



ISME 16  
Montreal

**16<sup>th</sup> International Symposium on Microbial Ecology**  
**Montreal, Canada, 21-26 August 2016**

### **SUMMARY**

On Sunday 19 August, around 2,000 scientists arrived at the Palais des Congrès de Montréal, located in between Montreal's Old Town and the modern part of the city. The Canadian flavor was very much present at the Sunday opening; LOC Chair Richard Villemur presented the history of microbial ecology in Canada on behalf of Ed Topp. This was followed by Charles Greer's plenary lecture, which also involved an ice hockey stick. A traditional Quebecois dance group showed the audience their skills and the jazzy tunes of McGill University's band could be heard during the opening reception.

A busy week of science followed, helmed by excellent plenary presentations of Roman Stocker, Richard Lenski, Emma Allen-Vercoe, and Siv Andersson. Penny Chisholm gave an inspiring lecture after receiving her Tiedje Award and Tom Curtis' Bird's Eye View lectures provided a lot of food for thought. Gerry Wright closed the meeting on Friday 26 August with his retrospective remarks in regard to the field. And on Tuesday 23 August nearly all delegates were able to attend the ISME Social Gathering at the classy decorated New City Gas venue, as it was included in the registration fees this year. We partied, danced, ate, swunged, or played foosball until the last bus left for the city center again.

The results of the delegate survey show that almost everyone had a very positive experience. We realize that there is always room for improvement but nonetheless we are thrilled that ISME16 was perceived in such a positive way.

ISME is grateful for a successful meeting, and would like to thank all delegates, speakers, sponsors, exhibitors and volunteers for their contribution. We hope to see you all in Leipzig.

### **FACTS AND FIGURES**

Abstracts/papers received	2066
Keynote Presentations	7
Bird's Eye View Presenters	1
Invited Presentations	117
Round Table Sessions	9
Contributed Papers selected for Oral presentation	231
Contributed Papers selected for Poster presentation	1724
Number of Attendees	2126

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### SCIENTIFIC AWARDS

**The Jim Tiedje Award:** This is presented to an exalted microbial ecologist who is recognized for his or her Outstanding Lifetime contribution to the field of microbial ecology. Past winners of this award include Nancy Moran (2014), Stephen Giovannoni (2012), Bo Barker Jørgensen (2010), Norman Pace (2008), Gijs Kuenen (2006) and Farooq Azam (2004). The 2016 awardee is **Sallie W. (Penny) Chisholm**, who presented her award lecture on the evening of Thursday, 25 August, 2016.

**The ISME Young Investigator Award:** This award recognizes early career microbial ecologists who have made significant contributions to this field. Past winners of this award include Ruth Ley (2014), Victoria Orphan (2012), Marc Strous (2010), Forest Rohwer (2008), Phil Hugenholtz (2006) and Ian Head (2004). The recipient of the 2016 award is **Gene Tyson**, University of Queensland, Australia.

**ISME Student Poster Award:** This is reserved for students, or graduates within two years of graduation as long as they are the first author on a submitted poster presentation. The ISME16 recipients are:

- **Mallory Choudoir** (Cornell University, United States), “Gene content and diversification of secondary metabolite biosynthetic gene clusters coincides with divergence of terrestrial *Streptomyces* populations”
- **Christopher E. Lawson** (University of Wisconsin-Madison, United States), “Distributed metabolic networks reveal microbial community interactions in anammox granules”
- **Laura-Carlota Paz** (Aarhus University, Denmark), “Differential effects of three nephridial earthworm symbionts on fitness, metabolome, and amino acid acquisition of their host ”
- **Nika Pende** (University of Vienna, Austria), “Dividing to expand: coccus-like growth mode in rod-shaped nematode symbionts”
- **Thomas S.B. Schmidt** (University of Zurich, Switzerland), “A family of interaction-adjusted indices of community similarity”
- **Wenke Smets** (University of Antwerp, Belgium), “The effect of land use and air pollution on the bacterial phyllosphere of Ivy and London plane tree”
- **Brodie Sutcliffe** (Macquarie University, Australia), “Effect of uranium on sediment microbial communities”
- **François-Étienne Sylvain** (Université Laval, Canada), “You are what you eat: get mature faster by foraging on your parents; the discus fish example”
- **Yuto Ueda** (Hiroshima University, Japan), “An innovative cultivation method that enable isolating pure culture automatically”

**The D.C. White Award:** David C. White’s vision was to honour and respect the power of quantitative analytical chemistry to microbial ecology. Thus, this award is presented to the most innovative poster at the ISME Symposia. The inaugural 2016 award was presented to **Yuto Ueda**, Hiroshima University, Japan.

**The MOBIO Award:** Bronze Sponsor MOBIO Laboratories, Inc. presented the MO BIO Award for the best poster at the symposium. The award was granted to **Wenke Smets**, University of Antwerp, Belgium.

**The Bill Costerton Award:** In honour of Bill Costerton, the award is granted to the author of the poster that best involves new theories in microbial ecology and wider inter-disciplinary significance. The award was presented to **François-Étienne Sylvain**, Université Laval, Canada.

**The Tom Brock Awards** acknowledge the accomplishments and promise of outstanding postdoctoral research associates on the basis of the presentations that they make at the ISME Symposium. The awards were granted to **Sebastian Lücker**, Radboud University Nijmegen, the Netherlands, and **Kenneth Lacey**, Indiana University, United States.

The **ISME-IWA Biocluster Award** recognizes the importance of interdisciplinary research at the interface of microbial ecology and water/wastewater treatment. The Grand Prize was awarded to both **Holger Daims**, University of Vienna, Austria, and to **Lutgarde Raskin**, University of Michigan, USA. **Mads Albertsen**, Aalborg University, Denmark, received the The Rising Star Prize.

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### Travel Awards

ISME made funds available for travel awards for approximately 80 young scientists. The grants were:

- North America € 300 (around CAD 400)
- Rest of the World € 750 (around CAD 1000)

We received a total of 381 submissions and were able to grant 82 ISME Travel Awards, 3 Exxon Mobil Travel Awards and 3 CSM Travel Awards, resulting in a total of 88 Travel Awards.

### ISME Travel Grants:

Abigail Armstrong, *University of Colorado, United States*

Lucas Auer, *LISBP (INSA - INRA), France*

Disa Bäckström, *Uppsala University, Sweden*

Tom Berben, *University of Amsterdam, Netherlands*

Bregje W. Brinkmann, *University of Amsterdam, Netherlands*

Timothy Bush, *University of Amsterdam, Netherlands*

Eric Capo, *CARTELE, INRA, University Savoie Mont Blanc, France*

Yi-Lung Chen, *National Taiwan Normal University/Academia Sinica, Taiwan*

Gerald Cobian, *University of Hawaii at Manoa, United States*

Yossi Cohen, *Hebrew University of Jerusalem, Israel*

Carolina Fernanda Cubillos León, *University of Antofagasta, Chile*

Mathilde Dahl, *Ernst Moritz Arndt University Greifswald, Germany*

Paula Dalcin Martins, *The Ohio State University, United States*

Storme Z. de Scally, *University of Pretoria, South Africa*

Vincent Delafont, *University of Vienna, Austria*

Kimberly Dill-McFarland, *University of Wisconsin-Madison, United States*

Grisel Fierros Romero, *Instituto Politécnico Nacional, Mexico*

Marco Giardina, *University of Technology Sydney, Australia*

Lars Grossmann, *University of Duisburg-Essen, Germany*

Ankit Gupta, *Indian Institute of Science Education and Research, Bhopal, India*

Lenka Harantová, *Academy of Sciences of the Czech Republic, Czech Republic*

Rachel Harris, *Princeton University, United States*

Zhanfei He, *Zhejiang University, China*

Olivia Healy, *University of Nebraska-Lincoln, United States*

Syrie Hermans, *The University of Auckland, New Zealand*

Sur Herrera Paredes, *The University of North Carolina at Chapel Hill, United States*

Stefanie Hetz, *Leibniz Universität Hannover, Germany*

Johannes Holert, *University of British Columbia, Canada*

John Hottenstein, *University of Arizona, United States*

Yue Hu, *Royal Institute of Technology (KTH), Sweden*

Shi Huang, *Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences, China*

Nicola Imperiali, *University of Lausanne, Switzerland*

Evelyn Joyce, *Waterford Institute of Technology, Ireland*

Katharina Kitzinger, *University of Vienna, Austria*

Sarah Kopac, *University of Connecticut, United States*

Simone S. Li, *EMBL Heidelberg, Germany*

Po-Yu Liu, *National Taiwan University and Academia Sinica, Taiwan*

Wen-Sui Lo, *Academia Sinica, Taiwan*

Gabriel L. Lozano, *Yale University, United States*

Joran Martijn, *Uppsala University, Sweden*

Alix Mas, *UMR 6553 Ecobio, France*

Sean McAllister, *University of Delaware, United States*

Jaime Leonardo Moreno-Gallego, *Universidad de los Andes, Colombia*

Jiro F. Mori, *Friedrich Schiller University Jena, Germany*

Francisco Moya, *University of Wisconsin-Madison, United States*

Bhavya Nalagampalli Papudeshi, *San Diego State University, United States*

Adrienne Narrowe, *University of Colorado Denver, United States*

Daniel Nasko, *University of Delaware, United States*

Jose Antonio Navas Molina, *University of*

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California San Diego, United States  
 David Needham, *University of Southern California, United States*  
 Filomena Ng, *AgResearch, Grasslands Research Centre, New Zealand*  
 Brent Nowinski, *University of Georgia, United States*  
 Nastassia Patin, *University of California, San Diego, United States*  
 Nika Pende, *University of Vienna, Austria*  
 Jean F. Power, *GNS Science/University of Waikato, New Zealand*  
 Jacob Price, *Drexel University, United States*  
 Kristin Rath, *Lund University, Sweden*  
 Henriette Lyng Røder, *University of Copenhagen, Denmark*  
 Luis M Rodriguez-R, *Georgia Institute of Technology, United States*  
 Robin Rohwer, *University of Wisconsin-Madison, United States*  
 Albert Remus Romero Rosana, *University of Alberta, Canada*  
 Ezequiel Santillan, *Nanyang Technological University, Singapore*  
 Ruth Schmidt, *Netherlands Institute of Ecology, Netherlands*  
 Michael Shaffer, *University of Colorado Denver, United States*  
 Cynthia Silveira, *San Diego State University, United States*  
 Yihua Sun, *Ghent University, Belgium*  
 Shan Sun, *Virginia Tech, United States*  
 Sotaro Takano, *Osaka University, Japan*  
 Sofie Thijs, *Hasselt University, Belgium*  
 Deepa Ruth Varkey, *Macquarie University, Australia*  
 Joost Verhoeven, *Memorial University of*

*Newfoundland, Canada*  
 Marta Volpi, *Aarhus University, Denmark*  
 Sanne Westhoff, *Leiden University, Netherlands*  
 Nathan I. Wisnoski, *Indiana University, United States*  
 Hon Lun Wong, *University of New South Wales, Australia*  
 Jen Wood, *La Trobe University, Australia*  
 Ke-Qing Xiao, *Aarhus University, Denmark*  
 Lily Xu, *MIT and the Broad Institute, United States*  
 Han Yan, *Tongji University, China*  
 Wenkai Yan, *Shanghai Jiao Tong University, China*  
 Keren Yanuka-Golub, *Tel Aviv University, Israel*  
 Yasuko Yoneda, *National Institute of Advanced Industrial Science and Technology (AIST), Japan*

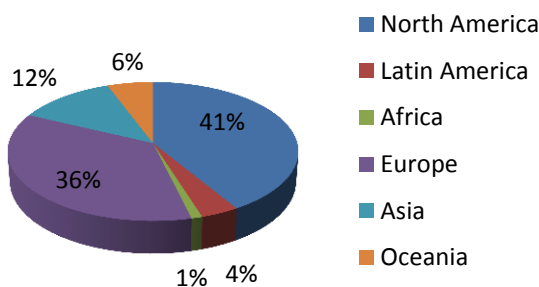
Sponsored by ExxonMobil:

Francisco Dini Andreote, *University of Groningen, Netherlands*  
 Colleen Friel, *Michigan State University, United States*  
 Michael Hoggard, *University of Auckland, New Zealand*

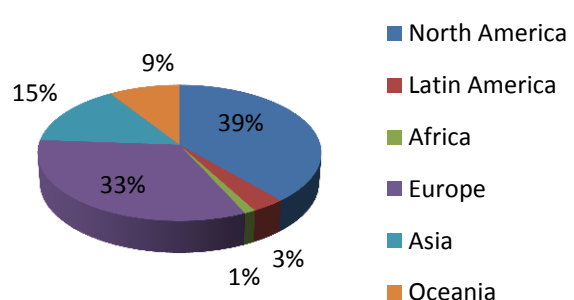
Sponsored by the Canadian Society of Microbiologists:

Preshita Gadkari, *Rutgers University, United States*  
 Ben Oyserman, *University of Wisconsin, United States*  
 Christine Sharp, *University of Calgary, Canada*

## Applicants Travel Awards



## Distribution Travel Awards



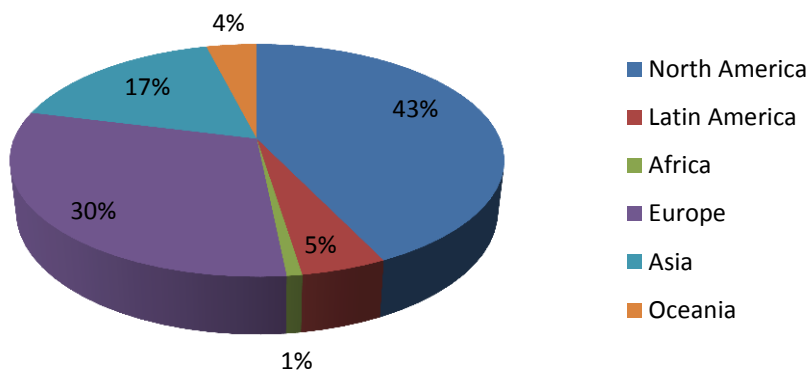
**FACTS ON REGISTRATION AND ATTENDANCE**

**Total Number of Attendees:** 2126, from 51 Countries

**Total Number of Attendees including Exhibitors and Accompanying Persons:** 2219

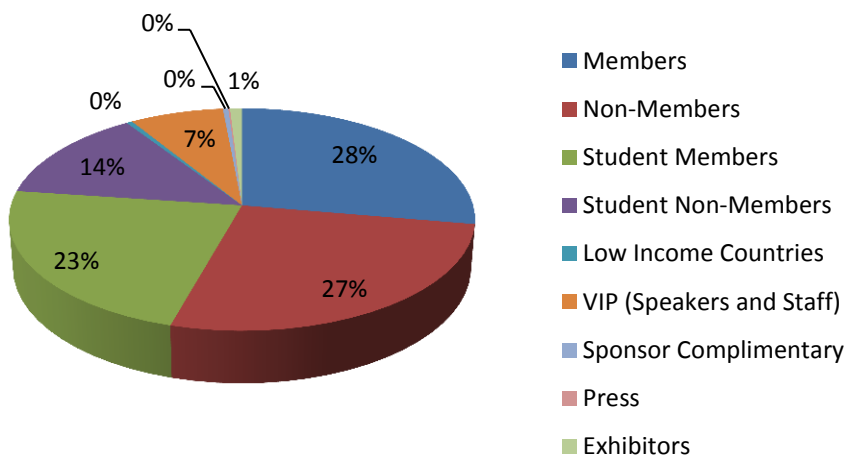
**Breakdown of Attendees per Region:**

**Attendees ISME16**



**Breakdown of Registration per Category:**

**Registration Category**



### POSTERS

Total number of Posters: 1724

Session No.	Title	Number of Posters
PS01	Evolution	64
PS02	Extreme environments	87
PS03	Nitrogen assimilation	14
PS04	Freshwater microbial ecology: crossing the border from sediment to the pelagic zone	54
PS05	Pathogen ecology and evolution	38
PS06	Genomics and ecophysiology of single microbial cells	13
PS07	Communication and networks in biofilm communities	36
PS08	Cutting-edge methods in microbial ecology	58
PS09	Mechanistic understanding of the human and mammalian microbiome	45
PS10	Microbial eukaryotes	29
PS11	Microbial cycling of one carbon compounds	17
PS12	Cultivating elusive microbes	14
PS13	Archaea: ecophysiology and evolution	14
PS14	Symbiotic associations: evolutionary mergers and acquisitions	57
PS15	Soil microbial ecology	219
PS16	Ecological theory	53
PS18	Petroleum microbiology	46
PS19	Bioremediation: working with natural microbial communities to improve water and soil quality	90
PS20	Dissimilation of nitrogen compounds	39
PS21	Human microbiome: exploration and manipulation	58
PS22	Microbial ecology meets environmental biotechnology	141
PS23	Applying -omics approaches to understand microbial functioning	218
PS24	Oceans of discovery, seas of change	72
PS25	Metal cycling	25
PS26	Polar microbial ecology	38
PS27	M"ISME"rizing viruses: diversity and interactions	37
PS28	Sulfur links in Earth's microbiomes	18
PS29	Plant-microbe interactions	130

### VENUE

ISME16 took place at the Palais des Congrès de Montréal, in downtown Montreal, Canada.

### SOCIAL EVENTS

#### **ISME Party – New City Gas**

For ISME16, we could include the party ticket in the registration fee, allowing all delegates to attend  
Number of Attendees: 1745

The Tours were outsourced to a third party and are not part of the ISME16 organization. Numbers for the tours are therefore unknown.

### LIST OF SPONSORS

#### **Sponsors:**

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Université Laval



**Travel Award Sponsors:**

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IWA



### Exhibitors:

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CSM – Canadian Society of Microbiologists



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Oxford University Press



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The International Society for Microbial Ecology

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## SYMPOSIUM FINAL REPORT

### SYMPOSIUM MANAGEMENT

#### **Symposium Management:**

Sarash de Wilde, the Netherlands (Head ISME Office)  
Sabine van Wegen, the Netherlands (Events Coordinator)  
Nina Koele, the Netherlands (Events Assistant)

#### **Organising Committees:**

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President  
Colin Murrell (United Kingdom)  
Vice President  
Michael Wagner (Austria)  
Past President  
Mark Bailey (United Kingdom)  
Secretary Treasurer

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Åsa Frostegård (Norway)  
Kirsten Küsel (Germany)  
Satoshi Okabe (Japan)  
Victoria Orphan (United States)  
Mike Taylor (New Zealand)  
Nicole Webster (Australia)

##### **Local Organizing Committee:**

Richard Villemur, INRS-Institut Armand-Frappier  
(Chair)  
Lyle Whyte, McGill University (Co-chair)  
Trevor Charles, University of Waterloo  
Philippe Constant, INRS-Institut Armand-Frappier  
Kari Dunfield, University of Guelph  
Peter Dunfield, University of Calgary  
Charles Greer, National Research Council  
Canada  
Steven Hallam, University of British Columbia  
Mohamed Hijri, Université de Montréal  
Laura Hug, University of Waterloo  
Steven Kembel, Université du Québec à Montréal  
Karine Lemarchand, Université du Québec à  
Rimouski  
Connie Lovejoy, Université Laval

Christine Martineau, Laboratoire de Santé  
Publique du Québec  
Luke Masson, National Research Council Canada  
Bill Mohn, University of British Columbia  
Nadia Mykytczuk, Laurentian University  
Louise Nelson, University of British Columbia  
Josh Neufeld, University of Waterloo  
Jesse Shapiro, Université de Montréal  
Richard Sparling, University of Manitoba  
Marc Strous, University of Calgary  
Ed Topp, Agriculture and Agri-Food Canada  
Gerrit Voordouw, University of Calgary  
David Walsh, Concordia University  
Etienne Yergeau, INRS-Institut Armand-Frappier  
Sang-Jin Kim, Korea Institute of Ocean Science &  
Technology (KIOST), South-Korea (Chair  
ISME15)

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