



NEWSLETTER

Issue 51 – August 2018

FOREWORD

In three months' time scientists from around the world will once again gather at the biennial CORESTA Congress, this year being held in Kunming, China. The "city of eternal spring" is very familiar to the tobacco community as the point of access to the Yunnan Province, a major Chinese tobacco producing area. In addition to the quality papers scheduled for presentation, the Congress will host a record five workshops on key current topics. These workshops, along with a special discussion session on heated tobacco products, are central to CORESTA's ambition to embrace change through science and innovation. It is hoped that participants will gain insight into the future and work together towards addressing the numerous challenges of today's tobacco and tobacco derived products environment.

The Congress will also host the CORESTA General Assembly and the usual Board and Scientific Commission elections to select the executives that will take the association forward over the next two years. Details are outlined in this Newsletter.

The CORESTA Sub-Groups and Task Forces have continued to be very active. New projects, publications and meetings continue at a steady pace, and a number of groups have had representatives make presentations at external events. Detailed reports will be made during the Congress.

In addition to information on the Congress and CORESTA working groups, this Newsletter also features an introduction to an exciting new venture undertaken by CORESTA in conjunction with an MBA project on the scientific measurement of the impact on stakeholders of measures taken to ensure sustainability.

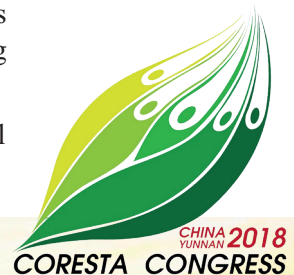
CORESTA CONGRESS Kunming, China, 22-26 October 2018

The China National Tobacco Corporation (CNTC) is looking forward to welcoming delegates to this year's CORESTA Congress from 22-26 October, and to the Sub-Group and Task Force meetings prior to the main event. All efforts are being made to ensure that participants experience true Chinese hospitality as soon as they arrive in Kunming, and the event venue, the InterContinental Hotel, has all the top-of-the-range amenities to cater for a first-class scientific gathering.

The Congress theme is "**Science and Innovation: Addressing the Needs**" and the working programme has been geared towards focusing on all aspects of the theme.

All programme and practical information on the Congress is detailed on the official Congress website at www.corestakunming2018.com. Any queries are to be addressed to the Organising Committee at lancia@coresta2018.org and demi@coresta2018.org who will be happy to assist.

Please note that "Early Bird" registration ends **15 August 2018** and online registration is open until **7 October 2018**.



KUNMING - A BRIEF HISTORY

Kunming is the capital of the Yunnan Province in southwest China.

Blessed with a year-round spring climate, it is affectionately known as the City of Eternal Spring.

Kunming's history spans over 2400 years, but it is believed that human habitation of the area dates back to the Neolithic period. Records can be traced back to 722-481 BC when the first Chinese began inhabiting the area. Since then, Kunming and the surrounding areas have witnessed a succession of kingdoms and dynasties.

Kunming owes its importance to the fact that it was the gateway to the South Silk Road that facilitated trade with Tibet, Sichuan, Myanmar and India.

The Kingdom of Dian was established around Lake Dian during the Warring States period (475-221 BC). Dian was subjugated by the Chinese Han dynasty under the reign of Emperor Wu in 109 BC.

It is thought that "Kunming" was the name of an ancient tribe in the southwest of Yunnan Province. It was not until the Tang Dynasty (618-907 AD) that it became a place name.

In 765, the Tang Dynasty established the Nanzhao Kingdom that built and developed the east side of the city, which marked the beginning of Kunming's history.

The Yuan Dynasty (Mongols) took over when in 1274 Kublai Khan captured the area and made Kunming the capital of Yunnan Province in 1276. The city grew as a trading centre between the southwest and the rest of China. Kunming is believed to have been the city of Yachi, described by the 13th century Venetian traveller Marco Polo.

In the 14th century, Kunming was retaken when the Ming Dynasty defeated the Mongols. During the Ming and the following Qing Dynasties, Kunming was the seat of the superior prefecture of Yunnan.

In the 19th century, the city experienced several rebellious attacks against the reigning Manchus by the

Muslims, led by Du Wenxiu, the Sultan of Dali.

The opening of the Kunming area began in earnest with the completion in 1906-1910 of the Yunnan-Vietnam Railway to Haiphong in north Vietnam (then part of French Indochina). Kunming became a treaty port opening to foreign trade in 1908 resulting in the development of a vibrant commercial centre.

Following the overthrow of the Qing dynasty in Yunnan, Kunming reverted to county status in 1912.

Kunming was transformed into a modern city as a result of the outbreak of the Second Sino-Japanese War in 1937. A great number of Chinese refugees from the east flooded to southwest of China, bringing with them money and expertise. During the Second World War, Kunming proved to be invaluable for the Allied Forces and Nationalists as it was located far from the invading forces in the east. Kunming expanded as a city, establishing itself as an industrial and manufacturing base for the wartime government in Chongqing, providing supplies and munitions to troops in the region, especially on the famous Burma Road.

A turbulent period ensued during the Cultural Revolution led by Mao Zedong. Being geographically isolated, Kunming and the Yunnan region were used by the government to exile people who had fallen politically out of favour. During the Vietnam War and the Sino-Vietnamese War, Kunming was an important supply depot.

Economic reforms in the mid-1980s saw a dramatic increase in economic investment in Kunming. Now one of the major developed cities in China, modern-day Kunming is a thriving

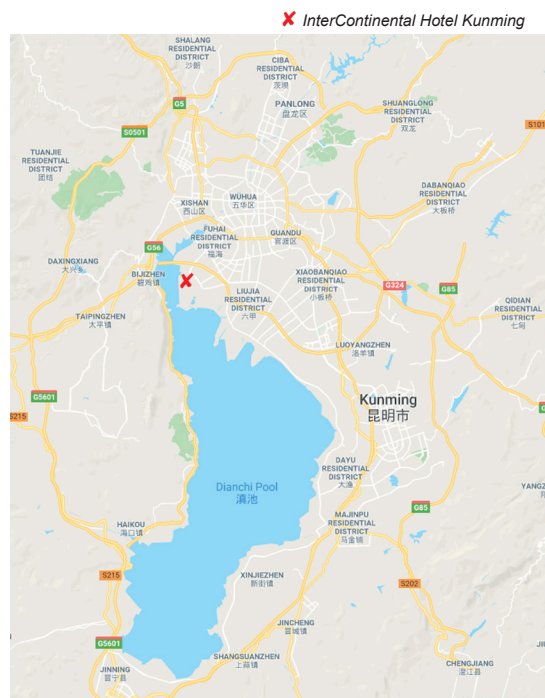
metropolis. Home to over 6.6 million people, its economic importance is due to its location, making it an important transport and trade platform in south-eastern Asia.

The city is a major mineral producer and an engineering centre and has numerous factories and processing plants.

Kunming has also become an important agricultural centre for the Yunnan region. Along with food and horticulture, tobacco is a major resource in the region and many local and international tobacco companies have headquarters and offices in the city.

Kunming is a centre of educational and cultural excellence and home to the prestigious Yunnan University and Yunnan Normal University.

A significant growth in tourism has made the city an international hub for the region's tourist industry. In addition to its temples, lakes and impressive hill landscapes, it is also close to several UNESCO World Heritage sites such as the Shilin Stone Forest.



✗ InterContinental Hotel Kunming



Lake Dianchi, Kunming

WORKING PROGRAMME

The Scientific Commission members form the Reading Committee. A full day is reserved for the review and selection of abstract submissions (250 in total this year) and the challenging task of setting the programme.

Information on the abstracts selected by the Reading Committee was communicated to authors by email on 26 June 2018 and contact with certain authors regarding possible clarification and/or modifications was undertaken in July. The draft Congress programme and complete list of papers have been published on the CORESTA website at www.coresta.org and on the official Congress website at www.corestakunming2018.com. The lists and programmes are kept up-to-date with any changes as necessary.

A total of **233** abstracts were selected for presentation:

- Agro-Phyto: 49 papers, 1 inter-group paper, 10 Workshop papers, 30 posters (Total: **90**)
- Smoke-Techno: 68 papers, 1 inter-group paper, 10 Workshop papers, 64 posters (Total: **143**)

Five Workshops are planned, with one as a plenary session (more information on next page). CORESTA Sub-Group and Task Force Coordinators will, as usual, present reports on the activities of their groups.

One keynote speaker will be presenting during the opening Plenary Session:

Dr Cao Pei-jian is the Vice Director of China Tobacco Gene Research Center and has been a visiting scholar in the Department of Plant Pathology at UC Davis. His team obtained the Special Prize for CNTC Scientific and Technological Progress Award in 2016, and he was selected in the Young Elite Scientists Sponsorship Program from 2016 to 2018 by the China Association for Science and Technology. Dr Cao will be speaking on multi-omics (genomics, transcriptomics, metabolomics, etc.) research on tobacco conducted by CNTC and progress on tobacco molecular breeding in China.

Tuesday 23 October			
Agro-Phyto		Smoke-Techno	
PLENARY			
Plenary Workshop SCIENCE & INNOVATION			
Agro-Phyto		Smoke-Techno	
LOW NICOTINE	GAP 1	IN VITRO	EVAP METHODS / PRODUCTS 1
GENETICS	GAP 2	HEATED TOBACCO PRODUCTS	CLINICAL STUDIES

Wednesday 24 October		
Agro-Phyto	Smoke-Techno	
Workshop CROP PROTECTION	EVAP METHODS / PRODUCTS 2	PRODUCT ANALYSIS
CPA 1	PRODUCT USE BEHAVIOUR	ANALYTICAL METHODS 1
Agro-Phyto	Smoke-Techno	
TSNA 1	Workshop RISK ASSESSMENT	
TSNA 2	RISK ASSESSMENT / POPULATION STUDIES	PRODUCT DESIGN

Thursday 25 October		
Agro-Phyto	Smoke-Techno	
BIOTECH	METHODS	PROCESS / QUALITY
Workshop GENOME APPLICATIONS	RISK PERCEPTION	ANALYTICAL METHODS 2
Voting Delegates	All	
General Assembly Board & Sci. Comm. Elections	Posters	

Friday 26 October			
Agro-Phyto		Smoke-Techno	
LEAF CHEMISTRY	CPA 2	BIOMARKERS	AEROSOL SCIENCE
DISEASE		Workshop BIOMARKERS	
Agro-Phyto		Smoke-Techno	
PLENARY			
Open Discussion HEATED TOBACCO PRODUCTS			



22 - 26 October 2018
Intercontinental Hotel
Kunming - China

WORKSHOPS

SCIENCE & INNOVATION – Tuesday 23 October – 10:50

To warrant the sustainability of the tobacco sector it is critical to address the needs of many stakeholders. The needs are as diverse as the stakeholders and the emergence of new and innovative products and technologies creates opportunities for advancements. This plenary Workshop will present modern practices in the field and how the role of the agronomist has changed over time. From the field to the plant, new – greener – trends in crop protection and the subsequent impact on final crop quality will be highlighted. The implications of regulation in conjunction with the wider economical aspects of the tobacco growing sector on long term sustainability will be covered.

With the introduction of innovative products, such as, but not limited to, e-vapour products, it is an

imperative to get consensus at society level, inter alia between manufacturers and regulators. The main requirement to reach such consensus is to derive robust, science-based understanding of product safety standards as well as harm reduction potentials, both of which will be covered by the Workshop. Relative and absolute risk assessment of existing as well as emerging products is an indispensable tool to characterize potential harm. The role to be played by risk assessment of innovative products in the context of population harm reduction and approaches to evaluate the possible public health gains will also be discussed.

The presentations will be followed by an open panel to foster exchange with presenters as well as to widen the themes as presented by the speakers.

CROP PROTECTION – Wednesday 24 October – 8:30

The tobacco industry is committed to ensuring the sustainability of the supply chain and has implemented a diverse range of programmes, from eliminating child labour to environmental stewardship and worker safety training. Profitability of the grower is one of the core components of this effort. The Agronomy and Phytopathology Study Groups of CORESTA continuously strive to integrate the components of sustainability into user-friendly formats such as the IPM Sub-Group, which is compiling notes for field technicians on the management of all known tobacco diseases and insects, and the Diagnoplant app for diagnosis of tobacco diseases. Application of CPAs is an integral part of IPM. A large proportion of the world's tobacco is produced by small-scale growers, most of whom rely on animals for their draft power, and also use

backpack sprayers to apply CPAs. In most regions, a network of extension personnel is available to train growers on all aspects of tobacco production, including advice on CPA use, storage and sprayer calibration. The four presentations in this Workshop will explore various aspects of CPA application in more depth than extension personnel would be expected to convey to growers, but which senior agronomists and management should be aware of when considering in-depth training and strategic planning.

The presentations will cover:

- the historical and current status of CPA residues
- the movement of CPAs in the plant and their fate in the environment
- the mechanics of spray droplet formation and factors affecting the efficiency of application
- the expectations of biological control.

TOBACCO BIOTECHNOLOGY - FROM GENOME TO VARIETIES – Thursday 25 October – 10:50

Recently there has been a worldwide interest in genomic research and marker assisted breeding in tobacco. This Workshop will allow the participants to present and discuss their strategies and results on the practical application of tobacco genome resources. It will also explore new collaborations and techniques that advance tobacco research and breeding. The topic will be tobacco genomics and biotechnology, but emphasis will be on practical application of genome and gene information on tobacco breeding. The presentations will be followed by a panel discussion to

directly interact with the presenters with the aim of triggering debate on this challenging and stimulating topic. A session entitled Biotechnology has been arranged before the Workshop and speakers from this session will join the panel discussion as well.

The presentations will cover the following areas:

- Tobacco genome research and genomic resources
- Reduction of harmful constituents by molecular breeding
- Viruses and bacterial diseases breeding
- Recent developments and practical applications of new breeding technologies

PRODUCT RISK ASSESSMENT – Wednesday 24 October – 14:00

Currently and historically, toxicological quantitative risk assessment (QRA) has been used by governmental and regulatory agencies worldwide for characterising potential health risks in the environment and consumer products. In this context, QRA is used to inform regulatory decision-making, and to evaluate potential public health concerns. With regards to tobacco products, enactment of the Family Smoking Prevention and Tobacco Control Act in the United States gave the US Food and Drug Administration the authority to regulate the marketing, manufacturing, and distribution of tobacco products, with the intention of protecting the public health. Given this, QRA can be a useful tool with respect to the evaluation

and regulatory decision making that accompanies the pre-market assessment of tobacco products.

This Workshop will increase awareness of toxicological quantitative risk assessment generally, and for tobacco products specifically. It will discuss and help in the understanding of strengths and limitations of a variety of assessment approaches for given circumstances. Various tools, methodologies, assumptions, definitions, and applications will be discussed. The utility, challenges, and opportunities will also be considered.

After the presentations, speakers will join a panel discussion to allow those attending the Workshop to ask relevant questions.

BIOMARKERS – Friday 26 October – 10:50

Biomarkers are important tools in regulatory decision-making. In the context of tobacco product regulation, biomarkers of exposure and biomarkers of effect/potential harm can play an important role in characterising the potential health risks. Although several smoking-related biomarkers of effect have been proposed, few have been satisfactorily applied to tobacco product evaluation or to assess the health effects of tobacco products due to various considerations, and several challenges remain.

Goals of the Workshop:

- To critically review application of biomarkers of effect and limitations for tobacco product evaluation
- To examine the biomarker qualification process for tobacco-related biomarkers.

Topics for discussion:

- Biomarker use in product evaluation and regulatory decision making
- Avenues available to industry and the FDA to accelerate progress
- A standardised fit-for-purpose qualification process for tobacco biomarkers
- Adequate assay methods for biomarkers, and applicable standards for different biomarker assays
- Integration of “Omic” datasets into tobacco product evaluation
- Ideas for collaboration between industry and regulatory authorities
- The role of CORESTA in CTP’s Critical Path Initiative and Biomarker Qualification Program.

HEATED TOBACCO PRODUCTS – An Open Discussion

Heated tobacco products (HTPs) are systems that heat and aerosolize tobacco constituents instead of burning them.

HTPs have become a prominent topic in many forums and meetings. The CORESTA Board was of the opinion that CORESTA had to contribute in providing sound scientific data on some aspects of these products.

A survey was recently sent to CORESTA Members to assess their interest in the HTPs, gauge their experience in testing and/or manufacturing HTPs, ask if they may be interested in working on the products within a CORESTA framework, and if so, obtain suggestions for the scope and objectives of a possible CORESTA Task Force.

Results of the survey indicated that there was significant interest in HTPs, particularly with regards to testing and regulations, physical test methods and aerosol and filler analytical methods, and much enthusiasm in participating in a discussion on the topic.

It has therefore been decided to hold a brief one-hour meeting at the end of the CORESTA Congress in order to have an open exchange with interested parties on the way forward and possibly set the groundwork for the launch of a CORESTA Task Force.

Meeting details:

Date: Friday, 26 October 2018 (after lunch)

Venue: InterContinental Hotel, Kunming, China

Participants: Open to all, including non-CORESTA members.

CONGRESS ELECTIONS

Elections are held every two years during the CORESTA Congress to renew the CORESTA Board and Scientific Commission. CORESTA Member Organisations have a right to vote to elect new officials for both these executive bodies. Each CORESTA Member Organisation holds a pre-defined number of votes depending on its membership category.

The Official Delegates of CORESTA Member Organisations will be receiving by email the Activity Report and Financial Report for the 61st and 62nd Financial Years, an agenda for the General Assembly and a form for registering delegates to the General Assembly. **Official Delegates who have not received these documents by 24 August 2018 should contact the CORESTA Secretariat.**

Renewal of the Board

The Board is responsible for managing CORESTA and defining CORESTA policy.

The Board consists of 10 elected Member Organisations and two to four co-opted Member Organisations. The elected members hold a four-year term of office, which is renewable, and co-opted members are in office for two years. In 2018, the tenure of nine companies expires (five elected and four co-opted). The vote will seek to elect five organisations. After the election, the newly elected Board will meet to co-opt two to four additional organisations to form a complete executive committee and will elect its President and Vice President.

The election to renew the Board will be held during the General Assembly on the afternoon of Thursday, 25 October. A simple majority quorum is required. Each Member Organisation has the right to vote at the Board election. Proxies are accepted - however, a single Member Organisation voting delegate can represent no more than three Members at each election, i.e. their Member Organisation and two additional Members.

Member Organisations wishing to run for election to the Board should contact the CORESTA Secretary General, before 24 September 2018.

<p>Members elected in 2014 whose terms will expire in October 2018</p> <p>delfort AG (Austria) KT&G Corporation (South Korea) Reynolds American Inc. Services Co. (USA) SWM International Inc. (USA) Universal Leaf Tobacco Company (USA)</p>	<p>Members elected in 2016 (until 2020)</p> <p>Alliance One International, Inc. (USA) British American Tobacco (UK) China National Tobacco Corporation (China) Imperial Tobacco Ltd (UK) Japan Tobacco Inc. (Japan)</p>
<p>Co-opted members whose terms will expire in October 2018</p> <p>Alternative Ingredients, Inc. (USA) Borgwaldt KC GmbH (Germany) Swedish Match AB (Sweden) University of Kentucky (USA)</p>	

Renewal of the Scientific Commission

The Scientific Commission is responsible for leading and organising scientific and technical activities within CORESTA and acts as scientific counsel to the Board.

The Scientific Commission consists of a five-person Executive Committee for each of the four Study Groups, i.e. 20 persons. They are elected *intuitu personae* which means they cannot be replaced by another person in case of absence, resignation, etc. They can serve up to three consecutive terms of office.

Elections will be held to elect the President, Secretary and three members. After the election, the incoming Scientific Commission members elect their new President and Vice President.

Similarly to the Board election, each Member Organisation has the right to vote at each Study Group election. Proxies are accepted, but a single Member Organisation voting delegate can represent no more than three Members at each election, i.e. their Member Organisation and two additional Members.

The elections for the renewal of the Scientific Commission will be held on the afternoon of Thursday, 25 October, after the General Assembly and Board elections. **Participants interested in running for election to the Scientific Commission, or nominating candidates, are asked to contact the CORESTA Secretary General and provide a brief résumé.** Candidates must be able, willing and committed to fulfilling their obligations and must participate fully in the activities, meetings and document reviews of the Study Group Executive Committee.

CORESTA INTERNAL STRUCTURES

CORESTA is an association ruled by French law. The governing bodies and main rules are described in three documents:

A. The Statutes

This document, amended several times since the inception of CORESTA in 1956, and most recently in October 2016, describes the general purpose of the association and the role of its governing bodies.

The governing bodies are:

- The General Assembly, which elects the Board and has many powers, including that of dissolving the association.
- The Board, which in practice runs the association and reports to the General Assembly.

Only fundamental elements are included in the Statutes.

B. The Internal Rules

The Internal Rules detail the procedures and dispositions needed to implement the Statutes. The latest version was approved in 2016.

The Internal Rules give full details on the rights and duties of the Members, on the procedures to elect the Board, on the duties and empowerments of the Secretary General, and only summary indications on the existence and work of the Study Groups and Scientific Commission, which are detailed in the third essential document, as developed hereunder.

C. The Rules Governing the Functions of the Scientific Commission and Study Groups

The existence and need for this document is mentioned in the Internal Rules. This document has to be approved by the General Assembly. The latest version, also approved in 2016, describes in detail the role, composition and functioning of the Study Groups and Scientific Commission and the rules for the elections within the Study Groups.

Additional documents on the functioning of the Sub-Groups and Task Forces have been produced by the Scientific Commission, namely Guidelines for Co-ordinators of Task Forces and Sub-Groups and Participation of Non-CORESTA Members in the Activity of Working Groups.

These documents are compiled in the CORESTA Main Rules 2016 publication available on the CORESTA website.



UPCOMING CORESTA MEETINGS (2018)

Meeting	Date	Location
SG Product Use Behaviour (PUB)	21 October	Kunming, China
SG Biomarkers (BMK)	21 October	Kunming, China
SG Smoke Analytes (SMA)	21 October	Kunming, China
SG Routine Analytical Chemistry (RAC)	21 October	Kunming, China
SG Integrated Pest Management (IPM)	21 October	Kunming, China
SG TSNA in Air-cured and Fire-cured Tobacco (TSNA)	21 October	Kunming, China
SG Agrochemical Residue Field Trials (RFT)	21 October	Kunming, China
Agrochemical Advisory Committee (ACAC)	22 October	Kunming, China
SG Proficiency Testing for Detection of Transgenic Tobacco (GMO)	22 October	Kunming, China
SG In Vitro Toxicity Testing (IVT)	22 October	Kunming, China
SG Physical Test Methods (PTM)	22 October	Kunming, China
SG Tobacco and Tobacco Products Analytes (TTPA)	22 October	Kunming, China
SG Cigarette Variability (CVAR)	22 October	Kunming, China
TF Consumer Reported Outcome Measures Consortium (CROM)	22 October	Kunming, China
TF Tobacco Alkaloid Genetics (TAG)	22 October	Kunming, China
TF Tobacco Biotechnology and Omics (TBO)	22 October	Kunming, China
SG E-Vapour (EVAP)	22 October	Kunming, China
CORESTA CONGRESS	22-26 October	Kunming, China

CORESTA SUB-GROUPS & TASK FORCES

SMOKE SCIENCE Study Group

New Task Force: Consumer Reported Outcome Measures Consortium (CROM)

NEW

At the initiative of the Product Use Behaviour (PUB) Sub-Group, a Consumer Reported Outcome Measures Consortium Task Force is being set-up with the following purposes:

- To develop CROM approach for Tobacco and Nicotine Products under guidance of industry, academia and regulatory agency stakeholders
- To adopt validation guidelines for CROM for use in the assessment of products with reduced risk potential
- To create a repository of existing and new CROM instruments outlining measurement and validation approaches

A two-hour introductory meeting is scheduled on 22 October in Kunming, prior to the CORESTA Congress. For further details please contact Krishna Prasad – British American Tobacco, UK (krishna_prasad@bat.com)

Revised Objectives: Sub-Group Smoke Analytes (SMA)

UPDATE

Updated Objectives:

1. To propose and maintain CORESTA Recommended Methods (CRMs) and related documents for the analysis of smoke constituents from combustible tobacco products.
2. To organise interlaboratory testing related to Objective 1.

The objectives of the Sub-Group were revised, together with those of the PTM, RAC and TTPA Sub-Groups (below), in order to harmonise the work of the four groups so that the scope of each is clearly defined and there is no overlap of tasks.

PRODUCT TECHNOLOGY Study Group

Revised Objectives: Sub-Group Physical Test Methods (PTM)

UPDATE

Updated Objectives:

1. To propose and maintain CORESTA Recommended Methods (CRMs) and related documents for the physical testing of tobacco, tobacco products and their components.
2. To organise interlaboratory testing related to Objective 1.

Revised Objectives: Sub-Group Routine Analytical Chemistry (RAC)

UPDATE

Updated Objectives:

1. To maintain CORESTA Recommended Methods (CRMs) and related documents for the analysis of tobacco, smoke, and cigarette components.
2. To organise interlaboratory testing related to Objective 1.
3. To organise the manufacture of and maintain CORESTA Monitors for TNCO and ignition propensity.

Revised Objectives: Sub-Group Tobacco and Tobacco Products Analytes (TTPA)

UPDATE

Updated Objectives:

1. To propose and maintain CORESTA Recommended Methods (CRMs) and related documents for the analysis of tobacco and unburned tobacco products.
2. To organise interlaboratory testing related to Objective 1.
3. To organise the manufacture of and maintain smokeless tobacco reference products.

The objectives of the above three Sub-Groups were revised, together with that of the SMA Sub-Group (above), in order to harmonise the work of all four groups so that the scope of each is clearly defined and there is no overlap of tasks.

CORESTA REPORTS

The following reports have been published on the CORESTA website at www.coresta.org:

- **Proficiency Study of Menthol in Cigarettes and Cut Filler**

Technical Report [RAC-116-CTR] – May 2018 (Sub-Group Routine Analytical Chemistry)

The CORESTA Routine Analytical Chemistry Sub-Group (RAC) conducted a proficiency study of menthol in cigarettes and cut filler in the first quarter of 2017. The objective of the study was to evaluate in-house methods for determination of menthol in cigarettes, cut filler, and non-tobacco material. Based on the results, which were generally comparable across the participating laboratories, a method has been proposed for evaluation and, if fit-for-purpose, will be proposed as a CORESTA Recommended Method (CRM).

- **2017 Collaborative Study on Carbonyl Containing Compounds in Electronic Cigarette Liquids**

Technical Report [EVAP-127-1-CTR] – May 2018 (Sub-Group E-Vapour)

The CORESTA E-Vapour Sub-Group (EVAP) investigated the development of an analytical method suitable for the analysis of carbonyl containing compounds in electronic cigarette liquids (e-liquids) and aerosols. A Collaborative Study was undertaken to evaluate repeatability and reproducibility (r&R) values of the proposed methodology based on high-performance liquid chromatography with ultra-violet detection (HPLC-UV) and 2,4-dinitrophenylhydrazine (DNPH) derivatization. It was decided that the results did not support the creation of a CORESTA Recommended Method (CRM) at this time due to the poor r&R values which were attributed to issues with sample integrity.

- **5th Round Robin Test for Multi-Capillary Ventilation Calibration Standards (2016/2017)**

Technical Report [PTM-124-CTR] – June 2018 (Sub-Group Physical Test Methods)

This report covers the results of the fifth ventilation (FV) standards cross-check conducted between September 2016 and October 2017. The CORESTA Physical Test Methods (PTM) Sub-Group organises a nominally annual cross-check for calibration laboratories to compare their capability to calibrate standards used in physical test instrumentation. The testing provides a baseline of ventilation instrument performance across the industry, since this standard type is used in the pressure drop / ventilation instrumentation of each supplier. Each laboratory is also able to use the result set in internal and external audit assessments.

- **Sub-Group Collaborative Study on Blue Mould - Final Report**

Technical Report [BM-025-CTR] – July 2018 (Sub-Group Collaborative Study on Blue Mould)

The Sub-Group Collaborative Study on Blue Mould (BM) was originally set up in 1964. Up until 2015, field trials (collaborative experiments on varieties) were carried out to look for cultivars more tolerant to the blue mould pathogen *Peronospora tabacina*. This document is the final report of the Sub-Group and covers the work done on the four main objectives established in 2008, namely: the collaborative experiment on varieties, the study of blue mould populations, work on metalaxyl sensitivity/resistance, and liaison with AERET to continue the Blue Mould Warning Service.

- **Joint Experiment Technical Study (JETS) Report 17/1 Maleic Hydrazide in Tobacco**

Technical Report [AA-130-CTR] – July 2018 (Sub-Group Agrochemical Analysis)

Due to the complexity of the distribution of maleic hydrazide (MH) throughout the tobacco plant, a Joint Experiment Technical Study (JETS) was conducted to evaluate the capacity of YC/T modified and ISO methods to properly quantitate MH on tobacco using both artificially spiked and naturally incurred tobacco samples. The results were published in March 2017 (Project AA-111 - JETS 16/2). A second proficiency test (JETS 17/1), with a larger number of participating laboratories, was carried out in 2018 to verify the initial results. It was concluded that the YC/T methods were not able to provide equivalent results to the reference methods (ISO 4876) in the evaluated samples.

- **Tobacco Virus Collaborative Study (1996-2011)**

Technical Report [VIR-030-CTR] – August 2018 (Sub-Group Virus Diseases)

Due to the impact of virus infection on leaf yield and quality, CORESTA initiated collaborative work to investigate the use of resistant cultivars and preventative methods to stop or decrease viral contamination. A first period from 1996-2007 focused on PVY and then continued until 2011 with focus on all tobacco viruses. The study produced data related to viral symptoms, geographic distribution, and frequency of viral occurrence trends over a relatively long period of time. It also contributed to train participants to correctly identify virus and other diseases symptoms on tobacco, and become more familiar with plant virology principles. This report presents the entire Collaborative Study and summarises the results.

CORESTA PROJECTS

The following projects were approved by the Scientific Commission and launched:

- **Project 186: Meta-analysis of Cigarette Smoke Exposure Biomarkers**
(Sub-Group Biomarkers) - Approved May 2018
- **Project 187: CM8 & CM9 Collaborative Studies - 2018**
(Sub-Group Tobacco and Tobacco Products Analytes) - Approved May 2018
- **Project 188: Systematic Review of CRMs 56 and 57**
(Sub-Group Tobacco and Tobacco Products Analytes) - Approved May 2018
- **Project 189: 14th FAPAS CPA Analysis Proficiency Test - 2018**
(Sub-Group Agrochemical Analysis) - Approved May 2018
- **Project 190: Consumer Reported Outcome Measures (CROM) Consortium**
(New Task Force) - Approval pending August 2018
- **Project 191: 7th Round Robin Test on Filter Ventilation Calibration Standards**
(Sub-Group Physical Test Methods) - Approved May 2018
- **Project 192: Systematic Review of CORESTA Guide No. 4**
(Sub-Group Physical Test Methods) - Approved May 2018
- **Project 193: Collaborative Study for the Determination of Nicotine in Tobacco and Tobacco Products**
(Sub-Group Tobacco and Tobacco Products Analytes) - Approved June 2018
- **Project 194: Systematic Review of CRM 78**
(Sub-Group Smoke Analytes) - Approved June 2018
- **Project 195: CORESTA Guide No. 1: Addition of CPA Fluopyram to GRL list**
(Sub-Group Agrochemical Advisory Committee) - Approved June 2018

CORESTA RECOMMENDED METHODS

New

- **CRM No. 87** – Determination of Nicotine in Tobacco Products by GC/MS
(April 2018) [RAC-TTPA-056-2-CRM-87]

This CRM is applicable to the determination of nicotine in cigarette filler, cigar filler, ground cigars (filler, wrapper, and binder), and smokeless tobacco products. The method is based on the results of the Collaborative Study published in the CORESTA Routine Analytical Chemistry / Smokeless Tobacco Sub-Groups Technical Report *2016 Collaborative Study on Nicotine in Tobacco Products*, February 2017.

Updated

- **CRM No. 64** – Routine Analytical Cigar-Smoking Machine - Specifications, Definitions and Standard Conditions
(Second edition – May 2018) [CSM-121-1-CRM-64]
- **CRM No. 46** – Atmosphere for Conditioning and Testing Cigars of all Sizes and Shapes
(Second edition – June 2018) [CSM-121-3-CRM-46]

CRMs 64 and 46 were subject to a periodic technical and editorial review by the CORESTA Cigar Smoking Methods Sub-Group and updated accordingly. They include new technologies and improve the applicability to laboratory operations.

All CORESTA Recommended Methods can be downloaded in PDF format at www.coresta.org

CORESTA GUIDES

Update - CORESTA Guide No. 1

Concept and Implementation of CPA Guidance Residue Levels [ACAC-195-CTG]

Agrochemical Advisory Committee (ACAC) has recently amended the fourth issue of its CORESTA Guide No. 1 with the addition of the CPA Fluopyram to the list of Guidance Residue Levels (GRLs). The 5 ppm GRL provisionally set in 2015 was confirmed after review of three years of additional residue analysis data.

Users of the CORESTA Guide No. 1 are reminded that the GRLs listed are applicable to cured tobacco leaf while focusing on processed tobacco leaf which is predominantly used for the production of traditional cigarette tobaccos and the GAPs associated with the cultivation of these tobacco types.

CORESTA Scientific Commission and Board Meetings



The **SCIENTIFIC COMMISSION** met on 6-7 June, in Victoria Falls, hosted by the Tobacco Research Board of Zimbabwe. Huub Vizée, President of the Board, attended as an observer.

- **Feedback was given from the Board meeting** held in February ** Board's strategy plan was discussed and inputs from the SC requested.
- **ISO/CEN:** ISO/TC 126 had met the former week with new chairpersons: W.D. Heller for TC126, S. Colard for SC1, T. Göckun for SC2 and A. Dumas de Raully for SC3. DIN and AFNOR secretaries were also attending their first global meeting. ** WG10: work on intense smoking regime nearing completion but group assigned new work items. ** WG13 (Bidis) and WG14 (BaP in smoke) disbanded after work completed ** WG19 on fine-cut tobacco sampling to be launched. ** Work on CRM76-Moisture was not approved. ** Four topics forwarded by CEN/TC 437/WG4 to ISO as a matter of expertise to measure mass of e-liquids vaporised and metals, nicotine and carbonyls in e-cigarette emissions.
- **ACAC:** Residue Field Trials gather enormous data to help set Guidance Residue Levels. ** Contribution in the CNTC CPA management seminar.
- **Agronomy & Leaf Integrity:** Good feedback on the Infestation Control Conference held in Winston-Salem, NC, USA, 7-8 May 2018. ** EU stated that mutagenesis organisms are not GMO, however Germany will ban them.
- **Phytopathology & Genetics:** Chapters of the "Field Guide to Integrated Pest Management" compiled by the IPM Sub-Group will be published. ** Blue Mould and Virus Sub-Group final reports reviewed.
- **Product Technology:** 41% of CORESTA projects handled by this Study Group. ** Edited first CVAR report (short-term) to be circulated.

- **Smoke Science:** IVT presented at the Genetic Toxicology Association meeting in May. ** Collaboration initiated between BMK and IVT groups.
- **Smoke Science / Product Technology (SSPT):** An SC ad-hoc group is seeking better efficiency with inter-connexions between working groups via the project mode. This should also give an opportunity to help younger scientists step in as leaders.
- **CORESTA Standards and PMO:** Final documents under review. ** PMO tools under evaluation.
- **CORESTA Website:** Phase 3 last adjustments to be implemented before review and launch.

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The **BOARD** met on 27-28 June in Santiago de los Caballeros, Dominican Republic, invited by Alternative Ingredients and kindly hosted by La Aurora, a cigar manufacturer.

- **USA:** FDA proposed rules were presented: scientific evidence must remain the key. ** EU and USA reinforce collaboration on medicine and tobacco. ** EU: A new issue raised about Single-Use Plastics, which include cigarette filters.
- The survey to evaluate CORESTA members' interest in Heated Tobacco Products was finalised.
- The Board Committees (Strategy, Finance, Events, Communication and IT) presented their reports. Strategy included inputs from SC and the Committee will work on a prioritised short list. ** About Events and Communication, some thoughts are to be given on how CORESTA is perceived.
- With regards to the vision of CORESTA, being "recognized as a source of best practices", the Board decided to launch a project on corporate social responsibility.
- The Activity and Financial report was presented showing a healthy financial situation and an increasing number of projects.
- Ms. Thurière's temporary contract was changed to a permanent contract as part-time staff of the Secretariat.



Physical Test Methods Sub-Group Meeting (Austria)

The Physical Test Methods (PTM) Sub-Group held its spring meeting in Vienna on 24 May 2018. The meeting was well attended and a full day was used to discuss all open projects and some time was spent on evaluating future activities.

As a major routine project the 11th Collaborative Study on Physical Parameters has started and the samples and the protocol were distributed to approximately 20 participating laboratories worldwide. It is expected that the study, including publication of the Technical Report, will be completed within this year. Further routine projects regarding the round robin tests on calibrations standards for filter ventilation, air permeability and pressure drop are progressing well and two reports on these round robin tests have been published since the last meeting in October 2017.

With the circulation of the final draft of the new CRM on the sealing strength of pouches for tobacco products in the PTM Sub-Group, a major piece of work has reached its final stages. A collaborative study to assess the variability of the method has still to be carried out, but publication of the new CRM is planned for the end of 2018.

The PTM Sub-Group's objectives have been revised in an attempt to harmonise the objectives of the Smoke Analytes (SMA), Tobacco and Tobacco Products Analytes (TTPA), Routine Analytical Chemistry (RAC) and PTM Sub-Groups. The modified version of the objectives was approved by the Sub-Group and after slight amendment by the Scientific Commission, was approved by the Board.

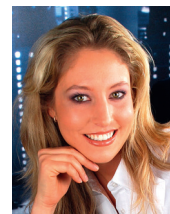
For the systematic review of documents, the PTM Sub-Group has started to check the status of its seven CRMs and its four Technical Guides, starting with a revision of Technical Guide No. 4 on the measurement of pressure drop. Further decisions on which CRMs and Technical Guides need revision will be made at the next PTM Sub-Group meeting and respective projects for the revision of documents will be launched.

For future activities, the PTM Sub-Group plans to work on physical measurements for filter capsules, most likely starting with the measurement of the crush strength of these capsules. Final aspects of this project still need to be defined and it is planned to submit a New Work Item Proposal later this year after the next Sub-Group meeting. Other topics that were discussed were the biodegradability of cigarette filters, coal fall-out on cigarettes, particularly on slim cigarettes, and the measurement of the permeability of snus pouches. Also looking further into the future, the PTM Sub-Group has discussed investigating physical measurements on the consumables of heated tobacco products.

The next meeting of the PTM Sub-Group will be the 27th meeting and will be held in Kunming, Yunnan, China, on 22 October in the afternoon before the CORESTA Congress.



Bernhard EITZINGER
PTM SG Coordinator



Patricia MÜLLER
PTM SG Secretary

CORESTA COMMUNICATION AT EXTERNAL EVENTS

Rhodia Acetow 11th Global Filter Colloquium



CORESTA had the opportunity to speak about its contribution to standards development for Next Generation Products (NGP). The 11th Global Filter Colloquium took place in Freiburg, Germany from 22-25 April 2018. The conference is organised by Rhodia Acetow on a regular basis, generally every three years, to mainly discuss specific topics related to filter technologies.

The presentation, given by Nils Rose (Borgwaldt), member of the CORESTA Board, was entitled "Contribution to Standards Development for Next Generation Products" and based on the one presented at the ENDS conference in June 2017 by Derek Mariner (BAT). The presentation gave answers to the questions such as: What is CORESTA? How is it organised? How are CRMs developed? What is the position of CORESTA in the world of standardisation? And what is the benefit of joining CORESTA? This gave CORESTA the chance to provide visibility to its global scientific work in general.

2018 Genetic Toxicology Association Meeting (GTA 2018)



The annual meeting of the Genetic Toxicology Association Meeting was held at the University of Delaware, USA, on 2-4 May 2018. Kei Yoshino (Japan Tobacco Inc.), CORESTA SC member and Coordinator of the In Vitro Toxicity Testing Sub-Group (IVT SG) made a presentation of the IVT SG activities (establishments, inter-laboratory proficiency studies, *in vitro* whole smoke) at one of the workshops entitled "Latest developments in regulation and assessment of combustible and alternative tobacco products" chaired by Martha Moore (Ramboll Environ) and Leon Stankowski (Charles River Laboratories). Speakers included industry (Altria Client Services, British American Tobacco, Reynolds American Incorporated Services Company, and Philip Morris International), contract laboratory (Covance), and US FDA Center for Tobacco Products. This gave CORESTA the chance to provide visibility to its global scientific work at an event where *in vitro* science was discussed.

The above presentations can be viewed in the Information/CORESTA Communication section of the CORESTA website.

Cigar Smoking Methods Sub-Group Meeting (Italy)

On 19-20 April 2018, the Cigar Smoking Methods Sub-Group met in Cava de' Tirreni, Italy. Cava de' Tirreni is the hometown of one of the two production facilities of the Manifatture Sigaro Toscano (MST), and it is always interesting to combine the scientific work with a more practical visit of a cigar factory. For many of the Sub-Group members, this was the first cigar factory they visited.

The visit to Italy was really cigar specific. After the MST factory visit, a meeting was scheduled at which technical challenges related to the machine smoking of handmade cigars were discussed. This project (CSM-148) has been ongoing for many months and it was a perfect opportunity for the team members to meet around the table to elaborate on the progress and the setup of a Collaborative Study.

The actual Sub-Group meeting was attended by 24 colleagues from all over the world. This is probably one of the all-time highest attendee records for the Sub-Group, and it was a pleasure to see many questions asked and active discussions between participants.

On the agenda was the outcome of the 13th Collaborative Study. The SG has as objective to optimise the methods to improve r&R, and this has been a continuous challenge for many years. Having new participants in the SG really helped to get the focus on the right parameters and to maybe also challenge conventional wisdom. The outcome of the study will be presented during the next CORESTA Congress in Kunming. In addition to the Collaborative Study, the Sub-Group discussed the setup of technical guidance for new laboratories starting to smoke cigars, and the update of the current CRMs to make them ready for potential international standardisation.

The potential benefits and challenges linked to the creation of reference products were discussed and this option will be further reviewed by a smaller group of SG members.

Finally, Thomas Lindegaard shared the findings of the hand-made cigar projects with the Sub-Group. These findings and observations triggered some very valuable discussions and showed that it is worthwhile to invest in “cross pollination” between groups to capture any synergies.

The Coordinator of the Sub-Group, Bob van Mierlo, expressed his thanks to MST for their kind hospitality and the Sub-Group members for their contribution and efforts.



Participants at the CSM SG meeting

CORESTA COMMUNICATION AT EXTERNAL EVENTS (*continued*)

12th European Pesticide Residue Workshop (EPRW 2018)

EPRW 2018, the European Pesticide Residue Workshop, was hosted in Munich, Germany, from 22-25 May. Masahiro Miyoshi (Japan Tobacco Inc.), Coordinator of the CORESTA Agrochemical Analysis Sub-Group, presented a poster entitled “CORESTA Agrochemicals Analysis Sub-Group” that gave an overview of the Sub-Group’s activities. These include conducting proficiency testing and creating technical documents for pesticide residue analysis on tobacco. The EPRW is held every two years as an open forum, with around 500 participants from private laboratories, food and environment control agencies, research institutes, universities, food and beverage companies and agrochemical industry, for discussion about the latest concepts and developments in the field of pesticide residues in food, drink and environmental samples. Some of the interesting topics presented at EPRW 2018 were discussed at the AA Sub-Group meeting held on 27-28 June 2018.



Electronic Nicotine Delivery Systems Conference (ENDS 2018)

ENDS 2018, the Electronic Nicotine Delivery Systems Conference, was held in London, UK, on 5-6 June. Eduardo Bera (Alternative Ingredients), member of CORESTA Board and EVAP Sub-Group, made a presentation (similar to that presented at the Rhodia Filter Colloquium in April) on “Contribution to Standards Development for Next Generation Products”, highlighting the importance of international cooperation on CORESTA’s approach used for the development of robust methods that, eventually, make their way to ISO. ENDS 2018 was a small conference, with about 100 delegates from large and small e-cigarette manufacturers, suppliers of services to the industry, market analyst and toxicology consultants. The content was mostly UK/EU focused considering Tobacco Product Directive 2 (TPD2) requirements. Speakers included industry, contract laboratories, market analysts and some consumer organisations.



The above presentations can be viewed in the Information/CORESTA Communication section of the CORESTA website.

Tobacco Research Board Visit - Zimbabwe

As the June ACAC, Scientific Commission (SC) and Reading Committee meetings were being held in Zimbabwe this year, the Tobacco Research Board (TRB) had extended an invitation to participants to visit its Kutsaga Research Station in Harare. On 1 June 2018, a seven-member delegation was welcomed by the TRB General Manager, Dr Dahlia Garwe, and shown around the research facilities.

Zimbabwe's climatic and geographical conditions are favourable for tobacco production. In addition, tobacco does not compete with food crops and provides good economic return per hectare. Tobacco has for a long time been a major source of revenue for the country and its population.

The TRB was established in 1950 as a statutory body responsible for applied fundamental research, development and extension to the tobacco industry. It has a mandate to "direct, control and carry out tobacco research in Zimbabwe." The TRB's mission is "to maximise economic value from sustainable and responsible tobacco production through the development and provision of elite varieties and innovative agro-based services and products."

From 1950-2000 the TRB focused on servicing large scale commercial production, but since 2000 it has enlarged its focus to include the requirements of the greatly increased small-scale sector. It is financed by a levy on tobacco sales, in-house income generating projects and, to a much lesser extent, wider industry support. The name "Kutsaga" is derived from the word "kutsvaga" which means "to seek" in the local language Shona. The Kutsaga Research Station well lives up to its name. An introductory talk by Dr Garwe described the research objectives, processes and projects underway. Dr Garwe explained that the TRB was pivotal in providing growers with advice on production, addressing their problems, and anticipating their future needs. This was done through interaction with growers and the establishment of fundamental, applied and contract research trials by the various TRB divisions.



The Chairman of the Agrochemical Advisory Committee (ACAC), Marco Prat, in turn discussed tobacco CPA integrity and the worldwide regulatory situation, presenting the current issues and how CORESTA and ACAC are actively working to educate, monitor and ensure that CPAs in tobacco are kept to a minimum.

A tour of the facilities, and interaction with the research staff, provided an in-depth insight into the work of the TRB.

First on the schedule was the Molecular Biology Services Division responsible for developing techniques for research and diagnostic purposes such as plant and pathogen characterisation, GMO screening and tissue culture (mostly potatoes and bananas).

In the next block was located the Plant Breeding Division responsible for the development and release of all varieties for local and regional use, including some cigar wrapper. It is currently working on the development of high and low nicotine varieties, PVY resistance and drought tolerance.

Down the corridor, the head of Crop Productivity Services described the work done on enhancing seed quality and seedling media and the research into optimising agronomic practices. The division also carries out CPA trials, a service vital not only for Zimbabwe but for the southern African region as a whole.

A few steps more brought the delegation to the Plant Health Services section consisting of the Entomology, Nematology and Plant Pathology departments. These provide timely, cost-effective, eco-friendly and sustainable integrated



pest management solutions. This is where growers bring their diseased plants for diagnosis at the Plant Clinic and where CPAs are evaluated for efficacy and residues and subsequent publication on the list of products endorsed by the TRB for use on tobacco.

Across the courtyard was the Analytical Chemistry Division headed by a researcher well known to the CORESTA Agrochemical Analysis Sub-Group. Here analysis methods are developed to process both in-house and client samples, and routine analyses are carried out for CPA residues, product formulations, soil, water, plant and foliar sampling.

A short drive from the main buildings and across the dam brought the delegation to the Kutsaga Farm. Tobacco seedlings are produced for sale to growers, and in addition, the TRB produces timber (eucalyptus) seedlings as part of its ongoing efforts to combat deforestation. The Agricultural Engineering Division undertakes research to enhance tobacco curing and evaluate alternative curing fuels. Detailed explanations were provided on the workings of the rocket barn that uses less timber fuel than regular curing and yields a superior product.

To meet the needs of both large and small scale growers and to generate much needed funds, the TRB has expanded its role to cover seed production and pelleting, seedling tray manufacture, medium for float trays, fertilizer development and sale, disease diagnostic services for other crops and expanded analytical services. A commercial tobacco crop is also produced and sold.

The delegation was shown around the seed pelleting facility that packs treated quality tobacco seed produced by the Kutsaga Seed Association. This seed is sold to growers in Zimbabwe and the region. The EPS factory, also onsite, produces and sells float seedbed trays and seeks to improve performance of the products with new designs and materials.

The TRB is actively involved in training and extension to enable growers to benefit from the knowledge gained through science and to ensure that good agricultural practices are followed. Tobacco productivity improvement sites are managed by TRB to give farmers hands-on experience. In addition, special loan schemes have been put in place to facilitate small-scale farmer access to products such as float trays and seed medium. Schools regularly visit the research station and university internships at the TRB allow students to acquire first-hand experience in their chosen field of research.

After a period of economic and political instability that affected tobacco production, the Zimbabwe tobacco industry is making a comeback on the world map. The TRB is contributing to its success for the benefit of growers and the country through its pursuit of scientific excellence, resilience and innovation in the face of many challenges.

The CORESTA delegation addressed their thanks to Dr Garwe and TRB staff for the opportunity to visit the research station and the very interesting tour.



New CORESTA Project

Sustainability: Scientific Methodologies for Measurement of Positive Impacts on Stakeholder Performance

Having recently left his company, Dr Stéphane Colard* is currently preparing an MBA specialising in ESG (Environment, Social and Governance Responsibilities, e.g. ISO26000) performance assessment and asked if CORESTA would be interested supporting him with his MBA as CORESTA's interest in sustainability issues is not new.

The Sustainability in Leaf Tobacco Production Task Force was created in 2012 and published in 2016 the Guide No. 17 on sustainability in tobacco production. The Board discussed Dr Colard's request and came to the conclusion that combining Dr Colard's MBA and investigating the topic from a broader and more scientific perspective would be of benefit to both parties. A set of objectives has therefore been identified including:

1. the elaboration of a scientific framework for assessing economic, social and environmental performances of tobacco and alternative products businesses
2. the identification of scientific tools required for the measurement of the positive impacts produced by actions undertaken for performance improvements
3. the assessment of the gaps between required and available tools.

The Board is convinced that CORESTA should contribute to fill the gaps by developing and recommending scientific methodologies for the measurement of positive impacts on performance. Dr Colard's MBA would be fully in line with the objectives set by CORESTA regarding sustainability issues. The expected benefits would be:

1. the initiation of new contact with non-CORESTA stakeholders (institutes, universities, other non-profit organisations)
2. the identification of opportunities to collaborate with other associations
3. the attraction of new Members to CORESTA
4. the opportunity to participate in new forums related to economic, social and environmental objectives and to promote CORESTA science in this area
5. the consolidation of CORESTA's reputation and visibility
6. the enhancement of CORESTA's vision relative to the best practices related to tobacco and its derived products
7. the development of additional elements to communicate to the management of CORESTA member organisations about the added value of the Association.

The Board therefore decided to support Dr Colard with his MBA in combination with addressing the CORESTA objectives. To enable Dr Colard to carry out this combined work, the Board offered him a partial grant for managing this project over a 12-month period starting October 2018.

The Board of CORESTA expects a large number of stakeholders to be involved in this project, and CORESTA Members are asked to please be prepared to contribute!

** Dr Stéphane Colard has 19 years' experience managing testing laboratories and leading research programmes in the tobacco industry. He is also actively involved in the work of AFNOR and ISO. He has in depth knowledge of CORESTA having served on the Scientific Commission and participated in and led several Sub-Groups and Task Forces.*

Acronyms / Abbreviations used in the Newsletter

AA	Agrochemical Analysis	GTA	Genetic Toxicology Association
ACAC	CORESTA Agrochemical Advisory Committee	HPLC-UV	High Performance Liquid Chromatography with Ultra-Violet Detection
AD	Anno Domini	HTP	Heated Tobacco Product
AERET	Association Européenne pour la Recherche et l'Expérimentation Tabacole	IPM	Integrated Pest Management
AFNOR	Association Française de Normalisation (France)	ISO	International Organization for Standardization
BaP	Benzo[a]pyrene	IT	Information Technology
BAT	British American Tobacco	IVT	In Vitro Toxicity Testing
BC	Before Christ	JETS	Joint Experiment Technical Study
BM	Blue Mould	JT	Japan Tobacco
BMK	Biomarkers	MBA	Master of Business Administration
CEN	Comité Européen de Normalisation	MH	Maleic Hydrazide
CORESTA	Cooperation Centre for Scientific Research Relative to Tobacco	MST	Manifatture Sigaro Toscano
CNTC	China National Tobacco Corporation	NC	North Carolina (USA)
CPA	Crop Protection Agent	NGP	New Generation Products
CRM	CORESTA Recommended Method	PMO	Project Management Office
CROM	Consumer Reported Outcome Measures	PTM	Physical Test Methods
CSM	Cigar Smoking Methods	PVY	Potato Virus Y
CTG	CORESTA Technical Guide	QRA	Quantitative Risk Assessment
CTP	Center for Tobacco Products (USA)	RAC	Routine Analytical Chemistry
CTR	CORESTA Technical Report	SC	Scientific Commission
CVAR	Cigarette Variability	SC	Sub-Committee (ISO)
DIN	Deutsches Institut für Normung e.V. (Germany)	SG / TF	Sub-Group / Task Force
DNPH	2,4-dinitrophenylhydrazine	SMA	Smoke Analytes
ENDS	Electronic Nicotine Delivery Systems	SSPT	Smoke Science and Product Technology (Smoke-Techno)
EPRW	European Pesticide Residue Workshop	TC	Technical Committee (ISO) (CEN)
EPS	Extruded Polystyrene Foam	TNCO	Tobacco, Nicotine, Carbon Monoxide
ESG	Environment, Social and Governance	TPD	Tobacco Product Directive (EU)
EU	European Union	TRB	Tobacco Research Board (Zimbabwe)
EVAP	E-Vapour	TSNA	Tobacco-specific nitrosamines
FDA	Food and Drug Administration (USA)	TTPA	Tobacco and Tobacco Products Analysis
GAP	Good Agricultural Practice	UK	United Kingdom
GMO	Genetically Modified Organism	UNESCO	United Nations Educational, Scientific and Cultural Organization
GRL	Guidance Residue Level	WG	Working Group (ISO)
		YC/T	Tobacco Voluntary Standard (China)