

### Peer-Reviewed Journal Articles –

1. Lim, D. S. S., B. E. Laval, G. Slater, D. Antoniadou, A. Forrest, W. Pike, R. Pieters, M. Saffari, D. Reid, D. Andersen and C. P. McKay. 2008. Limnology of Pavilion Lake B.C. - Characterization of a microbialite forming environment. *Fundamental and Applied Limnology* (in review).
2. Forrest, A.L., B.E. Laval, D. S. S. Lim, A. Trembanis, E. Magnusson, R. Yeo and C.P. McKay, 2008. Autonomous Underwater Vehicles: Robotic analogues for space exploration. *Special Issue Planetary Space Science: Exploring Mars* (in review).
3. Forrest, A.L. B.E. Laval, R. Pieters and D.S.S. Lim. In press. Convectively driven transport in temperate lakes. *Limnology and Oceanography*.
4. Laval, B, S L Cady, J C Pollack, C P McKay, J S Bird, J P Grotzinger, D C Ford, H R Bohm. (2000) Unique assemblage of modern freshwater microbialites, Pavilion Lake, British Columbia, Canada. *Nature* 407: 626-629.

### In preparation:

1. Lim, D. S. S., G. Slater, A. Airo, A. Brady, D. Mucciarone, B. Laval, and C. P. McKay. A geochemical investigation of microbialite morphogenesis in Pavilion Lake, British Columbia, Canada.
2. Brady, A.L., G. Slater, D.S.S. Lim, B. Laval Using  $^{14}\text{C}$  to constrain carbon sources and growth of carbonate microbialites in Pavilion Lake, B.C.

### PLRP Contributed Presentations at Professional Meetings and Invited Talks

1. Brady, A. G.F. Slater, B. Laval and D.S.S. Lim “Isotopic biosignatures associated with freshwater microbialites and carbonate precipitating microbial mats” 18<sup>th</sup> Annual Goldschmidt Conference, Vancouver, B.C. Canada 2008 (accepted abstract)
2. Slater, G., A.L. Brady, B. Laval and D.S.S. Lim “Using  $^{14}\text{C}$  to Constrain Carbon Sources and Growth of Carbonate Microbialites in Pavilion Lake, British Columbia” Astrobiology Science Conference, Santa Clara, California April 2008 (poster presentation)
3. Forrest, A, B Laval, D S S Lim, E Magnusson, R Yeo, C McKay, D Andersen, D Reid, M Doble, G Slater, A Brady. Autonomous Underwater Vehicles: Robotic analogues for space exploration. Astrobiology Science Conference 2008, Santa Clara, CA.
4. Pike, W, D S S Lim, B Laval, G Slater, D Reid, C McKay. Kelly Lake microbialites, another discovery in the Pavilion Lake region. Astrobiology Science Conference 2008, Santa Clara, CA.
5. Lim, D S S, B Laval, D Andersen, D Reid, G Slater, P Nuytten, D Williams, M Gernhardt, A Forrest, A Brady, C McKay. Deep Worker Submersibles at Pavilion Lake: A stepping-stone to the human exploration of the Moon, Mars and beyond. Astrobiology Science Conference 2008, Santa Clara, CA.
6. Turse, C, D Schulze-Makuch, D Lim, B Laval, L Irwin. The rise of complexity: Evidence from cell signaling compounds for Pavilion Lake microbialites and temperate zone microbial community ecosystems. Astrobiology Science Conference 2008, Santa Clara, CA.
7. Chan, O, S Pointing, B Laval, G Slater, D Lim. Molecular ecology of freshwater microbialite structures in Pavilion Lake, British Columbia, Canada. Astrobiology Science Conference 2008, Santa Clara, CA.
8. Brady, A, G Slater, B Laval, D S S Lim. Constraining the metabolic and isotopic variability in modern microbialite and microbial mat communities in British Columbia, Canada. Astrobiology Science Conference 2008, Santa Clara, CA.
9. Pavilion Lake Research Project – Understanding the limnological context of an unusual lake setting. Vancouver Aquarium Speakers’ Series, Vancouver, B.C., Canada, November 30, 2007.
10. Slater, G, A Brady, A, B Laval, B, D S S Lim. (2007) Constraining carbon sources and growth of microbialites in Pavilion Lake, BC using  $^{14}\text{C}$ . *Geochimica et Cosmochimica Acta* 71 (15): A948 Suppl.
11. Pavilion Lake, B.C., Canada – An investigation of potentially unique microbialites – a window into Early Earth systems. Geological Society of America Annual Meeting, Denver, CO, USA, October 28-31, 2007.
12. Forrest, A and B Laval. (2007) Lacustrine growth conditions of modern microbialites: an AUV perspective. 2<sup>nd</sup> International Workshop on Exploring Mars and its Earth Analogues. Trento, Italy.

13. Laval, B, D S S Lim, D Reid, G F Slater, C P McKay. (2007) Pavilion Lake Research Project: merging science and exploration to meet analogue research objectives. 2<sup>nd</sup> International Workshop on Exploring Mars and its Earth Analogues. Trento, Italy
14. Pavilion Lake – the key to understanding ancient microbialite morphogenesis. National Geographic Society Speakers' Series, Washington, D.C., June 12<sup>th</sup>, 2006.
15. Pavilion Lake, British Columbia, Canada – An investigation of potentially unique freshwater microbialites, and their application to Mars exploration. University of Toronto Geology Department Speakers' Series, February 23, 2005
16. Pavilion Lake, British Columbia, Canada – An investigation of potentially unique freshwater microbialites, and their application to Mars exploration. American Geophysical Union, Fall Meeting, San Francisco, CA, 5-9 December 2005.
17. Slater, G.F., Brady, A.L., Laval, B., Lim, D.S.S. Constraining carbon sources and growth of microbialites in Pavilion Lake, BC using <sup>14</sup>C Goldschmidt 2007 Cologne Germany, August 2007.
18. Brady, A. "An investigation into the mechanisms of microbialite formation and potential biosignatures using isotopic tracers" 2<sup>ND</sup> Analogue Research Workshop, Hamilton, Ontario May 2007
19. Slater, G.F. Brady A.L. Laval, B., Lim D.S.S., Isotopes and Biosignatures at Pavilion Lake Second Analogue Research Workshop, Hamilton ON, CA, May 2007
20. Laval B., D.S.S. Lim, D. Reid, G.F. Slater, C. McKay: Pavilion Lake Research Project, Merging Science and Exploration to Meet Analogue Research Objectives, Second Analogue Research Workshop, Hamilton ON, CA, May 2007
21. Pavilion Lake Research Project - merging science and exploration to meet analog research objectives. ISA 2007.
22. Laval, B, D Reid, D. S. S. Lim. Site protection issues of the Pavilion Lake Research Project in Marble Canyon Provincial Park, BC. British Columbia Protected Areas Research Forum. Victoria, BC, Canada, December 2006.
23. Forrest, A and B Laval. (2006) Saturation indices and equilibrium speciation in Pavilion Lake. 1<sup>st</sup> Analogue Research Workshop, NASA Ames Research Center, Moffett Field, CA, USA.
24. Microbialite Formation across Chemical and Photosynthetic Gradients in Pavilion Lake, BC. G. Slater, DSS Lim, Laval, Schulze-Makuch and Airo, AGU, Fall Meeting, San Francisco, CA, 5-9 December 2005.
25. Schulze-Mackuch, D, B Laval, D S S Lim, L N Irwin. (2005) The rise of complexity: do the Pavilion Lake Microbialites suggest a way to build a macroorganism? EOS Trans. AGU: 86 (52), Fall Meet. Suppl., Abstract B13A-1053.
26. Pavilion Lake, British Columbia, Canada – An investigation of potentially unique freshwater microbialites, and their application to Mars exploration. D. S. S. Lim<sup>1</sup>, C. P. McKay<sup>1</sup>, B. Laval<sup>2</sup>, D. Andersen<sup>3</sup>, A. Airo<sup>4</sup>, D. A. Mucciarone<sup>4</sup>, D. Schulze-Makuch<sup>5</sup> and S. Cady<sup>6</sup>, CSEW5, St.Hubert, QC, May 12-13, 2005
27. POSTER PRESENTATION: Pavilion Lake, BC, Canada – Investigating Microbialite Morphogenesis. Lim, D. Airo, A., Laval, B., Cady, S., McKay, C. NAI Conference 2005, Boulder Colorado, April 10-14<sup>th</sup>, 2005
28. POSTER PRESENTATION: Freshwater Microbialites of Pavilion Lake, British Columbia, Canada - A Limnological Investigation, Darlene S. S. Lim, C. P. McKay, B. Laval, J. Bird and S. Cady, Second Conference on Early Mars. October 11-15, 2004, Jackson Hole, Wyoming.