

WHISTLER CENTER
for Carbohydrate Research

Whistler Center for Carbohydrate Research
Technical Conference

with the

2017 Belfort Carbohydrate Lecture

by

Dr. Costas G. Biliaderis

Professor of Food Chemistry-Food Physics
Chairman at the Department of Food Science and Technology
Aristotle University of Thessaloniki, Greece

*“Structure-property relations of cereal fibers and implications
for food product development”*

Wednesday, May 10, 2017

8:30 a.m.

Pfendler Hall Auditorium



Dr. Costas G. Biliaderis is Professor of Food Chemistry - Food Physics and currently the Chairman at the Department of Food Science and Technology, Faculty of Agriculture, Aristotle University of Thessaloniki, Greece. He is a graduate of Aristotle University and received his M.Sc (1978) and Ph.D. (1980) degrees from the University of Saskatchewan, Canada. Prior to becoming a faculty member at Aristotle University (1993), he held appointments as a research associate with the National Research Council of Canada (1980-81), as a project chemist with General Foods Inc. (1984-85), and as Assistant Professor (1985-88) and Associate Professor (1988-1993) with the University of Manitoba, Canada. He has been a visiting professor with the Cyprus University of Technology (2010) and he also teaches graduate courses at the Mediterranean Agronomic Institute of Chania - CIHEAM, Chania, Greece (1997-2017).

Dr. Biliaderis and his students have conducted studies in the areas of chemistry-physical chemistry and functionality of polymeric food carbohydrates (starch, cereal cell wall polysaccharides, etc.), processing-preservation and quality aspects of food products (cereals, dairy products, fruit and vegetables, etc.), food dispersions (o/w) with engineered interfaces, structured delivery systems as well as functional foods and nutraceuticals. He has directed more than thirty major research projects funded by National and International institutions and the food industry and he acts as a consultant to food industries. Dr. Biliaderis is author or co-author of over 180 research articles in peer reviewed international journals and 15 chapters in scientific books. He has co-edited with Marta Izydorczyk (Agriculture Canada) a book entitled "Functional Food Carbohydrates" (CRC Press, 2007) and is or acted as a member of the editorial board of four international journals. He has more than 200 presentations in International Conferences and Workshops, including 40 invited talks-lectures, and served as an invited external examiner of eighteen doctoral theses in several European and Canadian Universities. Costas Biliaderis received several awards for his achievements in research, teaching, and scholarly works and since 2003 is listed as 'highly cited researcher' according to ISI-Thomson Scientific, for his published works (h-index 60, Web of Science).

Historical Background of Belfort Lectures

<https://www.whistlercenter.purdue.edu/>

<https://www.whistlercenter.purdue.edu/events/belfort-lectures/>

The Belfort Lectures were established and endowed by Dr. Anne D. Belfort in memory of her late husband Dr. Alan M. Belfort, who was awarded a Ph.D. degree from Purdue University in carbohydrate chemistry in 1960. Support for the Belfort Lectures is generously continued by Alan and Anne's daughter Anne E. Belfort.

Persons honored by being chosen to give a Belfort Lecture are scientists who have made outstanding contributions to glycoscience.

Previous Lecturers

2017 Belfort Lecture | May 10, 2017

Lecturer: **Costas G. Biliaderis, Ph.D.**

| "Structure-property relations of cereal fibers and implications for food product development"

2016 Belfort Lecture | May 11, 2016

Lecturer: **Dr. Liping Zhao**

| Nutritional engineering of gut microbiome for optimized human metabolic health

2015 Belfort Lecture | May 13, 2015

Lecturer: **Dr. Yong-Cheng Shi**

| "Modifying starches for nutritional and functional properties"

2014 Belfort Lecture | May 14, 2014

Lecturer: **Dr. Inger Björck**

| "Some food factors of importance for glycaemia in the acute phase and beyond"

2013 Belfort Lecture | May 8, 2013

Lecturer: **Dr. Jay-Lin Jane**

| "Structure and digestibility of selected resistant starch"

2012 Belfort Lecture | May 15, 2012

Lecturer: **Dr. Peter Williams**

2011 Belfort Lecture | May 11, 2011

Lecturer: **Dr. Geoff Fincher**

| Fine structure of polysaccharides from plant cell walls: from human health to biofuel production

2010 Belfort Lecture | May 12, 2010

Lecturer: **Dr. Jan Delcour**

| Basic Insights in Cereal Non-Starch Polysaccharides and Their Conversions as a Basis for Progress in Cereal Based Biotechnological Processes

2009 Belfort Lecture | May 13, 2009

Lecturer: **Dr. Glyn Phillips**

| Tailoring Hydrocolloid Structures to Control Functionality

2008 Belfort Lecture | May 7, 2008

Lecturer: **Dr. Eric Bertoft**

| Examination of the Cluster Structure of Amylopectins

2007 Belfort Lecture | May 1, 2007

Lecturer: **Marta Izydorczyk**

| "Cereal Cell-wall Polysaccharides: Molecular Structures, Physicochemical Characteristics, and Functional Properties".

2006 Belfort Lecture | May 1, 2006

Lecturer: **Ann-Charlotte Eliasson**

| Starch-lipid interactions: Functional and Nutritional Implications

2005 Belfort Lecture | May 1, 2005

Lecturer: **Alain Buleon**

| Structural Origins of Starch Properties

2004 Belfort Lecture | May 1, 2004

Lecturer: **Kwan-Hwa Park**

| Enzymes for Carbohydrate Engineering and Their Applications: Enzymatically Structures Starch for Food Industry.

2003 Belfort Lecture | May 1, 2003

Lecturer: **Alison M. Smith**

| A New View of Starch Metabolism: synthesis meets degradation.

2002 Belfort Lecture | May 1, 2002

Lecturer: **Michael J. Gidley**

| Influence of Polysaccharide Composition on the Structure and Properties of Cellulose-based Composites.

2001 Belfort Lecture | May 1, 2001

Lecturer: **John R. Mitchell**

| Polysaccharide Rheology: From High to Low Water

1999 Belfort Lecture | May 1, 1999

Lecturer: **A.G.J. Voragen**

| Progress in Structural Elucidation of Pectins

1996 Belfort Lecture | May 1, 1996

Lecturer: **Paul A. Seib**

| Crosslinking of Starch with Sodium Trimetaphosphate

1994 Belfort Lecture | May 1, 1994

Lecturer: **Victor J. Morris**

| Gellan Gum: A Broad Spectrum Gelling Agent

1993 Belfort Lecture | May 1, 1993

Lecturer: **Richard M. Black**

| Dispelling the Myths of Sugars and Sweeteners: If They Taste Good, They Must Be Bad

1991 Belfort Lecture | May 1, 1991

Lecturer: **Peter S. Belton**

| Use of NMR and Infrared Spectroscopy to Investigate Structure and Function in Carbohydrates

1989 Belfort Lecture | May 1, 1989

Lecturer: **William J. Whelan**

| The Biogenesis of Polysaccharides

1988 Belfort Lecture | May 1, 1988

Lecturer: **M. Rinaudo**

| Characterization and Properties of Some Water-soluble Bacterial Polysaccharides

1987 Belfort Lecture | May 1, 1987

Lecturer: **Louise Slade**

| A Polymer Science Approach to Food Carbohydrates

1984 Belfort Lecture | May 1, 1984

Lecturer: **Darrell G. Medcalf**

| Carbohydrate Utilization - Renewed Emphasis for Current and Future Products

1984 Belfort Lecture | May 1, 1984

Lecturer: **James N. BeMiller**

| Opportunities in Carbohydrate Research