robert LEVERETTE; RAI Services Company, Winston-Salem, NC, USA
- 10:25 AM      Panel Discussion & Audience Q&A

10:55 AM

**LUNCH**

**Session A**

**Symposium Panel: Exploring Risk  
Perceptions and Tobacco  
Use Behavior**

*Session Chair: Elizabeth Becker*

**Session B**

**MO, HTP, Other**  
*Session Chair: Karl Wagner*

12:00 PM

Welcome Remarks

Welcome Remarks

12:05 PM 128

**128. PERCEPTIONS  
OF NICOTINE AND  
TOBACCO PRODUCTS  
IN THE US ADULT  
POPULATION – A  
LATENT CLASS  
ANALYSIS. Hui  
CHENG, Sade Jones and  
Joshua Karelitz; Altria  
Client Services,  
Richmond, VA, USA**

132

**NICOTINE  
EXTRACTION  
FROM  
POLYPROPYLENE  
MODERN ORAL  
PACKAGING. Owen  
BUSSEY, Cody Perry  
and Serban  
Moldoveanu; Reynolds  
American, Winston  
Salem, NC, USA**

- 12:20 PM 129 **AN EXPLORATION ON RELATIVE HARM PERCEPTIONS OF PORTIONED ORAL NICOTINE PRODUCTS AMONG POTENTIALLY VULNERABLE POPULATIONS.** Christie POWELL<sup>1</sup>, Christie Y. Powell<sup>1</sup>, Red Thaddeus D. Miguel<sup>2</sup> and Isabella Steffensen<sup>2</sup>; <sup>1</sup>RAI Services Company, Winston-Salem, NC, USA, <sup>2</sup>Thera-Business Consulting, Ottawa, ON, Canada
- 12:35 PM 130 **THE EFFECTS OF A MODIFIED-RISK CLAIM FOR AN ENDS PRODUCT TO INCREASE SMOKERS' BEHAVIORAL INTENTIONS TO USE THE PRODUCT ARE COMPLETELY MEDIATED BY THE CLAIM'S EFFECTS ON RISK PERCEPTIONS.** Saul SHIFFMAN<sup>1</sup>, Stacey McCaffrey<sup>2</sup> and Ryan Black<sup>2</sup>; <sup>1</sup>Pinney Associates (consultant to Juul Labs, Inc), Bethesda, MD, USA and University of Pittsburgh, Pittsburgh, PA, USA <sup>2</sup> Juul Labs, Inc, Washington, DC, USA
- 133 **DETECTION OF THE PRESENCE OF TOBACCO IN TEA BASED HEAT-NOT-BURN SMOKING DEVICES.** Serban MOLDOVEANU; Reynolds American, Winston Salem, NC, USA
- 134 **PUFF-BY-PUFF CHEMICAL CHARACTERIZATION OF HEATED TOBACCO AEROSOL.** Kaitlyn SUSKI, Brad Ingebretsen, Raj Rao, Josh Kurzman and Emily Dong; Juul Labs, Inc, Washington, DC, USA

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|----------|-----|--|-----|---|
| 12:50 PM | 131 | <b>FDA-CTP REPRESENTATIVE</b><br>(tentative) | 135 | <b>HOW FLUFFY IS YOUR PACK? <u>JOHN LAUTERBACH</u></b> ,<br>Lauterbach and Associates, Deland, FL, USA  |
| 1:05 PM  |     | Panel Discussion & Audience Q&A              | 136 | <b>DEVELOPMENT OF CERTIFIED REFERENCE CIGARS REPRESENTING THREE PRODUCT CATEGORIES. <u>Ruth MCNEES</u></b> , Huihua Ji, Stacey Slone, Brent Shelton, Matt Craft, JT Hall, Orlando Chambers and Ling Yuan;<br>University of Kentucky, Lexington, KY, USA |
| 1:35 PM  |     |  |     | <b><i>Adjourn</i></b>   |