

Program

5th International Workshop on Anthocyanins, 2009

September 15-18, 2009

Noyori Conference Hall, Nagoya University, Nagoya, Japan

September, 15 (Tue)

15:00 *Registration*

17:00 *Welcome Party*

September, 16 (Wed)

8:50 *Opening Remarks*

Kumi Yoshida

Session 1 *Structure and Chemical Function of Anthocyanins 1*

9:00-10:25 *Chair: Fernando Pina (New University of Lisbon, Portugal)*

9:00 Chemistry of Anthocyanin-based Colours in Plants

Øyvind M. Andersen (University of Bergen, Norway)

9:35 Polyacylanthocyanins - History and Perspective of Their Study

Kunijiro Yoshitama (Kumamoto University, Japan)

10:00 Role of Phenolic Acids in Acylated Anthocyanins on the Stability and
Functionality

Norihiko Terahara (Minami-Kyushu University, Japan)

10:25-10:55 *Coffee Break*

Session 2 *Structure and Chemical Function of Anthocyanins 2*

10:55-12:00 *Chair: Øyvind M. Andersen (University of Bergen, Norway)*

10:55 Shooting for Red; Evidence for Anthocyanin Function in Leaves and Stems
Kevin Gould (Victoria University of Wellington, New Zealand)

11:25 Chromogenic Materials Based on 2-phenyl-1-benzopyrilium: From
Anthocyanins to Synthetic Flavylum Compounds

Fernando Pina (New University of Lisbon, Portugal)

12:00-13:20 *Lunch*

13:20-14:50 **Poster Presentation 1 (Odd Number Posters)**

14:50-15:50 *Selected Oral Presentations from Posters (1)*

Chair: Takanori Tsuda (Chubu University, Japan)

P09 Petr Marhol (Academy of Sciences of the Czech Republic, Czech Republic)

P14 Maria J. Melo (New University of Lisbon, Portugal)

P25 De-Xing Hou (Kagoshima University, Japan)

P26 Hiroyuki Iida (Meiji Seika Kaisha, Ltd., Japan)

P42 Chetan A. Nayak (Central Food Technological Research Institute, India)

P43 Richard V. Espley (Plant & Food Research, New Zealand)

15:50-16:05 *Coffee Break*

Session 3 Anthocyanins and Human Health 1

16:05-17:15 *Chair: Tony McGhie (Plant & Food Research, New Zealand)*

16:05 Protection against Neurodegeneration and Type II Diabetes by Anthocyanin Mixtures

Mary Ann Lila (North Carolina State University, U.S.A.)

16:30 Anthocyanin as a Functional Food Factor - Prevention of Type2 Diabetes and Its Mechanism -

Takanori Tsuda (Chubu University, Japan)

16:50 Therapeutically Active Phenolic Berry Compounds

Riitta Puupponen-Pimiä (VTT Technical Research Centre of Finland, Finland)

17:15-17:30 *Coffee Break*

Session 4 Anthocyanins and Human Health 2

17:30-18:50 *Chair: Mary Ann Lila (North Carolina State University, U.S.A.)*

17:30 Davidson's Plum: a Novel Food Colorant with Health-enhancing Properties
Izabela Konczak (Food Science Australia, Australia)

17:55 Anti-hyperglycemic Effect of Acylated Anthocyanins and Their Related Compounds

Toshiro Matsui (Kyushu University, Japan)

18:20 What Happens to Anthocyanins in the Human Body?

Tony McGhie (Plant & Food Research, New Zealand)

September, 17 (Thr)

Session 5 Control of Biosynthesis of Anthocyanins 1

9:00-10:25 Chair: Ronald Koes (Free University, The Netherlands)

9:00 MYB Transcription Factors as Tools to Generate High Anthocyanin Fruit
Andrew C. Allan (Plant & Food Research, New Zealand)

9:25 Regulation of Anthocyanin Production in *Perilla frutescens*
Mami Yamazaki (Chiba University, Japan)

9:40 Anthocyanidin Synthase, a Multifunctional Enzyme Involved in Various Branches of Flavonoid Biosynthesis?
Stefan Martens (University of Marburg, Germany)

10:00 Genetics and Epigenetics in Flower Pigmentation of Morning Glories
Shigeru Iida (Tokyo University of Agriculture and Technology, Japan)

10:25-10:50 Coffee Break

Session 6 Control of Biosynthesis of Anthocyanins 2

10:50-12:00 Chair: Mami Yamazaki (Chiba University, Japan)

10:50 Transcription Regulators Controlling Anthocyanin Synthesis in Petunia Flowers
Ronald Koes (Free University, The Netherlands)

11:10 Post-transcriptional Gene Silencing of *CHS*A and Its Chemical Control in Marginal Picotee Pattern Formation of *Petunia* petals
Masayoshi Nakayama (Nat. Agric. Food Res. Org., Japan)

11:30 *Selected Oral Presentations from Posters (2)*
P55 Toru Nakayama (Tohoku University, Japan)
P56 Nick W. Albert (Massey University, New Zealand)
P60 Kerry Hancock (AgResearch, Grasslands Research Centre, New Zealand)

12:00-13:20 Lunch

13:20-14:50 **Poster Presentation 2 (Even Number Posters)**

Session 7 Berry Pigments and Wine Color 1

14:50-15:45 Chair: Nami Goto-Yamamoto (Nat. Res. Inst. of Brewing, Japan)

14:50 Anthocyanin-derivatives and the Colour of Red Wines
Victor de Freitas (University of Porto, Portugal)

- 15:20 Biochemical Genomics of Anthocyanin Composition in Raspberry (*Rubus ideaus* L.) and Grapevine (*Vitis vinifera* L.) Berries
Steven T. Lund (University of British Columbia, Canada)

15:45-16:00 *Coffee Break*

Session 8 *Berry Pigments and Wine Color 2*

16:00-17:00 *Chair: Tadao Kondo (Nagoya University)*

- 16:00 Effect of Viticultural Conditions on Anthocyanins and Proanthocyanidins of Red-wine Grapes
Nami Goto-Yamamoto (National Research Institute of Brewing, Japan)
- 16:20 Anthocyano-ellagitannin Hybrids: New Pigments Modulating the Color of Aged-in-oak Wines?
Stéphane Quideau (Bordeaux University, France)

19:00 *Banquet (Nagoya Tokyu Hotel)*

September, 18 (Fri)

Session 9 *Ornamental Flowers and Anthocyanins*

9:00-10:40 *Chair: Atsushi Hoshino (National Institute for Basic Biology, Japan)*

- 9:00 Development and Commercialization of a Transgenic Rose Producing Delphinidin
Yoshikazu Tanaka (Suntory Holdings Ltd., Japan)
- 9:20 Control of Anthocyanin Accumulation and Colour Patterning in Flowers
Kevin Davies (Plant & Food Research, New Zealand)
- 9:45 Regulation of Flower Pigmentation in Japanese Ornamental Gentian
Masahiro Nishihara (Iwate Biotechnology Research Center, Japan)
- 10:10 Mechanism of pH Regulation in Epidermal Petal Cells Accumulating Anthocyanins
Francesca Quattrocchio (Free University, The Netherlands)

10:40-11:00 *Coffee Break*

Session 10 *Production and Usage of Anthocyanins*

11:00-12:20 *Chair: Kevin Davies (Plant & Food Research, New Zealand)*

- 11:00 Use of Anthocyanins for Food Products in Japan
Yutaka Higashimura (San-Ei Gen F. F. I., Inc., Japan)

11:20 Color Mutation Caused by a Transposable Element in Potato
Masaki Momose (Kirin Holdings Co., Ltd, Japan)

11:45 Colouring up Plant Biotechnology
Cathie Martin (John Innes Centre, U.K.)

12:20-13:30 *Lunch*

13:30-14:00 *Selected Oral Presentations from Posters (3)*
Chair: Yoshihiro Ozeki (Tokyo Univ. Agric. Tech., Japan)
P71 Naonobu Noda (Nat. Agric. Food Res. Org., Japan)
P72 Filippa Brugliera (Florigene Pty Ltd., Australia)
P82 Huaibi Zhang (Plant & Food Research, New Zealand)

Session 11 Vacuolar Function and Anthocyanins 1

14:00-14:45 *Chair: Wei Zhang (Flinders University, Australia)*

14:00 The Anthocyanin Modification Catalyzed the Enzymes in Vacuole
Yoshihiro Ozeki (Tokyo University of Agriculture and Technology, Japan)

14:15 Trafficking and Sequestration of Anthocyanins
Erich Grotewold (The Ohio State University, U.S.A.)

14:45-15:00 *Coffee Break*

Session 12 Vacuolar Function and Anthocyanins 2

15:00-15:45 *Chair: Kazuki Saito (Chiba University, Japan)*

15:00 *in vivo* Mechanisms of Blue Flower Color Development
Kumi Yoshida (Nagoya University, Japan)

15:20 Regulation of the Anthocyanin Biosynthetic Pathway in *Vitis Vinifera*
Cell Culture in Response to Multiple Induction Strategies
Wei Zhang (Flinders University, Australia)

15:45 Closing Ceremony

Yoshihiro Ozeki

Announcement on Next IWA