

The CSPB Medal (The Gold Medal)/La médaille de la SCBV (Médaille d'or)

The medal shall be awarded either for outstanding published contributions, or for distinguished service to plant biology, primarily in Canada.



BEVERLEY GREEN

Department of Botany, University of British Columbia

Dr. Beverley Green is an exceptional plant scientist who has long been internationally recognized for her seminal research contributions to chloroplast biochemistry and evolution of the photosynthetic apparatus. After receiving her PhD in Biochemistry from the University of Washington and a postdoctoral fellowship in molecular biology, Dr. Green joined the Botany Department at UBC to begin a highly successful career that is now in its fifth decade. Her research successes are attested by a stream of original papers and reviews (over 110 to date) and many invitations of speak at international meetings. These successes are in five main areas. (i) Discovery and mechanistic characterization of chlorophyll-protein complexes that form the core antenna complexes of photosystem II in plants and cyanobacteria, and the elucidation of the evolutionary relationships of the proteins involved. (ii) Chloroplast genomics, including the demonstration of the extraordinary 'mini-circle' organization of dinoflagellate chloroplast genes. (iii) Diatom genomics, including a leadership role in the consortium that sequenced the first diatom genome, *Thalassiosira pseudonana*. (iv) Discovery of the first example of gene transfer from the nucleus of a haptophyte alga tertiary symbiont to the nucleus of its dinoflagellate host. and (v) Chloroplast biology of chlorophyll c-containing algae, including the demonstration that these algae are unique in having acquired their chloroplast by engulfing a red alga, an evolutionary path that has led to four chloroplast envelope membranes instead of the usual two. Besides her outstanding research career, Dr. Green has been very active in training highly qualified personnel, having supervised more than 20 graduate students and postdoctoral fellows in the last 20 years alone. Many of these former associates have developed productive scientific careers in academia, government laboratories, and the private sector. Dr. Green also has an exceptional track record of administrative work at the university, national and international levels, including service on the editorial boards of two journals, on Canadian and US federal grant selection committees, and conference organization. In summary, Dr. Green could not be a more deserving candidate for the CSPB Gold Medal Award.

2013 CD Nelson Award in Plant Biology / Le Prix C.D. Nelson en Biologie Végétale

The Award shall be given for outstanding research contributions to plant biology. Special consideration will be given to originality and independence of thought. Nominees shall have been in an independent, full-time research position for no more than 10 years.



UWE HACKE

Department of Renewable Resources, University of Alberta

Dr. Uwe Hacke is an innovative scientist whose research program focuses on plant-water relations. Since his recruitment as a faculty member and Canada Research Chair at the Univ. of Alberta he has become an authority in integrating functional anatomy, molecular biology, whole plant physiology, and ecophysiology to understand how plants optimize water use under different and ever-changing environmental conditions. Uwe has also performed cutting-edge studies of plasma membrane water channels known as aquaporins and how they function in plants. He has published 46 papers in high impact journals including: *Plant Cell and Environment*, *Plant Physiology*, *Journal of Experimental Botany*, and *New Phytologist*. His work has been featured on the covers of *Plant Cell and Environment* and *International Journal of Plant Science*. Uwe has served on the Editorial Board of *Annals of Botany* and is currently a member of the Board of Advisors for *The New Phytologist*. He has contributed a number of prestigious review articles and book chapters, and has been invited to speak in many places, most recently at the Botanical Society of America meeting in New Orleans and Plant Vascular Development meeting in Banff. He has also been a dedicated mentor and teacher of graduate and undergraduate thesis students, and post-doctoral fellows. The CSPB/SCBV is delighted to honour Dr. Uwe Hacke as the recipient of the 2013 C.D. Nelson Award.

2013 Gleb Krotkov Award / Le Prix Gleb Krotkov

The Award shall be for outstanding service to the Society, both in administration and in scientific contributions to annual meetings.

CONNIE NOZZOLILLO

Dept. of Biology, University of Ottawa



Dr. Connie Nozzolillo is a Founding Member of the Canadian Society of Plant Biologists (formerly the Canadian Society of Plant Physiologists), and has been active in the Society, and in the larger world of plant biology, for many years. Connie was lead organizer for two (then-CSPP) Eastern Regional Meetings (1979, 1985), and a member of the organizing committee for two Annual Meetings: in 1967 (a joint meeting with the Canadian Botanical Association) and 2008 (the Society's 50th anniversary conference). Connie also served as the Society's Eastern Region Director from 1968 to 1970, and as the Society's representative to the Biological Council of Canada from 1984 to 1986.

Further service to the Society was through Connie's membership on the Gleb Krotkov Committee (1997-2000, serving as the chair in 1999-2000). She also served on the Ann Oaks Scholarship Fund Committee from 2000-2005; this was a time during which the Society was trying to "grow" the Fund, and this position required a lot of communications and meetings. Connie became the Society's Assistant Archivist in 1992, and then Archivist in 2000. The Archives are housed at the National Research Council's Sussex Drive research facilities in Ottawa. Connie has made many trips to the NRC to add documents and also to sort, catalogue and weed documents. This is very important for not only preserving important documents, but also Society history, especially from before the digital age. Furthermore, copies of all proceedings from CSPB conferences are sent to Connie for archiving. Overall, Connie has spent untold hours organizing and caring for the CSPB Archives. She has also made contributions to preserving the Society's history before she was an official archivist, and also outside of her duties as archivist. In the official history of the Society's first quarter century (*The First Twenty-Five Years – A History of the Canadian Society of Plant Physiologists*, written by Paul Gorham and Tony Bidwell, published in 1983), Connie's contributions to providing photographs for the document are gratefully acknowledged. Connie also co-authored, with Paul Gorham, "Photosynthesis Research in Canada from 1945 to the early 1970s" (Gorham PR, Nozzolillo CG (2006) *Photosyn Res* 88:83-10), in which the CSPP figures prominently. For the Society's 50th anniversary conference in 2008 (in Ottawa), Connie wrote "A History of the Canadian Society of Plant Physiologists - The Second Twenty Five Years." The history was distributed in hard copy at the conference and is also available on the Society website. Connie also presented a talk about the history of the then-CSPP during the opening session of the 50th anniversary conference. Connie has attended innumerable CSPP/CSPB conferences, and has continued to be a regular conference attendee after her retirement from the University of Ottawa. As well, she and her co-workers and students have presented numerous posters and talks at Annual and Regional Meetings.

2013 Ragai Ibrahim Prize / Le Prix Ragai Ibrahim

The Ragai Ibrahim Award Fund was established by CSPB/SCPB through a generous donation from Prof. Ragai Ibrahim, eminent Canadian plant scientist and an emeritus member of the CSPB-SCBV. The purpose of the award is to recognize excellence in publication by graduate students.



YUE (Alex) WU

Supervisor: Charles Després, Dept. of Biological Sciences, Brock University

Y. Wu, D. Zhang, J. Y. Chu, P. Boyle, Y. Wang, I. D. Brindle, V. De Luca, C. Després (2012) The Arabidopsis NPR1 Protein Is a Receptor for the Plant Defense Hormone Salicylic Acid. *Cell Reports* 1:639-647

Yue Wu, also known as Alex was an MSc student in Charles Després' lab when he contributed to this breakthrough paper in the field of plant-pathogen interactions. Salicylic acid (SA) was the last of the major plant hormones without a known receptor. Alex and colleagues have identified the elusive SA receptor, and the molecular mechanisms that facilitate the interaction are beginning to be characterised. Efforts can now be put forth to engineer crop protection based on this discovery, the importance of which is highlighted by the fact that biotech firms have already contacted the authors in hopes of developing the technology. Alex's work was central to the paper, where he used an established, but not often used, technology called equilibrium dialysis. The creative use of this method, along with extreme perseverance, is the reason for the success in identifying the long sought-after SA-receptor. Alex accomplished most of his experiments pertaining to the paper in his second year as an MSc student.

2013 Raqai Ibrahim Prize

Honourable Mention



SHIU (Terry) CHUNG LUNG

Supervisor: Simon Chung, Dept. of Biology, University of Waterloo

S. C. Lung & Simon D.X. Chuong (2012) A Transit Peptide-Like Sorting Signal at the C Terminus Directs the *Bienertia sinuspersici* Preprotein Receptor Toc159 to the Chloroplast Outer Membrane. *Plant Cell* 24:1560-1578

Shiu Cheung Lung, also known as Terry, completed this work during his PhD. This manuscript describes the identification and characterization of key components of the translocons responsible for the import of nuclear-encoded proteins leading to the differentiation of the two anatomically and biochemically distinct chloroplasts in the single-cell C4 species *Bienertia sinuspersici*. This is a unique cell system that disputed the classical Kranz paradigm of C4 photosynthesis, and serves as a tremendous research system for examining developmental biology. The identification of this novel transit peptide also enhances our current understanding of protein targeting and import into chloroplasts. Terry established the groundwork for understanding how proteins are differentially targeted to the two types of chloroplasts in *Bienertia*, elucidating the molecular basis for the compartmentalization of specific photosynthetic pathways unique to this species. One of the important findings in this manuscript is the data supporting a theory suggesting that the Toc159 receptors might be shuttling between the cytoplasm and chloroplast surface for the recognition and delivery of specific proteins to the chloroplasts. This hypothesis has become a topic of debate in the field of plant cell biology for the past few years, and Terry's results are in support of this proposed idea.