



65th Tobacco Science Research Conference
September 18-21, 2011 - Lexington, Kentucky USA
Revised Preliminary Program (03 August 2011)

Monday, September 19, 2011

Symposium

Time	Abstract	Title
9:00 AM		WELCOME: Anne Jack, University of Kentucky, 65th TSRC Conference Chair
9:10 AM		INTRODUCTION TO SYMPOSIUM: Edward Robinson, 65th TSRC Symposium Chair, Lorillard Tobacco Company "Challenges in the Development of Biomarkers of Smoking Exposure and Effect"
9:15 AM	1	BIOMARKER DISCOVERY AND VALIDATION USING GLOBAL METABOLOMICS. <u>Mike MILBURN</u> , Metabolon, Durham, NC, USA
9:45 AM	2	SMOKING RELATED BIOMARKERS OF POTENTIAL HARM/ EFFECT: CHALLENGES AND OPPORTUNITIES. <u>G. L. PRASAD</u> , Clinical Studies, R & D Department R. J. Reynolds Tobacco Co., Winston-Salem, NC, USA
10:15 AM		BREAK
10:45 AM	3	UTILITY OF BIOMARKERS IN ASSESSING EXPOSURE TO CIGARETTE SMOKE CONSTITUENTS IN ADULT SMOKERS. <u>Mohamadi SARKAR</u> , Altria Client Services, Center for Research and Technology, Richmond, VA USA
11:15 AM	4	A SCIENTIFIC FRAMEWORK FOR ASSESSING MODIFIED RISK TOBACCO PRODUCTS. <u>Christopher PROCTOR</u> and Martin Ward, British American Tobacco (Investments) Limited, Group Research and Development, Southampton, UK
11:45 PM		ADJOURN

Poster Session with Authors

- A CELL CULTURE MODEL FOR CHRONIC EXPOSURE TO CIGARETTE SMOKE.** Subhashini ARIMILLI¹, Brad E. Damratoski¹ and G. L. Prasad² ¹ Department of Microbiology & Immunology, Wake Forest University School of Medicine, Winston Salem, NC USA, ² R.J. Reynolds Tobacco Company, Winston Salem, NC USA
- DETERMINATION OF THEOBROMINE IN PROCESSED TOBACCO PRODUCTS BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY.** Mingliang BAO, Labstat International ULC, Kitchener, ON, Canada
- ANALYSIS OF MULTIPLE CLASSES OF CIGARETTE SMOKE CONSTITUENTS BY COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY WITH TIME OF FLIGHT MASS SPECTROMETRY (GCxGC-TOFMS).** Elizabeth HUMSTON-FULMER, Joe Binkley and Mike Riley, LECO Corporation Saint Joseph, MI, USA
- MAINSTREAM SMOKE CHEMISTRY OF SAMPLES FROM THE 2009 U.S. CIGARETTE MARKET.** J.A. BODNAR, P.A. Murphy, W.T. Morgan, and M.W. Ogden R.J. Reynolds Tobacco Company, Winston-Salem, NC, USA
- A FUNDAMENTAL UNDERSTANDING OF THE FILTRATION OF VOLATILE TOXICANTS IN CIGARETTE SMOKE BY ACTIVE CARBONS.** Peter J. BRANTON¹, Kevin McAdam¹, Chuan Liu¹, Martin Duke¹, Michele Mola¹, Maria Curle¹, Christopher Proctor¹, and Robert Bradley² ¹ British American Tobacco Group Research & Development Southampton, UK, ² MatsIRC Ltd., Carbon Technology, Penrith, Cumbria, UK
- REDUCTION OF ALDEHYDES AND HYDROGEN CYANIDE YIELDS IN MAINSTREAM CIGARETTE SMOKE USING AN AMINE FUNCTIONALISED ION EXCHANGE RESIN.** Peter J. BRANTON, Kevin McAdam, Chuan Liu, Martin Duke, Dinah Winter and Christopher Proctor, British American Tobacco Group Research & Development, Southampton, UK
- AN INTER-LABORATORY COMPARISON OF URINARY 3-HYDROXYPROPYLMERCAPTURIC ACID MEASUREMENT DEMONSTRATES GOOD REPRODUCIBILITY BETWEEN LABORATORIES.** Francis CHEUNG, Emmanuel Minet, Graham Errington, and Mike McEwan, British American Tobacco GR&D Southampton, UK, Gerhard Scherer, ABF GmbH, Kirk Newland, Celerion, Mehran Sharifi, Labstat International Inc. Brian Bailey, Covance Laboratories Ltd.
- AN EXAMINATION OF THE BIOLOGICAL EFFECTS OF REDUCED TOXICANT PROTOTYPE CIGARETTES USING IN VITRO MODELS OF SMOKING-RELATED DISEASES.** Ian M. FEARON, Mark Taylor, Tony Carr, Natalia Cockcroft, Geoff-Foss Smith, Katherine Hewitt, Linsey Haswell, Emma Bishop and Gary Phillips. British American Tobacco Group R&D Southampton U.K.
- DETERMINATION OF A WIDE RANGE OF N-NITROSO-COMPOUNDS IN TOBACCO SMOKE THROUGH THE USE OF TANDEM MASS SPECTROMETRY COUPLED TO GAS PHASE CHROMATOGRAPHY.** Gene GILLMAN;; T. D. Daniels, K.A Wilkinson, K.E Humpries, and S.S. Brown, Enthalpy Analytical, Durham, NC, USA
- FOLIAR NUTRITION FOR IMPROVING TOBACCO LEAF QUALITY: INSIGHTS FROM AGRONOMIC AND MOLECULAR STUDIES.** KARUPPAN Mahavishnan, Ambika P Upadhyay, and Navin K Sharma, ITC R&D Centre, Bangalore, Karnataka, India.
- COMPARISON OF THE VOLATILE FLAVOR COMPOUNDS IN DIFFERENT TOBACCO TYPES BY DIFFERENT EXTRACTION METHODS.** Jang-Mi Lee, Jeong-Min Lee, Chang-Gook Lee, Jin-Young Bock and Keon-Joong Hwang, KT&G Research Institute, Daejeon, South Korea
- CLINICAL DEVELOPMENT OF BIOMARKERS OF BIOLOGICAL EFFECT FOR PRODUCT ASSESSMENT STUDIES.** Frazer J LOWE, Audrey Richter and Karsta Luettich British American Tobacco, Southampton, UK, Antonella Bassi British American Tobacco, Rome, Italy
- THE USE OF CIGARETTE SMOKE DILUTION BY GLYCEROL AS A MEANS OF REDUCING SMOKERS EXPOSURE TO SMOKE TOXICANTS.** Kevin G. MCADAM¹, E.O. Gregg², C. Liu¹, D.J. Dittrich¹, M.G. Duke¹, C.J. Proctor¹, ¹GR&D Centre, Southampton, UK, ²Consultant – ENI Limited, Towcester, UK
- REDUCTION OF NITROGENOUS AND PHENOLIC CIGARETTE SMOKE TOXICANT YIELDS THROUGH THE USE OF A TOBACCO TREATMENT PROCESS.** Kevin G. MCADAM¹, C. Liu¹, Y. DeGrandpré², A. Porter³, A. Griffiths¹, R. Voisine², F. Côté², C. Proctor¹, ¹GR&D Centre, Southampton, UK, ²Imperial Tobacco Canada Ltd, Montreal, Quebec, Canada, ³Montreal, Quebec, Canada
- QUANTIFICATION OF MENTHOL PERCEIVED BY HUMAN ON CIGARETTE SMOKING.** Sharad K METHA, Manoj K. Singh, and S.V. Dhalewadikar ITC R&D Centre, Peenya, Bangalore
- AN IN VITRO COMPARATIVE STUDY OF [¹⁴C]-EUGENOL AND [¹⁴C]-METHYLEUGENOL ACTIVATION AND DETOXIFICATION KINETICS IN HUMAN, MOUSE, AND RAT LIVER FRACTIONS.** Emmanuel MINET¹, Gentile Daniela², Clive Meredith¹, Eian D. Massey¹, ¹British American Tobacco, Group R&D, Southampton, UK, ²Charles River Laboratories, Edinburgh, UK

- 21 **QUANTIFICATION OF 1,2 PROPYLENE GLYCOL, GLYCEROL, AND SORBITOL IN TOBACCO AND TOBACCO PRODUCTS.** N. PALANI, Devaraj Sathish Kumar, Deepa Pillai, T.K. Dinesh ITC R&D Centre Peenya Bangalore India
- 22 **CELL TRANSFORMATION ACTIVITY OF CIGARETTE SMOKE CONDENSATE IN Bhas 42 ASSAY.** Kamala PANT and Shannon W. Bruce, BioReliance Corp Rockville, MD USA, C. Gary Gairola, University of Kentucky Medical Center Lexington, KY, USA
- 23 **THE EFFECTS OF MAINSTREAM CIGARETTES SMOKE COMPONENTS ON GENE EXPRESSION IN NCI-H292 CELLS.** Takashi SEKINE, Yoko Sawamoto, and Yasuo Fukano, Japan Tobacco Inc., Kanagawa, Japan
- 24 **A CUSTOMIZED SOFTWARE SOLUTION FOR TRACKING BIOLOGICAL SAMPLES IN CLINICAL AND BIOMARKER RESEARCH.** Angela M. SLATER, T. Ryan Meadows, Bobbette A. Jones, and G.L. Prasad, R.J. Reynolds Tobacco Company, Winston-Salem, NC USA
- 25 **HIGHER YIELD PRODUCT SMOKING, ARE THERE YIELD ERRORS INHERENT WHEN USING A MECHANICAL SMOKING MACHINE?** Ian TINDALL and Tim Mason: Ceulean, Milton Keynes, UK
- 26 **SINGLE-NUCLEOTIDE POLYMORPHISM FREQUENCY BETWEEN NICOTIANA TABACUM CULTIVARS.** Yuri UJM, Yi Lee, and Yeong-Seon Seok Department of Industrial Plant Science & Technology, Chungbuk National University Chungbuk Cheongju, South Korea
- 27 **DETERMINATION OF OXIDES OF NITROGEN (NOx) IN ANALYTICAL SMOKING PART 1 : COMPLEXITIES IN CALIBRATION METHODS.** James VINCENT, Tim Mason, and Ian Tindall, Ceulean, Milton Keynes, United Kingdom
- 28 **COMPARISON OF THE TRANSCRIPTIONAL EFFECTS OF TWO HARM-REDUCED CIGARETTES.** Michael J. WOLKOWICZ, Tatyana Kotova, and Michael Timko, University of Virginia, Charlottesville, VA
- 29 **APPLICATION RESEARCH ON FLUE-CURED TYPE CIGARETTE TECHNOLOGY BY TWICE CASING.** YAN Keliang, WU Yi, Zeng Xiaoying, and Hu Weiyao, Technology Center of Hongyun Honghe Tobacco (Group) Co., Ltd., Kunming, PR China
- 30 **MICROARRAY-BASED GENE EXPRESSION PROFILES OF ORAL CAVITY CELLS EXPOSED TO DIFFERENT TOBACCO PREPARATIONS.** Wolfgang ZACHARIAS, and Hong Gao, Dept. of Medicine, J.G. Brown Cancer Center, Univ. of Louisville, Louisville, KY ; G. L. Prasad, RJ Reynolds Tobacco Co., Winston-Salem, NC

Monday, September 19, 2011 - Afternoon, Session A

Session Chair: Florian Perini

Time	Abstract	Title
2:20 PM	31	EFFECTS OF THE NUMBER OF LABORATORIES AND REPLICATES ON THE PRECISION OF MEASUREMENT METHOD. <u>Thomas VERRON</u> , Xavier Cahours ¹ , Stephen W. Purkis ² , ¹ SEITA, Imperial Tobacco Group, Fleury-les-Aubrais, France, ² Imperial Tobacco Limited, Bristol, UK
2:40 PM	32	THE EFFECTS OF TRAPPING SOLUTIONS ON RECOVERIES OF CARBONYL COMPOUNDS IN MAINSTREAM CIGARETTE SMOKE. <u>Kevin A. WILKINSON</u> , Kristin H Bounds, Kathy E. Humphries, and I. Gene Gillman, Enthalpy Analytical, Inc., Durham, NC
3:00 PM	33	SETTING THE RECORD STRAIGHT – A REPLY TO GOODPASTER ET AL. – THE REAL CHEMISTRY AND TOXICOLOGY OF NOVEL SMOKELESS TOBACCO PRODUCTS. <u>John H. LAUTERBACH</u> , Lauterbach & Associates, LLC Macon, GA USA, Deborah A. Grimm, Coordinated Instrumentation Facility, Tulane University, New Orleans, LA, USA
3:20 PM		BREAK
3:50 PM	34	ANALYSIS OF MINOR ALKALOIDS IN TOBACCO I : PREPARATION OF STANDARD SOLUTION. <u>Shun YAMAUCHI</u> and Hiroyuki Yoshida, Japan Tobacco Inc. Leaf Tobacco Research Center, Tochigi, Japan
4:10 PM	35	ANALYSIS OF MINOR ALKALOIDS IN TOBACCO II : RAPID ANALYTICAL METHOD BY GC/FID. <u>Hiroyuki YOSHIDA</u> and Shun Yamauchi, Japan Tobacco Inc. Leaf Tobacco Research Center, Tochigi, Japan
4:30 PM	36	THE X200AH – A NEW GENERATION FULLY AUTOMATED SMOKING MACHINE. <u>Chris CRAWLEY</u> , Axiom Select LLC, Richmond, VA, Terry J. Chai, Columbus, Ohio USA, Ming Hou, Shanghai, China
4:50 PM		ADJOURN

Monday, September 10, 2011 - Afternoon, Session B

Session Chair: Anthony Gerardi

Time	Abstract	Title
2:20 PM	37	A STRATEGY FOR MEASURING THE IN VITRO CYTOTOXICITY AND GENOTOXICITY OF TOBACCO SMOKE AEROSOL. <u>Ken SCOTT</u> , Debbie Dillon, Annette Dalrymple, Ian Crooks, and Clive Meredith British American Tobacco, Group Research and Development Southampton, UK
2:40 PM	38	CYTOTOXIC EFFECTS OF DIFFERENT TOBACCO PREPARATIONS ON HUMAN PERIPHERAL BLOOD MONONEUCLEOCYTES. <u>Subhashini ARIMILLI</u> , Brad E. Damratoski ¹ and G. L. Prasad ² , ¹ Department of Microbiology & Immunology, Wake Forest University School of Medicine, Winston Salem, NC USA, ² R.J. Reynolds Tobacco Company, Winston Salem, NC, USA
3:00 PM	39	ASSESSMENT OF NICOTINE METABOLITES AND SPECIFIC CIGARETTE SMOKE CONSTITUENTS IN HUMAN URINE. <u>Mi JANG</u> , Han-Jae Shin, Hyung-Seok Lee, Hak-Chul Hyun, Hyung-Ok Sohn and Yong-Ok Kim, KT&G Research Institute, Daejeon, Korea
3:20 PM		BREAK
3:50 PM	40	AN EVALUATION OF CEMA, AND ADDUCTS OF CYSTEINYLGLYCINE AS POTENTIAL BIOMARKERS OF EXPOSURE TO ACRYLONITRILE, FORMALDEHYDE, AND ACETALDEHYDE FROM CIGARETTE SMOKE. <u>Emmanuel MINET</u> , Francis Cheung ¹ , Graham Errington ¹ , Katharina Sterz ² , Gerhard Scherer ² , ¹ British American Tobacco, Group R&D, Southampton, UK, ² Analytisch-Biologisches Forschungslabor GmbH, Munich, Germany
4:10 PM	41	THE USE OF ENDPOINTS IN IN VITRO MODELS OF CARDIOVASCULAR DISEASE EXPOSED TO HUMAN SMOKERS' SERUM AS POTENTIAL BIOMARKERS OF SMOKING-RELATED CARDIOVASCULAR DISEASE. <u>Ian M. FEARON</u> , Karina McQuillan, Mark Taylor, Tony Carr, Olivia Mayland, Katherine Hewitt, Karsta Luettich, and Frazer Lowe, British American Tobacco, Group R&D, Southampton, UK
4:30 PM	42	CLINICAL STUDIES TO INVESTIGATE THE INFLUENCE OF REDUCED TOXICANT PROTOTYPE CIGARETTES ON LEVELS OF BIOMARKERS OF EXPOSURE AND BIOLOGICAL EFFECT IN HEALTHY SMOKERS. <u>Jim SHEPPERD</u> , A.C. Eldridge, K. McAdam and C.J. Proctor, British American Tobacco, GR&D, Southampton, UK
4:50 PM		ADJOURN

Tuesday, September 20, 2011 - Morning, Session A

Session Chair: Colin Fisher

Time	Abstract	Title
8:50 AM	43	ADOPTION OF STRIP-TILLAGE SYSTEMS FOR DARK-FIRED TOBACCO PRODUCTION IN WESTERN KENTUCKY. <u>Andy BAILEY</u> , Univ. of Kentucky / Univ. of Tennessee UKREC Princeton, KY
9:10 AM	44	INVESTIGATION OF TOBACCO BLACK SHANK RESISTANCE CONFERRED BY AN INTROGRESSED N. RUSTICA GENOMIC REGION. <u>Katherine E. DRAKE</u> and Ramsey S. Lewis, Crop Science Department, N.C. State University, Raleigh, NC USA
9:30 AM	45	A DRAFT GENOME SEQUENCE OF PERONOSPORA TABACINAR THE TOBACCO BLUE MOLD PATHOGEN. <u>David ZAITLIN</u> , KTRDC, University of Kentucky, Lexington, KY USA
9:50 AM	46	SELECTION OF RESISTANCE TO MULTIPLE PATHOGENS IN TOBACCO ASSISTED BY MARKERS AND GREENHOUSE SCREENINGS. <u>Natalia MARTINEZ</u> , Robert D. Miller, Dandan Li, and Glen Weinberger, Department of Plant and Soil Sciences, University of Kentucky, Lexington, KY USA
10:10 AM		BREAK
10:40 AM	47	EVALUATION OF BURLEY CULTIVARS FOR LEAF QUALITY. <u>Robert D. MILLER</u> , University of Kentucky, Lexington, KY, USA
11:00 AM	48	PRELIMINARY STUDY OF A METHOD TO VERIFY THE COUNTRY OF ORIGIN FOR RAW AND PROCESSED SAMPLES OF TOBACCO LEAF. <u>Bob PEARCE</u> , Army Stromburg, Jason Unrine, Limin Feng, and Colin Fisher, University of Kentucky, Lexington, KY USA
11:20 AM	49	USING TRANSCRIPTION FACTORS TO REGULATE TOBACCO METABOLIC PATHWAYS. <u>Ling YUAN</u> , Kentucky Tobacco Research and Development Center, and Department of Plant and Soil Sciences, University of Kentucky, Lexington, KY USA
11:40 AM		ADJOURN

Tuesday, September 20, 2011 - Morning, Session B

Session Chair: Buddy Brown

Time	Abstract	Title
8:50 AM	50	EVALUATION OF THE PRECURSORS GENERATING HYDROGEN PEROXIDE IN AN AQUEOUS EXTRACT OF PARTICULATE PHASE CIGARETTE SMOKE. <u>Yuichiro TAKANAMI</u> , Japan Tobacco Inc., Yokohama, Kanagawa, JAPAN
9:10 AM	51	DIFFERENTIATION IN CYTOTOXICITY AND INFLAMMATORY EFFECTS OF TOBACCO FREE FATTY ACID-IRON COMPLEXES. <u>Florian R. PERINI</u> , Edward A. Robinson, and Manoj Misra, Lorillard Tobacco Company, Greensboro, NC, USA
9:30 AM	52	PUFF-RESOLVED ON-LINE REAL-TIME ANALYSIS AND QUANTIFICATION OF TOBACCO SMOKE COMPONENTS BY A COMMERCIAL SMOKE PROFILER (SMOKING MACHINE – PHOTO-IONIZATION TOF MASS SPECTROMETER SYSTEM). <u>Ralf ZIMMERMANN</u> ¹ , Nils Rose ² , Anderas Walte ³ , Mohammad Saraji-Bozorgzad ³ , Matthias Bente ³ , Thomas Gröger ⁴ , and Markus Eschner ⁴ , ¹ Chair of Analytical Chemistry and Joint Mass Spectrometry Centre/HMGU University of Rostock, Germany, ² Borgwaldt KC, Hamburg, Germany, ³ Photonion GmbH, Schwerin, Germany, ⁴ Helmholtz Zentrum, München, Germany
9:50 AM	53	DETECTION OF THE MOLECULAR COMPOSITION OF PYROLYSIS GASES IN THERMAL ANALYSIS (TA) USING PHOTO IONIZATION TOF MASS SPECTROMETRY FOR EVOLVED GAS ANALYSIS (EGA): INSTRUMENTAL SET-UP AND FIRST RESULTS ON TOBACCO AND CIGARETTES MATERIALS. <u>Ralf ZIMMERMANN</u> ¹ , Mohammad Saraji-Bozorgzad ² , Matthias Bente ² , Andreas Walte ² , and Markus Eschner ³ , ¹ Chair of Analytical Chemistry and Joint Mass Spectrometry Centre/HMGU University of Rostock, Germany, ² Photonion GmbH, Schwerin, Germany, ³ Helmholtz Zentrum München, Germany
10:10 AM		BREAK
10:40 AM	54	EFFECT OF SUGAR CONTENT ON ACETALDEHYDE YIELD IN CIGARETTE SMOKE. <u>Xavier CAHOURS</u> ¹ , Thomas VERRON ¹ , Stephen W. PURKIS ² , ¹ SEITA, Imperial Tobacco Group, Fleury-les-Aubrais, France, ² Imperial Tobacco Limited, Bristol, UK
11:00 AM	55	PYROLYZATE COMPOSITION FOR SEVERAL POLYMERIC CARBOHYDRATES. <u>Serban MOLDOVEANU</u> , R.J. Reynolds Tobacco Co., Winston-Salem, NC, USA
11:20 AM	56	SEPARATION OF VOLATILE AND SEMI-VOLATILE COMPOUNDS IN TOBACCO USING ON-LINE COMBINATION OF LIQUID CHROMATOGRAPHY AND GAS CHROMATOGRAPHY-MASS SPECTROMETRY. <u>Shaofeng LIU</u> , Junchao Bai, Junwei Guo, Jizhao Guo, Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou, China
11:40 AM		ADJOURN

Tuesday, September 20, 2011 - Afternoon, Session A

Session Chair: Lowell Bush

Time	Abstract	Title
1:30 PM	57	INFLUENCE OF NITROGEN FERTILIZATION RATE AND ALLELES AT THE YELLOW BURLEY LOCI ON TSNA FORMATION IN AIR-CURED TOBACCO. <u>Ramsey S. LEWIS</u> ¹ , Robbie Parker ¹ , Anne Jack ² , David Danehower ¹ , Scott Whitley ¹ , Lowell Bush ² , ¹ Crop Science Department N.C. State University, Raleigh, NC USA, ² University of Kentucky, Lexington, KY USA
1:50 PM	58	THE EFFECT OF ARTIFICIAL CASING METHODS ON TSNA ACCUMULATION. <u>Colin FISHER</u> , Anne Jack, Lowell P. Bush, and Robert Pearce, Plant & Soil Sciences Department, University of Kentucky, Lexington, KY, USA
2:10 PM	59	CONTRIBUTIONS OF THREE NICOTINE DEMETHYLASES TO NICOTINE AND NORNICOTINE COMPOSITION IN THE PLANT. <u>Bin CAI</u> ¹ , F. Fannin ¹ , R. Lewis ² , R. Dewey ² , L. Bush ¹ , ¹ Dept of Plant and Soil Sciences, University of Kentucky, Lexington, KY USA, ² Dept of Crop Science, North Carolina State University, Raleigh, NC USA
2:30 PM	60	DEVELOPMENT OF DNA MARKERS FOR NIC1 AND NIC2 GENES REGULATING NICOTINE BIOSYNTHESIS IN TOBACCO. <u>Dandan LI</u> and Robert D. Miller, Dept. of Plant and Soil Sciences, Univ. of Kentucky Lexington, KY USA
2:50 PM		BREAK
3:20 PM	61	PERSISTENCE OF TOBACCO SEED IN THE ENVIRONMENT. <u>Richard MUNDELL</u> , James O'Daniel, Orlando Chambers, University of Kentucky, Lexington, KY USA
3:40PM	62	FIELD EVALUATION OF AN INTERSPECIFIC HYBRID AS A CONTAINMENT STRATEGY FOR PLANT-MADE PHARMACEUTICAL APPLICATIONS IN TOBACCO. <u>Orlando CHAMBERS</u> ¹ , J. Hollis Rice ² , Richard Mundell ¹ , Reginald J. Millwood ² , C. Neal Stewart ² , and H. Maelor Davies ¹ , ¹ Kentucky Tobacco Research & Development Center, Lexington, KY USA, ² University of Tennessee, Knoxville, TN, USA
4:00PM	63	EFFECT OF BALE WEIGHT ON TSNA CONTENT OF CURED BURLEY TOBACCO IN LARGE BALES. <u>Paul DENTON</u> ^{1,2} , Margarita Velandia ¹ and Vickie Witcher ¹ , ¹ University of Tennessee, Knoxville, TN USA, ² University of Kentucky, Lexington, KY USA
4:20 PM		ADJOURN

Time	Abstract	Title
1:30 PM	64	IMPROVED PRESSURE DROP & VENTILATION INSTRUMENT WITH VARIABLE FLOW RATES. <u>Steven A. WILSON</u> , Eastman Chemical Company, Kingsport, TN USA
1:50 PM	65	APPLICABILITY OF CURRENT TOBACCO RELATED METHODOLOGIES TO NEW OR NOVEL TOBACCO PRODUCTS. <u>Peter JOZA</u> , Andrew Masters, Bill Rickert, and Xinyu Liu, Labstat International ULC, Kitchener, Ontario, Canada
2:10 PM	66	THE IMPACT OF DIFFERENT PHYSICAL AND CHEMICAL CIGARETTE PAPER BASE SHEET PARAMETERS ON SMOKE YIELDS. <u>Mario MAYR</u> and Dietmar Volgger, delfortgroup / Wattenspapier, Austria
2:30 PM	67	BAND DIFFUSION AT HIGH TEMPERATURE. <u>Joseph WANNA</u> , SWM Intl, Alpharetta, GA USA and Jean Marie Loureau, SWM Intl, Quimperle, France
2:50 PM		BREAK
3:20 PM	68	FILTER ADDITIVES FOR THE SELECTIVE FILTRATION OF PHENOLS FROM CIGARETTE SMOKE. <u>Tony McCORMACK</u> and Mike Taylor, Filtrona Technology Centre, Jarrow, Tyne & Wear UK
3:40PM	69	STUDY ON MENTHOL DIFFUSION PROCESS INTO ACETATE FIBER USING LASER MICRO RAMAN SPECTROSCOPY. <u>Masato MIYAUCHI</u> , Ayako Chiku, and Takashi Hasegawa, Japan Tobacco, Inc., Tokyo, Japan
4:00 PM	70	DETERMINATION OF NITROALKANES IN CIGARETTE MAINSTREAM SMOKE WITH HEART-CUT TWO-DIMENSIONAL GC/MS METHOD. <u>Jizhao GUO</u> , Jingjing Shang, Fuwei Xie, and Xiaobing Zhang, Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou, China
4:20 PM		ADJOURN

Wednesday, September 21, 2011 - Morning, Combined Session

Session Chair: Serban Moldoveanu

Time	Abstract	Title
8:50 AM	71	CONSUMPTION PATTERNS AND BIOMARKERS OF EXPOSURE IN CIGARETTE SMOKERS SWITCHED TO DISSOLVABLE TOBACCO (CAMEL ORBS), DUAL USE, OR TOBACCO ABSTINENCE. <u>George R. KRAUTTER</u> and Michael F. Borgerding, R. J. Reynolds Tobacco Company, Winston-Salem, NC USA
9:10 AM	72	NICOTINE UPTAKE, URGE TO SMOKE, AND CARBOXYHEMOGLOBIN CHANGES IN SMOKERS AFTER CONSUMPTION OF SMOKE-FREE TOBACCO PRODUCTS. <u>Elaine K. ROUND</u> , Leanne C. Lee, Sheri A. Bowman, Kelly M. Harger, Tracy M. Hefner, Angela M. Slater, and Mitchell F. Stiles, R. J. Reynolds Tobacco Company, Winston Salem, NC USA
9:30 AM	73	A NOVEL MODEL MOUTH SYSTEM FOR EVALUATION OF IN VITRO RELEASE OF NICOTINE AND TOBACCO-SPECIFIC NITROSAMINES FROM MOIST SNUFF. <u>Jie ZHANG</u> , Peng Li, Yongli Zong, Shihao Sun, Yubing Song, and Jianping Xie, ¹ Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou, China, ² Beijing Cigarette Factory of Shanghai Tobacco (Group) Corporation Beijing, China
9:50 AM		BREAK
10:20 AM	74	DIFFERENCES IN FREE AMINO ACID CONTENTS BETWEEN FLUE-CURED TOBACCO AND BURLEY TOBACCO BOTH CURED WITH FLUE-CURING AND AIR-CURING METHOD. <u>Hongzhi SHI</u> , Henan Agricultural University, Zhengzhou, Henan, China; Tian Zhao, Guoshun Liu, Haiyan Zhou, Henan Agricultural University, Zhengzhou, Henan, China; Jinhu Yang, Rui Chu, Binchuan Burley Tobacco Company, Binchuan, Yunnan, China; Wenbi Li, Junwei Yang, Dali Tobacco Company, Dali, Yunnan, China
10:40 AM	75	THE PROTEIN EXPRESSION PROFILES OF MATURE TOBACCO LEAVES ON LOW NITROGEN NUTRITION EXPOSURE. <u>Huijuan YANG</u> , Henan Agricultural University, Zhengzhou, China; Hong Cui, Guoshun Liu, Hongzhi Shi, Li Xu Henan Agricultural University, Zhengzhou, Henan, China
11:00AM	76	SIMULTANEOUS DETERMINATION OF TOBACCO-SPECIFIC NITROSAMINES IN RABBIT'S URINE AND BLOOD BY LC-MS-MS. <u>Jianxun ZHANG</u> , Zhaoyu Wang, Binbin Lu, Sheng Wang, and Juan Wang, Zhengzhou Tobacco Research Institute of CNTC Zhengzhou, China
11:20 AM	77	THE EVOLUTION OF MOISTURE, TEMPERATURE AND DENSITY OF CUT TOBACCO AND SHRINKAGE CHARACTERISTICS DURING CYLINDER DRYING. <u>Wenkui ZHU</u> , Chuanfang Yu, Liangyuan Chen, and Bin Li, Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou, China; Qiang Zen, Fujian Tobacco Co., Xiamen, Fujian, China; Hongtao Li, Shandong Tobacco Co., Qingdao, Shandong, China
11:40 AM		ADJOURN