

## GUEST EDITORIAL

Dr Thomas A. Perfetti and Dr Alan Rodgman were awarded the CORESTA Prize in 2010. The two scientists were honored by CORESTA for their lifetime research work on tobacco and tobacco smoke, culminating in the excellent and highly recommendable compendium “The Chemical Components of Tobacco and Tobacco Smoke” published in 2009. It is an honor for the editors to publish in *Beiträge zur Tabakforschung International/CONTRIBUTIONS TO TOBACCO RESEARCH* the presentation given by Drs Perfetti and Rodgman at the 2010 CORESTA plenary session in Edinburgh.

Dr Alan Rodgman was born in Wales in 1924 and moved with his parents to Canada four years later. In 1945, he entered the University of Toronto supported by two mathematics, physics and chemistry scholarships awarded to him in 1942. It is certainly of interest that his bachelor thesis in 1949 dealt with *N*-nitrosamines, a group of chemical compounds some of which have played an important role since the end of the 1970s in the evaluation of the carcinogenicity of tobacco and tobacco smoke. His bachelor thesis, his master thesis (on the kinetics of a specific Diels-Alder reaction) and his doctoral thesis (in 1953, on oxymercuration-deoxymercuration) were supervised by Dr George F. Wright, who preceded Dr Dietrich Hoffmann as a colleague and co-worker of Dr Ernst L. Wynder in tobacco research. While studying at the university from 1947 to 1953, Alan Rodgman conducted during weekends and in his leisure time research on carcinogenesis and anticarcinogenesis at the Best Department of Medical Research. This research was as well important later for his ideas and work in the tobacco industry.

In mid 1954, Dr Rodgman joined the research department of R.J. Reynolds Tobacco Company. Following promotions from senior research chemist to section head and division manager, he became director of research in 1976 and, after a re-organization of the research and development department in 1980, was appointed director of fundamental research. Dr Rodgman retired in 1989.

Dr Rodgman served in different functions at the Tobacco Chemists Research Conference, in CORESTA and with the editorial board of various tobacco related journals, including the editorial board of *Beiträge zur Tabakforschung*. He is author or co-author of many important publications in numerous scientific journals. He was a member of several U.S. government committees, such as the Tobacco Working Group of the National Cancer Institute's program on the Less Hazardous Cigarette (1976–1977) and the U.S. Technical Study Group of the Cigarette Safety Act of 1984.

In 2003, Dr Rodgman received the first U.S. Tobacco Science Research Conference Lifetime Achievement Award. On this occasion, his colleague and co-worker at the R.J. Reynolds Tobacco Company research department, Charles A. Green, wrote a short article on Alan Rodgman. It was published in this journal in 2005 (1). As pointed out by Dr Green, there is no question that Alan Rodgman has dedicated his professional life to achieving the highest standards of science, especially in tobacco science.

Dr Thomas A. Perfetti was born in 1952 in Jeanette, Pennsylvania. In 1970, he entered Indiana University of Pennsylvania and earned a Bachelor of Science in chemistry in 1974. In the same year, he moved to the Virginia Polytechnic Institute and State University, where his doctoral thesis on the electronic effects associated with the Woodward-Hoffmann rules was accepted in 1977. In the same year, Dr Perfetti joined the research department of R.J. Reynolds Tobacco Company as a chemist. There, he initiated and worked in several research programs on tobacco and smoke chemistry, cigarette design, flavor chemistry and analytical methods development. Successively, he became Senior Research Chemist, Senior Staff Scientist, Master Scientist and Principal Scientist. In this position he collaborated with RJR-Nabisco and R.J. Reynolds International on corporate program development and program management issues. Dr Perfetti spent much of his career in the laboratory and served as manager of several divisions of R.J. Reynolds Tobacco Company. He retired in 2003 and started in the same year together with his wife Patricia the Perfetti & Perfetti LLC, a scientific consulting company in Winston-Salem.

Dr Perfetti has served as a reviewer for scientific journals and in the organization committees of several conferences on tobacco science. Over the last 35 years he has authored or co-authored over 70 presentations and papers.

In 2009, Rodgman and Perfetti published the outstanding survey “The Chemical Components of Tobacco and Tobacco Smoke”. This book will undoubtedly become an authoritative standard for scientists working on tobacco and tobacco smoke. It was reviewed by Charles R. Green in this journal in 2009 (2). In the lecture given by Dr Perfetti at the 2010 CORESTA Congress the contents of the book and the motives for preparing it were explained. The main focus of the presentation was on the complexity of the chemical composition of tobacco and tobacco smoke. The problems and challenges in

evaluating the complex materials, tobacco and tobacco smoke, regarding their toxicity for humans were pointed out. It is certainly not possible to estimate the mutagenic and carcinogenic potential of whole tobacco smoke based solely on the analytically determined levels of various individual components with well known biological properties. It is also unlikely that the test results of more than one hundred components assessed on a yearly basis in tobacco products and tobacco smoke - as discussed in a draft proposal of a U.S. FDA working group - will help to prevent increased hazards from smoking (3). As Drs Perfetti and Rodgman pointed out in their presentation "the difficulties encountered in extrapolating biological activity from cigarette smoke composition provide generally applicable lessons as they are representative of the problems encountered with other complex mixtures". The statement by DIPPLE *et al.* (4) - in their summary of the research on polycyclic aromatic hydrocarbons from the 1930s through 1980 - is equally true today for cigarette smoke: "many important questions remain unanswered ... many questions persist despite the considerable progress that has been made."

The statement by DIPPLE *et al.* (4) is certainly correct concerning today's knowledge of the biological activity of tobacco smoke. There are many questions unanswered and persisting. However, considerable progress has been made in the past up to now and this progress is the basis for the expectation that additional important questions will be answered in the future.

The scientific work of Rodgman and Perfetti was not only important for their company, the R.J. Reynolds Tobacco Company, but for all scientists working on tobacco and tobacco smoke, regardless whether they are

employees of tobacco companies or researchers at universities and other independent institutions. This is especially true for their excellent book. Therefore, both scientists are worthy recipients of the CORESTA Prize.

#### REFERENCES

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3. Food and Drug Administration - Center for Tobacco Products (CTP); Tobacco Product Constituents Subcommittee of the Tobacco Products Scientific Advisory Committee (TPSAC); June 8–9, 2010; <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/TobaccoProductsScientificAdvisoryCommittee/UCM222975.pdf> (Accessed April 2011).
4. Dipple, A., R.C. Moschel, and C.A.Y. Bigger: Polynuclear hydrocarbons; Chapter 2 in: *Chemical Carcinogens*. Second edition, edited by C.E. Searle, American Chemical Society Monograph 182 (1984) 41–163, American Chemical Society, Washington, D.C.

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