



PROGRAMME

12 October – 12 November 2020

"Integrated Science: Opportunities and Challenges"





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AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

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AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

SESSION: Biotechnology

Chairman: Dongmei XU

Abstract No. (Abstract ID)	Oral Presentation
AP 01 1671	Identification and verification of lncRNA against herbivores in <i>Nicotiana attenuata</i> JIN Jingjing(1,2); RAN Li(3); BALDWIN I.T.(2) (1) Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou 450001, P.R. China (2) Department of Molecular Ecology, Max Planck Institute for Chemical Ecology, D-07745 Jena, Germany (3) Institute of Insect Sciences, Zhejiang University, 310058 Hangzhou, P.R. China
AP 02 1672	The AP2 transcription factor <i>NtERF172</i> confers drought resistance by modifying <i>NtCAT</i> HU Risheng(1); LI Yangyang(1); LIU Dan(2); ZHAO Qiang(3) (1) Hunan Tobacco Research Institute of CNTC, No. 628, Section 1, Furong South Road, Tianxin District, Changsha 410000, Hunan Province, P.R. China (2) Tobacco Research Institute, Chinese Academy of Agricultural Sciences, Qingdao 266101, P.R. China (3) College of Horticulture, Qingdao Agricultural University, Qingdao 266109, P.R. China
AP 03 1738	Tobacco yield improvement by photosynthetic antenna engineering SHEN Y.; DAVIS G.; XU D. Altria Client Services LLC, Product Design and Maintenance, 601 East Jackson Street, Richmond, VA 23219, U.S.A.
AP 04 1766	Reduction of cadmium in tobacco leaves KUDITHIPUDI C.; MORRIS J.W. Altria Client Services LLC, Product Design and Maintenance, 601 East Jackson Street, Richmond, VA 23219, U.S.A.



AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

SESSION: Diseases

Chairman: François DORLHAC de BORNE

Abstract No. <i>Abstract ID</i>	Oral Presentation
AP 05 1675	Biological control of bacterial wilt by constructing tobacco rhizosphere microbial community at the seedling stage LIU Yanxia(1); LI Xiang(2); SUN Guangjun(2); LI Guanglei(2); JIANG Chaoying(2); JIAO Jian(2); XIA Zhilin(2); GUO Liang(2); SHEN Hong(2) (1) <i>Guizhou Academy of Tobacco Science of CNTC, Guiyang 550000, P.R. China</i> (2) <i>Guizhou Tobacco Company of CNTC, China National Tobacco Corporation, Guiyang 550000, P.R. China</i>
AP 06 1687	Coping with spotted wilt in tobacco BERTRAND P.; MOORE J.M.; LUO Xuelin; La HUE S. <i>University of Georgia, Crop and Soil Sciences, 2360 Rainwater Road, Tifton, GA 31793-5766, U.S.A.</i>
AP 07 1743	The <i>eIF(iso)4E-T</i> deficient <i>va</i> tobacco is superior to Virgin A Mutant in resistance to Potato Virus Y TAKAKURA Y.; UDAGAWA H.; SHINJO A.; KOGA K. <i>Japan Tobacco Inc., Leaf Tobacco Research Center, 1900 Idei, Oyama, Tochigi 323-0808, Japan</i>
AP 08 1792	Potential fungicides and biocontrol agents to manage target spot (<i>Thanatephorus cucumeris</i>) on flue-cured tobacco in Virginia JOHNSON C.S. <i>Virginia Tech, Southern Piedmont Agricultural Research and Extension Center, 2375 Darvills Road, Blackstone, VA 23824, U.S.A.</i>

AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

SESSION: Low Nicotine

Chairman: Marcos LUSSO

Abstract No. <i>Abstract ID</i>	Oral Presentation
AP 09 1680	Multi-omics data revealed nov-miR1170 regulates nicotine biosynthesis of <i>Nicotiana tabacum</i> XU Yalong; JIN Jingjing; CHEN Qiansi; XIE Xidong; LIU Pingping; ZHAI Niu; LU Peng; LI Zefeng; CAO Peijian <i>China Tobacco Gene Research Center, Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou 450001, P.R. China</i>
AP 10 1736	Evaluation of low-nicotine tobacco cultivars and agronomic production practices by non-destructive photonic sensing TUCCIO L.(1); BARGIACCHI E.(2); MILLI G.(3); MIELE S.(2); MICHELETTI F.(1); AGATI G.(1) (1) <i>CNR-IFAC, I-55019 Sesto Fiorentino, FI, Italy</i> (2) <i>Consortium INSTM, I-50121 Firenze, Italy</i> (3) <i>Fattoria Autonoma Tabacchi (FAT) & ITT, I-06012 Città di Castello, PG, Italy</i>
AP 11 1817	Analysis of the surface chemistry of high- and low-alkaloid Burley varieties/lines grown using standard agronomic practices and under low-nicotine field management MIHAYLOVA-KROUMOVA A.(1); FISHER A.M.(1); FISHER C.R.(2); WAGNER J.G.(1) (1) <i>University of Kentucky, Kentucky Tobacco Research and Development Center, 1401 University Dr., Lexington, KY 40546, U.S.A.</i> (2) <i>University of Kentucky, Plant Science Building, 1405 Veterans Drive, Lexington, KY 40546, U.S.A.</i>
AP 12 1822	Reducing nicotine in Burley tobacco by combining low alkaloid varieties and agronomic practices – a very different second year FISHER A.M.; FISHER C.R.; JI Huihua <i>University of Kentucky, 1401 University Drive, 200L KTRDC Bldg, Lexington, KY 40546, U.S.A.</i>



AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

SESSION: Nutrition

Chairman: Susan DIMBI

Abstract No.

Abstract ID

Oral Presentation

AP 13

1673

Effect of tilling depth on bacterial community structure and enzyme activities of flue-cured tobacco rhizosphere soil in mountainous areas of Yunnan

DENG Xiaopeng(1); TONG Wenjie(1); LIU Qi(2); LI Junying(1); YANG Min(3); XU Zhaoli(1); MA Erdeng(1); YU Lei(3)

(1) Yunnan Academy of Tobacco Agricultural Sciences of CNTC, 33 Yuantong Street, Kunming City, Yunnan Province, P.R. China

(2) Tobacco College of Yunnan Agricultural University, 95 Jinhei Road, Kunming City, Yunnan Province, P.R. China

(3) Agricultural College of Kunming University, 2 Puxin Road, Kunming City, Yunnan Province, P.R. China

AP 14

1737

A comparison of traditional and alternative fertilizer programs for flue-cured tobacco production

SHORT M.M.; VANN M.C.; CHEEK J.A.; WHITLEY D.S.

North Carolina State University, Department of Crop and Soil Sciences, 101 Derieux Street, Raleigh, NC 27695, U.S.A.

AP 15

1783

Nitrogen fertilizer source and the impact to flue-cured tobacco nutrient assimilation, yield, quality, value, and chemistry

VANN M.C.; WOODLEY A.L.; SUCHOFF D.H.; FISHER L.R.

North Carolina State University, Department of Crop & Soil Sciences, NCSU Campus Box 7620, Raleigh, NC 27695, U.S.A.

AP 16

1826

Nitrogen application programs for fine-textured soils of the North Carolina Piedmont

VANN M.C.(1); WHITLEY D.S.(1); MASON J.H.(1); HAMBRICK T.(2); STRADER W.(3); DABBS D.C.(4)

(1) North Carolina State University, Department of Crop & Soil Sciences, NCSU Campus Box 7620, Raleigh, NC 27695, U.S.A.

(2) Forsyth County Cooperative Extension, 1450 Fairchild Road, Winston-Salem, NC 27105, U.S.A.

(3) Rockingham County Cooperative Extension, 525 NC Hwy 65 – Suite 200, Reidsville, NC 27320, U.S.A.

(4) Alamance County Cooperative Extension, 209-C North Graham-Hopedale Road, Burlington, NC 27217, U.S.A.



AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

SESSION: Organic / Sustainable Production

Chairman: Fabienne LALANDE

Abstract No. <i>Abstract ID</i>	Oral Presentation
AP 17 1724	Establishing nitrogen fertility recommendations for the production of organic Burley tobacco SUCHOFF D.H.; VANN M.C.; FISHER L.R. <i>North Carolina State University, Department of Crop and Soil Sciences, 101 Derieux Place, Raleigh, NC 27695, U.S.A.</i>
AP 18 1739	Effects of polyethylene mulches on pest management and yield in organic flue-cured tobacco MACHANOFF C.A.; SUCHOFF D.H.; VANN M.C.; WOODLEY A.L. <i>North Carolina State University, Department of Crop and Soil Sciences, 101 Derieux Street, Raleigh, NC 27695, U.S.A.</i>
AP 19 1740	Impacts of conservation tillage and cover crop mulch on weed emergence and leaf yield and quality inorganic flue-cured tobacco MACHANOFF C.A.; SUCHOFF D.H.; VANN M.C.; WOODLEY A.L. <i>North Carolina State University, Department of Crop and Soil Sciences, 101 Derieux Street, Raleigh, NC 27695, U.S.A.</i>
AP 20 1825	Winter cover crop management in the production of organic flue-cured tobacco WOODLEY A.L.; HAHN S.L.; VANN M.C.; OSMOND D.L. <i>North Carolina State University, Department of Crop & Soil Sciences, NCSU Campus Box 7620, Raleigh, NC 27695, U.S.A.</i>



AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

SESSION: Production

Chairman: Anthony JACKSON

Abstract No. <i>Abstract ID</i>	Oral Presentation
AP 21 1776	Impacts of lower-leaf removal timing, number, and nitrogen application to flue-cured tobacco VANN M.C.(1); FINCH C.E.(1); FISHER L.R.(1); WELLS R.(1); BROWN A.B.(2) (1) <i>North Carolina State University, Department of Crop & Soil Sciences, NCSU Campus Box 7620, Raleigh, NC 27695, U.S.A.</i> (2) <i>North Carolina State University, Department of Agricultural & Economic Resources, NCSU Campus Box 8109, Raleigh, NC 27695, U.S.A.</i>
AP 22 1777	Cigar wrapper tobacco production in western North Carolina VANN M.C.; MACHACEK J.L.; CHEEK J.A.; WHITLEY D.S. <i>North Carolina State University, Department of Crop & Soil Sciences, NCSU Campus Box 7620, Raleigh, NC 27695, U.S.A.</i>
AP 23 1779	Industrial hemp: the benefits, concerns, and unknowns for North Carolina tobacco farmers SHORT M.M.(1); MCGINNIS M.(2); VANN M.C.(1); SUCHOFF D.H.(1); EDMISTEN K.L.(1) (1) <i>North Carolina State University, Department of Crop and Soil Sciences, 101 Derieux Street, Raleigh, NC 27695, U.S.A.</i> (2) <i>North Carolina Department of Agriculture & Consumer Services, Agronomic Division, 4300 Reedy Creek Road, Raleigh, NC 27607, U.S.A.</i>
AP 24 1824	Economic factors influencing lower leaf removal decisions BLALOCK C.(1); VANN M.C.(1); FISHER L.R.(1); BROWN A.B.(2) (1) <i>North Carolina State University, Department of Crop & Soil Sciences, NCSU Campus Box 7620, Raleigh, NC 27695, U.S.A.</i> (2) <i>North Carolina State University, Department of Agricultural & Economic Resources, NCSU Campus Box 8109, Raleigh, NC 27695, U.S.A.</i>



AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

SESSION: TSNA

Chairman: Colin FISHER

Abstract No. <i>Abstract ID</i>	Oral Presentation
AP 25 1650	Analysis of TSNA and their relationship with alkaloids in cigar wrapper and filler tobaccos from different regions and varieties SHI Hongzhi(1); ZHOU Di(1); SUN Yuqi(1); WANG Jun(2); ZHOU Jun(3); ZHAO Yuanyuan(1); ZENG Dailong(4); QIN Yanqing(2); BAI Ruoshi(3); YANG Xingyou(2); LI Jingjing(1) (1) <i>College of Tobacco Science of Henan Agricultural University / Tobacco Cultivation Key Laboratory of China Tobacco / Tobacco Harm Reduction Research Center of HAU, Zhengzhou 450002, P.R. China</i> (2) <i>Sichuan Tobacco Company, Chengdu 618400, P.R. China</i> (3) <i>Beijing Cigarette Factory of Shanghai Tobacco (Group) Co., Beijing 100024, P.R. China</i> (4) <i>China Tobacco Sichuan Industrial Co., Ltd, Great Wall Cigar Factory, Shifang, P.R. China</i>
AP 26 1676	Rapid screening of nicotine converters from tobacco seedling population LI Yong; PANG Tao; CHEN Xuejun; SHI Junli; SUI Xueyi; GU Huaguo <i>Yunnan Academy of Tobacco Agricultural Sciences of CNTC, Yunnan, P.R. China</i>
AP 27 1710	Three-year N-nitrosornicotine data for stable reduced converter (SRC) dark tobacco crop LION K.; LUSSO M.; ADAMS A.; MORRIS W.; DAVIS G. <i>Altria Client Services LLC, Research, Development & Regulatory Affairs, 601 East Jackson Street, Richmond, VA 23219, U.S.A.</i>
AP 28 1752	Correlation between post-curing TSNA increase and alkaloid and nitrite contents in cured leaves KAWANA M.; MASUDA S.; SATO N. <i>Japan Tobacco Inc., Leaf Tobacco Research Center (LTRC), 1900 Idei, Oyama, Tochigi 323-0808, Japan</i>

AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

POSTER SESSION: Pest & Diseases

Abstract No. Abstract ID	Poster Presentation
APPOST 01 1652	Study of fungicides effect of Vista and Nativo on tobacco collar rot (<i>Sclerotinia sclerotiorum</i>) in Northern Iran SAJJADI A.; NAJAFI M.R.; HOSSEINI A.; MASOUDI A.; SAFFAR F. <i>Tirtash Tobacco Research and Education Center, Behshar, Iran</i>
APPOST 02 1653	Production of wettable powder biopesticide formulation from two superior <i>Bacillus thuringiensis</i> strains native to Northern Iran SHAZDEH AHMADI M.; SAJJADI A.; SALEHI JOUZANI Gh.R.; ASSEMI H.; SHAHADATI MOGHADAM Z. <i>Tirtash Tobacco Research and Education Center, Behshar, Iran</i>
APPOST 03 1654	Field evaluation of the efficacy of formulations produced from <i>Bacillus thuringiensis</i> (Bt) and nuclear polyhedrosis virus (NPV) isolates native to Northern Iran against <i>Helicoverpa armigera</i> SHAZDEH AHMADI M.; SAJJADI A.; SALEHI JOUZANI Gh.R.; ASSEMI H.; SHAHADATI MOGHADAM Z. <i>Tirtash Tobacco Research and Education Center, Behshar, Iran</i>
APPOST 04 1677	Identification of a PVY isolate breaking down the resistance of va-genotype tobacco in China LI Ruo; WAN Xiuqing; QIAO Chan; GUO Zhaokui <i>Heilongjiang Institute of Tobacco Science of CNTC, Hayao Road 17, Harbin, P.R. China</i>
APPOST 05 1746	Phosphorous acid effects on Pythium root rot in tobacco float bed HARADA H. <i>Japan Tobacco Inc., Leaf Tobacco Research Center, 1900 Idei, Oyama, Tochigi 323-0808, Japan</i>
APPOST 06 1813	Diagnosis of leaf curl and crooked tip diseases on tobacco plants in Tay Ninh Province, Vietnam VAN NGUYEN C.(1); VIET HA C.(2) (1) <i>Tobacco Institute, 133 Nguyen Trai, Thanh Xuan, Ha Noi, Vietnam</i> (2) <i>Vietnam National University of Agriculture, Vietnam</i>

AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

POSTER SESSION: Production & Nutrition

Abstract No. <i>Abstract ID</i>	Poster Presentation
APPOST 07 1668	Evaluation of the effects of organic and chemical fertilizer on quality and yield of flue-cured tobacco under irrigated and rainfed conditions AHMADI M.(1); MOHSANZADEH R.(1); DAVANLO A.(1); YAGHOBI Y.(1); SHAHADATI MOGHADAM Z.(1); GHOLIZADEH A. Gh.(1); ALINEJAD R.(1); HOSSEINI A.(1); SALAVATI M.R.(1); NOROZI A.(2); LATIFI N.(3); DASTA N.(2) (1) <i>Tirtash Tobacco Research and Education Center, Behshar, Iran</i> (2) <i>Azad University, Iran</i> (3) <i>Gorgan University of Agricultural Science and Natural Resources, Iran</i>
APPOST 08 1678	Growth, nitrogen uptake and soil N₂O emissions in flue-cured tobacco as influenced by drip fertigation strategy MA Erdeng(1); GAO Tian(2); ZHANG Guangbin(3); XU Zhaoli(1); LI Junying(1); TONG Wenjie(1); Deng Xiaopeng(1) (1) <i>Yunnan Academy of Tobacco Agricultural Sciences of CNTC, No. 33 Yuantong Rd, Kunming 650031, P.R. China</i> (2) <i>College of Tobacco Science, Yunnan Agricultural University, Jinhei Road, Kunming 650201, P.R. China</i> (3) <i>State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, No. 71 East Beijing Road, Nanjing 210008, P.R. China</i>
APPOST 09 1679	Dynamic change of soil pH, physi-chemical characters and enzymatic activity under restructuring arable layer CHEN Jin(1,2); DENG Xiaohua(2,3); PENG Shuguang(3); LIU Yongjun(3); DENG Yongsheng(2); WANG Zhenhua(4); PENG Deyuan(4); LI Yuanhuan(2); SU Gexuan(2) (1) <i>Ningxiaing Branch, Changsha Tobacco Company, Hunan, Ningxiang 410600, P.R. China</i> (2) <i>College of Agronomy, Hunan Agricultural University, Changsha 410128, P.R. China</i> (3) <i>China Tobacco Mid-south Agricultural Experimental Station, Changsha 410128, P.R. China</i> (4) <i>Zhangjiajie Tobacco Company of Hunan, Zhangjiajie 427000, P.R. China</i>
APPOST 10 1720	Improved soil fertility and microbial diversity by microbial organic fertilizers in continuous tobacco cropping areas GUO Hui(1); YANG Huijuan(1); SUN Junwei(2); WEI Yuehui(1); SHI Hongzhi(1) (1) <i>College of Tobacco Science, Henan Agricultural University, Zhengzhou 540002, P.R. China</i> (2) <i>Dali State Company of CNTC, Dali 671000, P.R. China</i>
APPOST 11 1742	Ensuring nicotine uniformity by measuring tobacco leaf using NIR spectrometer UEYAMA S.(1); ISHIHARA K.(1); ISSHIKI H.(2); SEINO Y.(2); IGA H.(2); SUMITOMO T.(2) (1) <i>Japan Tobacco Inc., Leaf Tobacco Research Center, 1900 Idei, Oyama, Tochigi 323-0808, Japan</i>

AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

Abstract No.

Abstract ID

Poster Presentation

(2) *Japan Tobacco Inc., Leaf Services Division, 2-2-1 Toranomon, Minato-ku, Tokyo 105-8422, Japan*

APPOST 12

1781

A study for inheritance of chemical components in dried leaves of tobacco varieties of different types and their F1 progenies

KORUBIN-ALEKSOSKA A.(1); DOJCINOV S.(2)

(1) *“St. Kliment Ohridski” University - Bitola, Scientific Tobacco Institute - Prilep, Kicevska bb, Prilep, Republic of North Macedonia*

(2) *Alliance One Macedonia - Kavadarci, Zapaden Bulevar 105, 1430 Kavadarci, Republic of North Macedonia*

APPOST 13

1782

Tobacco production programming in the Suwannee River Valley of North Florida

VANN C.D.(1); WYNN K.(2); BROUGHTON D.(3); MOORE J.M.(4); VANN M.C.(5)

(1) *University of Florida - Institute of Food and Agricultural Sciences, Lafayette County Extension, Mayo, FL 32066, U.S.A.*

(2) *University of Florida - Institute of Food and Agricultural Sciences, Hamilton County Extension, Jasper, FL 32052, U.S.A.*

(3) *University of Florida - Institute of Food and Agricultural Sciences, North Florida Research & Education Center - Suwannee Valley, Live Oak, FL 32060, U.S.A.*

(4) *University of Georgia, Department of Crop & Soil Sciences, Tifton, GA 31793, U.S.A.*

(5) *North Carolina State University, Department of Crop & Soil Sciences, Raleigh, NC 27695, U.S.A.*

APPOST 14

1811

The effect of silicate solubilizing bacteria and mycorrhizal symbiosis on potassium fertilizer requirements of tobacco (*Nicotiana tabacum* L.)

RANJBAR R.(1); SEPEHR E.(2); SAMADI A.(2); SADAGHIANI M.H.(2); DOVLATI B.(2); BARIN M.(2)

(1) *Urmia Tobacco Research Center, Urmia, Iran*

(2) *Soil Science Department, Faculty of Agriculture, Urmia University, Urmia, Iran*



AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

CORESTA SUB-GROUP & TASK FORCE REPORTS

Agronomy & Leaf Integrity

Group	Report Presentation
AA	Sub-Group Agrochemical Analysis MIYOSHI M. <i>Japan Tobacco Inc., 1900, Idei, Oyama, Tochigi 323-0808, Japan</i>
GMO	Sub-Group Proficiency Testing for Detection of Transgenic Tobacco DORLHAC DE BORNE F. <i>Imperial Tobacco Limited, Leaf Research, La Tour, 24100 Bergerac, France</i>
LNTP	Task Force Collaborative Study of Low Nicotine Tobacco Agronomic Production Practices LUSSO M. <i>Altria Client Services LLC, Research, Development & Regulatory Affairs, 601 East Jackson Street, Richmond, VA 23219, U.S.A.</i>
PSMST	Sub-Group Pest and Sanitation Management in Stored Tobacco SCHMIDT V. <i>R.J. Reynolds Tobacco Company, R&D Department, P.O. Box 1487, Winston-Salem, NC 27102-1487, U.S.A.</i>
RFT	Sub-Group Agrochemical Residue Field Trials WATANABE N. <i>Japan Tobacco Inc., 1900, Idei, Oyama, Tochigi 323-0808, Japan</i>
TSNA	Sub-Group TSNA in Air-Cured and Fire-Cured Tobacco FISHER C.R. <i>University of Kentucky, 1401 University Drive, Lexington, KY 4 0546-0312, U.S.A.</i>



AGRONOMY & LEAF INTEGRITY and PHYTOPATHOLOGY & GENETICS

CORESTA SUB-GROUP & TASK FORCE REPORTS

Phytopathology & Genetics

Group	Report Presentation
BIO	Sub-Group Efficacy of Biological and Eco-Friendly CPAs MAVUKA R. <i>Tobacco Research Board, Kutsaga, P.O. Box 1909, Airport Ring Road, Harare, Zimbabwe</i>
BKS	Sub-Group Collaborative Study Black Shank DIMBI S. <i>Tobacco Research Board, Kutsaga, P.O. Box 1909, Airport Ring Road, Harare, Zimbabwe</i>
IPM	Sub-Group Integrated Pest Management FISHER A.M. <i>University of Kentucky, Kentucky Research & Development Center, 202B KTRDC Building, 1401 University Drive, Lexington, KY 40546-0236, U.S.A.</i>
TAG	Task Force Tobacco Alkaloid Genetics GUO Yongfeng <i>Tobacco Research Institute, Chinese Academy of Agricultural Sciences (CAAS), No. 11 Keyuanjingsi Road, Laoshan District, Qingdao City, Shandong Province, P.R. China</i>
TBO	Task Force Tobacco Biotechnology and Omics ZAITLIN D. <i>University of Kentucky, 1401 University Drive, Lexington, KY 4 0546-0312, U.S.A.</i>
XDES	Sub-Group Extended Diagnostic Expert System MARIGNAC E. <i>CORESTA, 11 rue du Quatre Septembre, 75002 Paris, France</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

SESSION: Cigarette Design

Chairman: Bernhard EITZINGER

Abstract No.

Abstract ID

Oral Presentation

ST 01

1690

Numerical simulation of cigarette smoking process: Effects of multifactor variations on cigarette burning behaviour and releases of tar and CO

LI Qiaoling(1); ZHONG Hongxiang(1); LIN Kai(1); CAI Guohua(1); WANG Daoquan(1); CHEN Xin(1); ZHENG Quanxing(1); LIU Xiucai(1); MA Pengfei(1); DENG Xiaohua(1); XU Hanchun(1); CHEN Xiaodong(2); LI Bin(3); LI Yuefeng(1)

(1) Technology Center, China Tobacco Fujian Industrial Co., Ltd., of CNTC, No. 298, Binshui Road, Jimei District, Xiamen 361021, Fujian, P.R. China

(2) College of Chemistry and Chemical Engineering, Xiamen University, No. 422, South Siming Road, Xiamen 361005, Fujian, P.R. China

(3) Key Laboratory of Tobacco Processing Technology of CNTC, Zhengzhou Tobacco Research Institute of CNTC, No. 2, Fengyang Street, Hi-Tech District, Zhengzhou 450001, P.R. China

ST 02

1823

Paper filter – a market changer?

MOSTOVOJUS V.; TUCINSKAS G.

Nemuno Banga LLC, Kestucio str. 1, Lentvaris, Lithuania

SESSION: E-Vapour

Chairman: Rob STEVENS

Abstract No.

Abstract ID

Oral Presentation

ST 03

1684

Method development for the analysis of mono-carbonyl compounds in e-vapor products by LC-MS

ZHU J.; HEREDIA A.; TWEEDY J.; TAYYARAH R.

ITG Brands and Fontem USA, P.O. Box 21688, Greensboro NC 27420, U.S.A.

ST 04

1785

Method optimization on analysis of TSNA in electronic cigarette liquids and N-nitrososarcosine (NSAR) in smokeless tobacco by UHPLC-MS/MS

WU Jingcun; QIN Feng

PerkinElmer Health Sciences Canada, Inc., 501 Rowntree Dairy Road, Unit 6, Woodbridge, Ontario L4L 8H1, Canada

ST 05

1814

Determination of glycidol in e-liquids and emissions from e-cigarettes

WANG Jiaming; RODRIGUEZ-LAFUENTE A.; JOZA P.

Labstat International Inc., 262 Manitou Drive, Kitchener, Ontario N2C 1L3, Canada



SMOKE SCIENCE & PRODUCT TECHNOLOGY

SESSION: HTP Aerosol Analysis

Chairman: Jutta PANI

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 06 1770	eHTP aerosol generation: mass balance method to evaluate the contribution of stick elements and device design DUROT N.; ROUILLARD S.; RAVERDY-LAMBERT D. <i>SWM INTL c/o LTR Industries, Usine Le Mans, 72702 Allonnes Cedex, France</i>
ST 07 1772	Investigation on HTP aerosol release dynamics with a new puff by puff HTP vaping machine DEJOIE S.(1); DUROT N.(1); BINARD F.(2); ROUILLARD S.(1); RAVERDY-LAMBERT D.(1) (1) <i>SWM Intl c/o LTR Industries, Usine Le Mans, 72702 Allonnes Cedex, France</i> (2) <i>SWM Intl c/o PDM Industries, Kerisole, 29300 Quimperlé, France</i>
ST 08 1804	Development and validation of a routine method for the determination of carbonyl compounds in heated tobacco products (HTP) by UPLC-MS JABLONSKI J.J.; MARTIN A.M.; GILLMAN I.G. <i>Enthalpy Analytical, LLC, 1470 E Parham Road, Richmond, VA 23228, U.S.A.</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

SESSION: HTP and E-Vapour Design

Chairman: Jutta PANI

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 09 1693	Influence of tobacco powder particle size on the reconstituted tobacco slurry process for electrically heated tobacco products TIAN Yongfeng; DONG Gaofeng; MIAO Mingming; TANG Jianguo; ZHU Donglai; SHANG Shanzhai; ZHANG Xia; HE Pei; TANG Shiyun; YANG Chen; LIU Zhihua <i>Technical Center, China Tobacco Yunnan Industrial Co., Ltd., of CNTC, Yunnan Key Laboratory of Tobacco Chemistry, No. 367, Hongjin Road, Kunming 650231, P.R. China</i>
ST 10 1769	Modular new product development in highly dynamic markets KÜCHENHOF J.(1); NIEBUHR G.(2); SCHMIDT R.(2); KESSLER M.(2); KRAUSE D.(1) (1) <i>Hamburg University of Technology, TUHH, Institute for Product Development and Mechanical Engineering Design (PKT), Denickestraße 17, 21073 Hamburg, Germany</i> (2) <i>Hauni Maschinenbau GmbH, Dev. Vaping Technologies, Kurt-A.-Körber-Chaussee 8-32, 21033 Hamburg, Germany</i>
ST 11 1791	Extractable and leachable testing of electronic nicotine delivery systems MORLEY N.; McGUIGAN S.; THOMAS J.; FEILDEN A. <i>Hall Analytical Laboratories Ltd, Millbrook Business Centre, Floats Road, Manchester M23 9YJ, U.K.</i>
ST 12 1807	Thermal behaviour of tobacco pads for aerosol generation SHEER C.(2); JAMALI A.(1); BÄUMKER E.(1); SABERI M.(1); PELZ U.(1); KESSLER M.(2); SCHMIDT R.(2); GOLDSCHMIDTBÖING F.(1) (1) <i>University of Freiburg, IMTEK, Design of Microsystems, Georges-Koehler-Allee 102, 79110 Freiburg, Germany</i> (2) <i>Hauni Maschinenbau GmbH, Vaping Technologies, Barnerstraße 14, Aufgang D, 22765 Hamburg, Germany</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

SESSION: *In vitro* Toxicology

Chairman: Kei YOSHINO

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 13 1762	<i>In vitro</i> biological assessment of nicotine administration efficiency of a prototypic ENDS with a novel volumetric heater MIRDOGAN A. <i>Hausi Maschinenbau GmbH, Kurt-A.-Körber-Chaussee, 8-32, 21033 Hamburg, Germany</i>
ST 14 1774	<i>In vitro</i> assessment of acute respiratory toxicity SHARMA M.(1); STUCKI A.(1); VERSTRAELEN S.(2); FRIJNS E.(2); MAES F.(2); CLIPPINGER A.J.(1) (1) <i>PETA International Science Consortium Ltd., Society Building, 8 All Saints Street, London N1 9RL, U.K.</i> (2) <i>VITO, Flemish Institute for Technological Research, Boeretang 200, 2400 Mol, Belgium</i>

SESSION: Nicotine Pouches

Chairman: Bin HU

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 15 1686	Characterization of on![®] nicotine pouches – Part 2: Nicotine dissolution release profiles ALDEEK F.; WAGNER K.A.; SMITH C.R.; McCUTCHEON N; GRISEVICH H; SUAREZ C.J.; McFARLANE C.B.; DANIELSON T.L. <i>Altria Client Services LLC, Research, Development & Regulatory Affairs, 601 East Jackson Street, Richmond, VA 23219, U.S.A.</i>
ST 16 1819	Harm reduction opportunities with a portfolio of oral tobacco-derived nicotine containing pouches SARKAR M. <i>Altria Client Services LLC, 601 East Jackson Street, Richmond, VA 23219, U.S.A.</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

SESSION: Non-Targeted Analysis of Smoke Free Product Aerosols

Chairman: Guy JACCARD

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 17 1682	The dos and don'ts of non-targeted screening by LC–HRAM-MS for chemical characterization of smoke-free products WACHSMUTH C.; ARNDT D.; BUCHHOLZ C.; BENTLEY M.; GOUJON-GINGLINGER C. <i>Philip Morris Products S.A., PMI R&D, Quai Jeanrenaud 5, CH-2000 Neuchâtel, Switzerland</i>
ST 18 1683	Computer-assisted structure identification (CASI) for high-throughput identification of small molecules by GC×GC–HRAM-TOFMS KNORR A.; ALMSTETTER M.; MARTIN E.; CASTELLON A.; POSPISIL P.; BENTLEY M.; GOUJON-GINGLINGER C. <i>Philip Morris Products S.A., PMI R&D, Quai Jeanrenaud 5, CH-2000 Neuchâtel, Switzerland</i>
ST 19 1703	Non-targeted chemical characterization of complex matrices by nominal- and high-resolution accurate-mass GC×GC–TOFMS ALMSTETTER M.; KNORR A.; RHOUMA M.; MARTIN E.; CASTELLON A.; POSPISIL P.; BENTLEY M.; GOUJON-GINGLINGER C. <i>Philip Morris Products S.A., PMI R&D, Quai Jeanrenaud 5, CH-2000 Neuchâtel, Switzerland</i>
ST 20 1786	Non-targeted analysis using gas chromatography mass spectrometry for evaluation of chemical composition of e-vapor products MILLER IV J.H.; SHAH N.H.; NOE M.R.; AGNEW-HEARD K.A.; GARDNER W.P.; PITHAWALLA Y.P. <i>Altria Client Services LLC, 600 East Leigh Street, Richmond, VA 23219, U.S.A.</i>
ST 21 1799	Untargeted chemical characterization of the aerosol generated by a heated tobacco product BENTLEY M.; ALMSTETTER M.; ARNDT D.; KNORR A.; MARTIN E.; POSPISIL P.; MAEDER S. <i>Philip Morris Products S.A., PMI R&D, Quai Jeanrenaud 5, 2000 Neuchâtel, Switzerland</i>
ST 22 1820	Can liquid chromatography scan techniques be as useful a tool for e-liquids as gas chromatography scan techniques have been for cigarette tobaccos? LAUTERBACH J.H. <i>Lauterbach & Associates, LLC, 211 Old Club Court, Macon, GA 31210, U.S.A.</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

SESSION: Product Use Behaviour

Chairman: Xavier CAHOURS

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 23 1731	New measures for assessing the abuse liability of connected ENDS CAPONE M.J. <i>Hauni Vaping Technologies, Weidenbaumsweg 103, 21033 Hamburg, Germany</i>
ST 24 1775	Dos and don'ts in the design of indoor air quality studies on smoke-free products MITOVA M.I.; GOUJON-GINGLINGER C.; GOMEZ LUESO M.; ROTACH M.; MAEDER S. <i>Philip Morris Products S.A., PMI R&D, Quai Jeanrenaud 5, CH-2000 Neuchâtel, Switzerland</i>
ST 25 1778	Human abuse liability assessment of tobacco and nicotine products: considerations to meet current regulatory recommendations BAXTER S.(1); VANSICKEL A.(2); SHERWOOD N.(3); CAMPBELL L.(1); KONG M.(4) (1) <i>RAI Services Company, Winston Salem, NC, U.S.A.</i> (2) <i>Altria Client Services, Richmond, VA, U.S.A.</i> (3) <i>Neil Sherwood Consulting, Nyon, Switzerland</i> (4) <i>Altasciences Clinical Research, Laval, QC, Canada</i>

SESSION: Risk Assessment

Chairman: Paul HARP

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 26 1667	Comparative risk assessment of heated tobacco product and electronic cigarette aerosols with cigarette smoke based on cancer potency and margin of exposure RODRIGO G.; JACCARD G.; TAFIN DJOKO D.; KORNELIOU A.; ESPOSITO M.; BELUSHKIN M. <i>Philip Morris Products S.A., PMI R&D, Rue des Usines 56, CH-2000 Neuchâtel, Switzerland</i>
ST 27 1827	Cardiovascular, carcinogenic and reproductive effects of nicotine exposure: a narrative review of the scientific literature MARTINEZ J.; PRICE L. <i>JT International SA, 8 Rue Kazem Radjavi, 1202 Geneva, Switzerland</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

SESSION: Smoke and Tobacco Analysis

Chairman: Karl WAGNER

Abstract No. <i>Abstract ID</i>	Oral Presentation
ST 28 1694	Transfer of aroma components in slim cigarettes flavoured by different methods WU Bingyu; FEI Ting; LUO Chen; BI Yanjiu; MA Lichao; TAO Liqj; WU Da <i>Shanghai Tobacco Group Co., Ltd., of CNTC, No. 3733, Xiupu Road, Shanghai 201315, P.R. China</i>
ST 29 1722	Comparison of reference cigarette variability, smoke yields, and filler HPHC content of 1R6F and 3R4F MORTON M.J.; BLAKE T.L.; WAGNER K.A. <i>Altria Client Services LLC, 601 East Jackson Street, Richmond, VA 23219, U.S.A.</i>
ST 30 1816	Dokha tobaccos – does their chemistry follow their growth in popularity? LAUTERBACH J.H. <i>Lauterbach & Associates, LLC, 211 Old Club Court, Macon, GA 31210, U.S.A.</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

POSTER SESSION: Cigarettes and Cigars

Abstract No. <i>Abstract ID</i>	Poster Presentation
STPOST 01 1698	An algorithm for inspecting breakable capsules with “Off-Centre” defects based on machine vision technology SONG Xuyan; PAN Xi; LI Ran; WEI Min; HE Yunlu <i>China Tobacco Hubei Industrial Co., Ltd. of CNTC, Yellow Crane Tower Science Park, No. 1355, Jinshan Avenue, Dongxihu District, Wuhan 430040, Hubei, P.R. China</i>
STPOST 02 1729	Analysis of highly volatile flavouring compounds in cigarettes smoke PINTO M.I.; PORTER R.; GHELLI J.; GOSS C.; THOMPSON N.; DALTON D.; WRIGHT C. <i>British American Tobacco, R&D Centre, Regents Park Road, Millbrook, Southampton, SO15 8TL, U.K.</i>
STPOST 03 1805	Conversion of glycerin in cigar smoke to formaldehyde in DNPH trapping solution JABLONSKI J.J.; GILLMAN I.G. <i>Enthalpy Analytical, LLC, 1470 E Parham Road, Richmond, VA 23228, U.S.A.</i>
STPOST 04 1806	Assessing the sources of smoke variability in machine-made cigars HILLDRUP J.P.; GILLMAN I.G. <i>Enthalpy Analytical, LLC, 1470 E Parham Road, Richmond, VA 23228, U.S.A.</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

POSTER SESSION: HTP and E-Vapour Analysis

Abstract No.	Poster Presentation
<i>Abstract ID</i>	
STPOST 05 1663	A screening method by gas chromatography–mass spectrometry for the quantitation of 33 aerosol constituents from a heat-not-burn tobacco product HOFER I.; GAUTIER L.; CORTES SAUTEUR E.; DOBLER M.; PYTHON A.; O'REILLY C.; GISI D.; TINGUELY E.; WEHREN L.; GARCÍA FIDALGO E.; CUKURCAM L.; HENNEMANN M.; MATERA R.; ROTA D.; SANTOS CH.; SEQUEIRA C.; EPARS T. <i>Philip Morris Products S.A., PMI R&D, Quai Jeanrenaud 5, CH-2000 Neuchatel, Switzerland</i>
STPOST 06 1711	Assessment of filter pre-treatment for metal analysis in e-vapour aerosol IMAI R.; NAGAE H.; FUKAI Y.; SHIMAZU A.; TAKAYAMA H. <i>Japan Tobacco Inc., Scientific Product Assessment Centre, 6-2, Umeokaoka, Aoba-ku, Yokohama, Kanagawa 227-8512, Japan</i>
STPOST 07 1798	New developments in vacuum photoionisation TOF-MS technique to analyse smoking products on-line and in real time EHLERT S.(1,2); HEIDE J.(2); WALTE A.(1); ZIMMERMANN R.(2) <i>(1) Photonion GmbH, Hagenower Str. 73, 19061 Schwerin, Germany</i> <i>(2) University of Rostock, Dept. of Analytical Chemistry, Dr.-Lorenz-Weg 2; 18059 Rostock, Germany</i>
STPOST 08 1815	Determination of a-tocopherol acetate (vitamin E acetate) in e-liquids and cannabis liquids samples - a comparison between HPLC-DAD and LC-MS/MS methods RODRIGUEZ-LAFUENTE A.; JOZA P. <i>Labstat International Inc., 262 Manitou Drive, Kitchener, Ontario N2C 1L3, Canada</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

POSTER SESSION: Tobacco and Smokeless Tobacco

Abstract No. <i>Abstract ID</i>	Poster Presentation
STPOST 09 1662	Study of thermal decomposition of Iranian Virginia tobacco components MORADI ROBATI G.R.; SAJJADI A.; SALAVATI M.R. <i>Tirtash Tobacco Research and Education Center, Behshar, Iran</i>
STPOST 10 1685	Characterization of on![®] nicotine pouches – Part 1: HPHCs WAGNER K.A.; BALLENTINE R.M.; BROWN A.P.; JIN X.C.; LOPEZ V.F.; SHARIFI M.; McFARLANE C.B.; MELVIN M. S.; MORTON M.J.; DANIELSON T.L. <i>Altria Client Services LLC, Research, Development & Regulatory Affairs, 601 East Jackson Street, Richmond, VA 23219, U.S.A.</i>
STPOST 11 1695	Factors influencing pyrolysis and smoke release characteristics of tobacco particles at low temperature CAO Yun(1); ZHOU Shun(1,2); WANG Xiaofeng(1); ZHANG Yaping(1,2); ZHANG Xiaoyu(1); WANG Chenghu(1); LI Yanyan(1); GUAN Mingjing(1); CHEN Gang(2); HUANG Lan(2) (1) <i>Key Laboratory of Combustion & Pyrolysis Study of CNTC, Anhui Tobacco Industrial Co., Ltd., of CNTC, No. 9, Tianda Road, Hefei 230088, P.R. China</i> (2) <i>Key Laboratory for Tobacco Chemistry of Anhui Province, Anhui Tobacco Industrial Co., Ltd., of CNTC, No. 9, Tianda Road, Hefei 230088, P.R. China</i>
STPOST 12 1696	A rapid quantitative optimization method for technological parameters of threshing based on uniform experimental design YIN Fan; CHEN Zhuangyu; LUO Xianhua <i>Chenzhou Redrying Factory of Hunan Tobacco Redrying Co., Ltd., of CNTC, No. 1728, Chenzhou Avenue, Huatang Town, Beihu District, Chenzhou, 423000, Hunan, P.R. China</i>
STPOST 13 1697	Analysis of menthol optical isomers in tobacco products SI Xiaoxi; ZHU Ruizhi; TANG Jianguo; MIAO Mingming; LIU Zhihua <i>Yunnan Key Laboratory of Tobacco Chemistry, R&D Center of China Tobacco Yunnan Industrial Co., Ltd. of CNTC, No. 367, Hongjin Road, Kunming 650231, Yunnan, P.R. China</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

POSTER SESSION: Toxicology

Abstract No. <i>Abstract ID</i>	Poster Presentation
STPOST 14 1656	Mode-of-action analysis of the induction of micronuclei by a flavouring compound <i>in vitro</i> WATANABE T.; MUNAKATA S.; ISHII T.; SAITO J.; ERAMI K.; HASHIZUME T. <i>Japan Tobacco Inc., R&D Group, Scientific Product Assessment Center, 6-2, Umeaoka, Aoba-ku, Yokohama, Kanagawa 227-8512, Japan</i>
STPOST 15 1660	The comparative analysis of cytokine production by a human 3D airway tissue model following exposure to traditional cigarette smoke, tobacco-heated product and e-cigarette aerosol BEDFORD R.(1); ROTHWELL E.(1); MARTIN S.(1); O'HANLON C.(1); McCUNE A.(2); HOLLINGS M.(1) (1) <i>Genetic Toxicology, Covance Laboratories Ltd, Harrogate, North Yorkshire, U.K.</i> (2) <i>Immunology and Immunotoxicology, Covance Laboratories Ltd, Harrogate, North Yorkshire, U.K.</i>
STPOST 16 1709	Comparison of <i>in vitro</i> cytotoxicity and genotoxicity of condensates derived from electronic-cigarettes and reference combustible cigarette DOSHI U.; GARDNER W.; LEE K.M. <i>Altria Client Services LLC, 601 East Jackson Street, Richmond, VA 23219, U.S.A.</i>
STPOST 17 1714	Comparison of smoking machines for sample preparation for <i>in vitro</i> assays SEKIGUCHI H.; ITO H. <i>Japan Tobacco Inc., Scientific Product Assessment Center, 6-2, Umeaoka, Aoba-ku, Yokohama, Kanagawa 227-8512, Japan</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

CORESTA SUB-GROUP & TASK FORCE REPORTS

Smoke Science

Group	Report Presentation
BMK	Sub-Group Biomarkers PRASAD G.L. <i>RAI Services Co., P.O. Box 1487, Winston-Salem, NC 27102, U.S.A.</i>
CROM	Task Force Consumer Reported Outcome Measures Consortium CHREA C. <i>Philip Morris Products S.A., Quai Jeanrenaud 3, CH-2000 Neuchâtel, Switzerland</i>
IVT	Sub-Group <i>In Vitro</i> Toxicity Testing YOSHINO K. <i>Japan Tobacco Inc., 6-2 Umegaoka, Aoba-ku, Kanagawa 227-8512, Japan</i>
NGTX	Task Force 21st Century Toxicology for Next Generation Tobacco and Nicotine Products (NGTX) GACA M. <i>British American Tobacco, Group R&D, Regents Park Road, Millbrook, Southampton SO15 8TL, U.K.</i>
PUB	Sub-Group Product Use Behaviour PRASAD K. <i>British American Tobacco, Group R&D, Regents Park Road, Millbrook, Southampton SO15 8TL, U.K.</i>
SMA	Sub-Group Smoke Analytes JEFFERY J. <i>British American Tobacco, R&D Centre, Regents Park Road, Millbrook, Southampton SO15 8TL, U.K.</i>



SMOKE SCIENCE & PRODUCT TECHNOLOGY

CORESTA SUB-GROUP & TASK FORCE REPORTS

Product Technology

Group	Report Presentation
CSM	Sub-Group Cigar Smoking Methods LINDEGAARD T. <i>Scandinavian Tobacco Group A/S, Sydmarken 42, SE-2860 Soborg, Denmark</i>
EVAP	Sub-Group E-Vapour GARNER C.(1); <u>GILLMAN I.G.</u> (1) <i>RAI Services Company, 401 North Main Street, Winston-Salem, NC 27102, U.S.A.</i> (2) <i>JUUL Labs, Raleigh, NC, U.S.A.</i>
HTP	Task Force Heated Tobacco Products DIGARD H. <i>British American Tobacco, R&D, Regents Park Road, Millbrook, Southampton SO15 8TL, U.K.</i>
PTM	Sub-Group Physical Test Methods EITZINGER B. <i>delfort AG, Fabrikstraße 20, A-4050 Traun, Austria</i>
RAC	Sub-Group Routine Analytical Chemistry YAMAZAKI H. <i>Japan Tobacco Inc., 1-17-7, Yokokawa, Sumida-ku, Tokyo 130-8603, Japan</i>
TTPA	Sub-Group Tobacco and Tobacco Products Analytes WAGNER K.A. <i>Altria Client Services LLC., 601 East Jackson St., Richmond, VA 23219, U.S.A.</i>