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DOE/ER/20208-T2

FINAL REPORT DE-FG02-96ER20218

FASEB Summer Research Conference on Signal Transduction in Plants CONF-9607174-Sum

July 16-21, 1996, Copper Mt. CO

Terri L. Lomax and Ralph S. Quattano, Organizers

The second FASEB Conference on Signal Transduction in Plants attracted approximately 50 conferees from the US, United Kingdom, Germany, the Netherlands, Mexico, and Japan, with a good mix of established investigators, young faculty, and postdoctoral fellows still in training. The meeting had a broad emphasis and covered many different aspects of signal transduction including sessions on: 1) Environmental Signaling (Terri Lomax, Oregon State University, chair); 2) Perception and Transduction of Light Signals (Elaine Tobin, UCLA, chair); 3) Signaling in Plant-Microbe Interactions (David Lynn, U. Chicago, chair); 4) Signaling in Plant-Pathogen Interactions (Chris Lamb, Salk Institute, chair); 5) Cell:Cell Communication (Keith Roberts, John Innes Institute, chair); 6) The Cytoskeleton, Plasma Membrane, Cell Wall Continuum (Gloria Muday, Wake Forest University, chair); 7) Signaling Molecules in Plant Growth and Development I (Ralph Quattano, University of North Carolina, chair); and 8) Signaling Molecules in Plant Growth and Development II (Gretchen Hagen, University of Missouri, chair). Thirty-six speakers made presentations at these sessions, including four postdoctoral scientists whose work was selected as "hot topics" from the poster abstracts.

The level of science and quality of the presentations was extremely high, with much of the data presented being as yet unpublished. Especially notable was progress in elucidating the signaling mechanisms in response to wounding and pathogen attack; the demonstration that gene products can move between plant cells via plasmodesmata; the role of kinases in plant defense responses, cell differentiation, self-incompatibility, plasma membrane-cell wall communication, and stress responses; and breakthroughs in identifying the components in plant hormone response mechanisms. The session on Plant-Microbe Interactions in particular presented a nearly complete picture of how *Agrobacterium tumefaciens* and plants communicate and interact with each other. The discussions between conferees were very interactive and continued both before and after sessions. The participants were uniformly enthusiastic about the meeting and appreciated both the small size of the conference and the broad range of topics that were covered, bringing together workers in different areas of plant signal transduction who do not often (or never!) interact with each other. Several attendees stated that it was one of the most stimulating conferences that they had ever attended.

Despite this level of enthusiasm, no business meeting was held because the general feeling was that the field of plant signal transduction is rapidly becoming too large and complex to be covered at any single meeting. This means that in the future, meetings on more specific topics will need to be proposed. We encouraged the attendees with ideas for such meetings to contact FASEB directly with their proposals, but did not think that a business meeting would generate them at this time. In addition, there is a rising number of related meetings and this may have played a role in the rather low attendance at this meeting. Although we had tried to move the FASEB meeting to a different year from the Gordon Conference on a similar topic, the Gordon Conference then changed the year of their meeting to coincide with ours. This increase in the number of meetings has also led to problems in fund-raising in an atmosphere that is already increasingly difficult.

The logistics of the meeting all went off splendidly, which is a great tribute to the efforts of Jackie Spangler Johnson. The one drawback was the timing of the conference, which was in a week when the Copper Mt. was essentially shut down, with even the lifts not running and many other facilities (swimming pools, etc.) not available. Otherwise, all ran smoothly and allowed an excellent conference to take place. The organizers greatly appreciate Jackie's efforts, both in helping to get the meeting organized and in ensuring it's success once at Copper Mountain.

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1996 FASEB Summer Symposium - Signal Transduction in Plants
June 16-21, 1996, Copper Mountain, Colorado
Terri L. Lomax and Ralph S. Quatrano, co-chairs

Schedule (5 June 1996 version)

Sunday, June 16

2:00 PM	FASEB conference office opens for registration
6:00 - 7:00 PM	Reception for participants and guests
7:00 - 8:30 PM	Buffet dinner
8:30 - Midnight	Lounge open

Monday June 17

7:30 - 9:00	Breakfast
8:00 AM	FASEB office opens
9:00 - 12:00 AM	Environmental Signaling
9:00 - 9:35	Terri Lomax* Environmental regulation of gravitropic signal transduction
9:35-10:10	Patrick Masson Root gravitropism and waving in <i>Arabidopsis thaliana</i>
10:10-10:30	Break
10:30-11:05	Kay Walker-Simmons Wheat abscisic acid-responsive protein kinases that are up-regulated by dehydration and cold
11:05-11:40	Dianna Bowles Signal transduction pathways leading to wound-responsive gene expression
11:40-12:00	Bratislav Stankovic Intercellular communication in plants: Electrical stimulation of proteinase inhibitor
12:00 - 1:30 PM	Lunch
1:30 PM -	Afternoon free
5:00 - 6:00 PM	Poster viewing and lounge open
6:00 - 7:00 PM	Dinner
7:00 - 10:00 PM	Perception and Transduction of Light Signals
7:00-7:40	Elaine Tobin* Phytochrome-regulated Lhcb (cab) gene expression
7:40-8:20	Daniel Chamovitz Regulators mediating light control of seedling development patterns
8:20-8:40	Break
8:40-9:20	Gary Coté Light signal transduction in pulvini
9:20-10:00	Anthony Cashmore The cryptochrome family of blue light receptors
10:00 - Midnight	Lounge open

* = session organizer

Tuesday, June 18

7:30 - 9:00 AM	Breakfast	
9:00 - 12:00 AM	Signaling in Plant-Microbe Interactions	
9:00 - 9:40	David Lynn*	The molecular language of <i>Agrobacterium</i> pathogenesis VirB-mediated transport of diverse substrates from <i>Agrobacterium</i> into plant cells
9:40-10:20	Andrew Binns	
10:20-10:40	Break	
10:40-11:20	Steven Winans	Quorum-sensing by <i>Agrobacterium tumefaciens</i> \ Opines, autoinduction and the central dogma of the <i>Agrobacterium</i> -plant relationship
11:20-12:00	Steven Farrand	
12:00 - 1:30 PM	Lunch	
1:30 PM -	Afternoon free	
5:00 - 6:00 PM	Poster viewing and lounge open	
6:00 - 7:00 PM	Dinner	
7:00 - 10:00 PM	Signaling in Plant Pathogen Interactions	
7:00-7:40	Barbara Baker	Molecular-genetic characterization of N gene function
7:40-8:20	Gregory Martin	Signal transduction events in bacterial speck disease
8:20-8:40	Break	
8:40-9:20	Dierk Scheel	Receptor-mediated elicitor recognition and signal transduction in plant defense
9:20-10:00	Chris Lamb*	Function of the oxidative burst in plant disease resistance
10:00 - Midnight	Lounge open	

Wednesday, June 19

7:30 - 9:00 AM	Breakfast	
9:00 - 12:00 AM	Cell:Cell Communication	
9:00 - 9:30	Keith Roberts*	Cell-cell interactions and plant cell fate determination Regulation of cell differentiation at the shoot and floral meristem by the receptor kinase CLV1
9:30-10:10	Steven Clark	
10:10-10:50	David Jackson	Plasmodesmal trafficking of Knotted 1 gene products may define a novel cell:cell signaling pathway in plants
10:50-11:05	Break	
11:05-11:45	Teh-hui Kao	Role of petunia S-RNAses in self-incompatibility interactions between pollen and pistil
11:45-12:00	Laura Zonia	Signaling systems regulating pollen development
12:00 - 1:30 PM	Lunch	
1:30 PM -	Afternoon free	
5:00 - 6:00 PM	Poster viewing and lounge open	
6:00 - 7:00 PM	Dinner	

7:00 - 10:00 AM	The Cytoskeleton, Plasma Membrane, and Cell Wall Continuum	
7:00-7:35	Gloria Muday*	Actin association of an auxin transport protein: In vivo and in vitro evidence
7:35-8:10	Melvin Schindler	Signal-mediated changes in the tension within the actin network
8:10-8:30	Break	
8:30-9:05	Darryl Kropf	Polarity establishment in zygotes
9:05-9:40	Bruce Kohorn	A cell wall-associated receptor-like kinase
9:40-10:00	Gail McLean	TMV movement protein association with the plant cytoskeleton: Transport and plasmodesmata permeability
10:00 - Midnight	Lounge open	

Thursday, June 20

7:30 - 9:00 AM	Breakfast	
9:00 - 12:00 AM	Signaling Molecules in Plant Growth and Development I	
9:00 - 9:35	Ralph Quatrano*	Regulation of gene expression by ABA and VP1
9:35-10:10	Ton Bisseling	A peptide encoded by ENOD40 of legumes and non-legumes modifies phytohormone response
10:10-10:30	Break	
10:30-11:05	Richard Walden	Molecular dissection of auxin action
11:05-11:40	Clarence Ryan	Polypeptide signaling for systemic wound response proteins (SWRPs)
11:40-12:00	Marian Löbner	Jasmonate recognition in barley
12:00 - 1:30 PM	Lunch	
1:30 PM -	Afternoon free	
5:00 - 6:00 PM	Poster viewing and lounge open	
6:00 - 7:00 PM	Dinner	
7:00 - 10:00 PM	Signaling Molecules in Plant Growth and Development II	
7:00-7:40	Neil Olszewski	Gibberellin signal transduction in <i>Arabidopsis</i>
7:40-8:20	Anthony Bleeker	Characteristics of the ethylene receptor ETR1 from <i>Arabidopsis</i>
8:20-8:40	Break	
8:40-9:00	Gretchen Hagen*	Auxin-responsive genes
9:00-9:40	Thomas Guilfoyle	Composite auxin response elements
10:00 - Midnight	Lounge open	

Friday, June 21

7:30 - 9:00 AM	Breakfast
11:30 - 12:30 PM	Box lunches
12:00 noon	Bus departs for airport (box lunch served on bus)
1:30 PM	FASEB office closes

WE GRATEFULLY ACKNOWLEDGE THE FOLLOWING CONTRIBUTORS

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