



Research Publications: UBC Faculty of Land and Food Systems

Timeframe: April 1, 2021-June 30, 2021

Priority Area: Addressing Climate Change and Resilient Food Systems

Google Scholar

- Optimal ultrasonication process time remains constant for a specific nanoemulsion size reduction system. [Scientific Reports, 11\(1\), 1-12, 9241, April 2021](#). Authors: **Anubhav Pratap-Singh, Yigong Guo, Sofia Lara Ochoa, Farahnaz Fathordoobady, Anika Singh**
- Seed coat mucilages: Structural, functional/bioactive properties, and genetic information. [Comprehensive Reviews in Food Science and Food Safety, 20\(3\), 2534-2559, April 2021](#). Authors: Yan Liu, Zhenfei Liu, Xuerui Zhu, Xinzhong Hu, Hui Zhang, Qingbin Guo, **Rickey Y. Yada, Steve W. Cui**
- Long-term silicon dynamics in terrestrial ecosystems: insights from 2-million years soil chronosequences. [EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-1105](#). Authors: Félix de Tombeur, Benjamin Turner, Etienne Laliberté, Hans Lambers, Grégory Mahy, Michel-Pierre Faucon, Graham Zemunik, **Jean-Thomas Cornélis**
- Nutrient cycling differs between cropped soils with century-old and recently pyrolyzed biochar. [EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-15676](#). Authors: Victor Burgeon, Julien Fouché, Sarah Garré, Ramin Heidarian-Dehkordi, Gilles Colinet, **Jean-Thomas Cornélis**
- Resilience of cardiac performance in Antarctic notothenioid fishes in a warming climate. [Journal of Experimental Biology, 224\(10\), May 2021](#). Authors: Kristin M. O'Brien, William Joyce, Elizabeth L. Crockett, Michael Axelsson, Stuart Egginton, **Anthony P. Farrell**
- Inherent and Stress-Induced Responses of Fine Root Morphology and Anatomy in Commercial Grapevine Rootstocks with Contrasting Drought Resistance. [Plants, 10\(6\), 1121, June 2021](#). Authors: Idan Reingwartz, Jake Uretsky, Italo F. Cuneo, **Thorsten Knipfer, Clarissa Reyes, M. Andrew Walker, Andrew J. McElrone**
- How Broad Is Enough: The Host Range of Bacteriophages and Its Impact on the Agri-Food Sector. [PHAGE, 2\(2\), 83-91, June 2021](#). Authors: **Karen Fong, Catherine W.Y. Wong, Siyun Wang, and Pascal Delaquis**
- Lactic acid fermentation: A novel approach to eliminate unpleasant aroma in pea protein isolates. [LWT Food Science and Technology, 111927, June 2021](#). Authors: **Yuan Shi, Anika Singh, David D Kitts, Anubhav Pratap-Singh**
- Food Processing Wastewater Treatment: Current Practices and Future Challenges. [Pollution Control Technologies, 177-208, June 2021](#). Authors: Darakhshan Nayyar, Tabish Nawaz, Saba Noore, **Anubhav Pratap Singh**
- Wildcards in climate change biology. [Ecological Monographs, June 2021](#). Authors: Diane S. Srivastava, Laura Cristine, Amy L. Angert, Megan Bontrager, Sarah L. Amundrud, Jennifer L. Williams, Alex C.Y. Yeung, Devin R. de Zwaan, Patrick L. Thompson, Sally N. Aitken, Jennifer M. Sunday, Mary I. O'Connor, Jeannette Whitton, Norah E. M. Brown, Colin D. MacLeod, Laura Wegener Parfrey, Joey R. Bernhardt, **Juli Carrillo, Christopher D.G. Harley, Patrick T. Martone, Benjamin G. Freeman, Michelle Tseng, Simon D. Donner**

- Effects of aging on the shelf life and viscoelasticity of gellan gum microcapsules. [Food Hydrocolloids, 106982, June 2021](#). Authors: Yun-Han Huang, Xiran Li, Mariano Michelin, Bruna, C. Lepercio, Marcio S.Carvalho, **John M.Frostad**

SciVal

- Organo-mineral associations largely contribute to the stabilization of century-old pyrogenic organic matter in cropland soils. [Geoderma, 388, 114841, April 2021](#). Authors: Victor Burgeon, Julien Fouché, Jens Leifeld, Claire Chenu, **Jean-Thomas Cornélias**

Priority Area: Ending Hunger and Improving Food Security

Google Scholar

- Predictors of household food insecurity and relationship with obesity in First Nations communities in British Columbia, Manitoba, Alberta and Ontario. [Public Health Nutrition, 24\(5\), 1021-1033, April 2021](#). Authors: Ashleigh Domingo, Jerry Spiegel, Martin Guhn, **Hannah Wittman**, Amy Ing, Tonio Sadik, Karen Fediuk, Constantine Tikhonov, Harold Schwartz, Hing Man Chan, Malek Batal
- Electro-based technologies in food drying-a comprehensive review. [LWT Food Science and Technology, 111315, June 2021](#). Authors: Alireza Mousakhani-Ganjeh, Amir Amiri, Farzaneh Nasrollahzadeh, Artur Wiktor, Azadeh Nilghaz, **Anubhav Pratap-Singh**, Amin Mousavi Khaneghah
- Citizen views on genome editing: effects of species and purpose. [Agriculture and Human Values, 1-14, June 2021](#). Author: Gesa Busch, **Erin Ryan, Marina A. G. von Keyserlingk, Daniel M. Weary**

Priority Area: Enhancing Regional Agriculture for Sustainable Cities

Google Scholar

- Assessment of metal contamination in soil and vegetation along the Arbutus Greenway in Vancouver, British Columbia. [Plant and Soil, April 2021](#). Authors: **Fausak, L., A. D. Watkinson, K. Dy, and L.M. Lavkulich**
- Data from: Lythrum salicaria common garden under Neogalerucella herbivory. [Dryad, Dataset, May 2021](#). Authors: Michael Stastny, **Risa Sargent, Jake Russell-Mercier**
- Diversification supports farm income and improved working conditions during agroecological transitions in southern Brazil. [Agronomy for Sustainable Development, 41\(3\), 35, May 2021](#). Authors: Anne Elise Stratton, **Hannah Wittman, Jennifer Blesh**
- Association of estrous expression detected by an automated activity monitoring system within 40 days in milk and reproductive performance of lactating Holstein cows. [Journal of Dairy Science, May 2021](#). Authors: S. Borchard, C.M. Tippenhauer, J.-L. Plenio, A. Bartel, **A.M.L. Madureira, R.L.A. Cerri, W. Heuwieser**
- Tree Diversity, Site Index, and Carbon Storage Decrease with Aridity in Douglas-Fir Forests in Western Canada. [Frontiers in Forests and Global Change, June 23, 2021](#). Authors: Roach, Winnifred Jean and Simard, Suzanne W. and Defrenne, Camille E. and Pickles, Brian J. and **Lavkulich, Les M. and Ryan, Teresa.**

- Saving the world from your couch: the heterogeneous medium-run benefits of COVID-19 lockdowns on air pollution. [Environmental Research Letters, 25 June 2021](#). Authors: Jean-Philippe Bonardi, Quentin Gallea, Dimitrija Kalanoski, Rafael Lalive, **Raahil Madhok**, **Frederik Noack**, Dominic Rohner, and Tommaso Sonno

SciVal

- A shift from phenol to silica-based leaf defences during long-term soil and ecosystem development. [Ecology Letters, 24\(5\), 984-995, May 2021](#). Authors: Felix de Tombeur, Etienne Laliberté, Hans Lambers, Michel-Pierre Faucon, Graham Zemunik, Benjamin L. Turner, **Jean-Thomas Cornelis**, Grégory Mahy
- Pairwise comparison locomotion scoring for dairy cattle. [Journal of Dairy Science, 104\(5\), 6185-6193, May 2021](#). Authors: John Gardenier, James Underwood, **D.M. Weary**, C.E.F. Clark
- Revisiting the effects of the COVID-19 pandemic on Canada's agricultural trade: The surprising case of an agricultural export boom. [Canadian Journal of Agricultural Economics, 69\(2\), 251-260, May 2021](#). Authors: **Richard Barichello**

Priority Area: Promoting Nutrition and Wellbeing for Healthier Communities

Google Scholar

- Baseline Hemoglobin, Hepcidin, Ferritin, and Total Body Iron Stores are Equally Strong Diagnostic Predictors of a Hemoglobin Response to 12 Weeks of Daily Iron Supplementation in Cambodian Women. [The Journal of Nutrition, 12 May 2021](#), nxab108. Authors: Lulu X Pei, Hou Kroeun, Suzanne M Vercauteren, **Susan I Barr**, Tim J Green, Arianne Y Albert, **Crystal D Karakochuk**
- The Inclusion of Folic Acid in Weekly Iron–Folic Acid Supplements Confers no Additional Benefit on Anemia Reduction in Nonpregnant Women: A Randomized Controlled Trial in Malaysia. [The Journal of Nutrition, 12 May 2021](#), nxab115. Authors: **Kaitlyn L I Samson**, Su Peng Loh, Siew Siew Lee, Dian C Sulistyoningrum, Geok Lin Khor, Zalilah Binti Mohd Shariff, Irmi Zarina Ismai, Maria Makrides, Jennifer A Hutcheon, Marion L Roche, Timothy J Green, **Crystal D Karakochuk**
- Is eating a mixed diet better for health and survival?: A systematic review and meta-analysis of longitudinal observational studies. [Critical Reviews in Food Science and Nutrition, 1-17, May 2021](#). Authors: **Hadis Mozaffari**, Zeinab Hosseini, Jacynthe Lafrenière, **Annalijn I. Conklin**
- Experimental Campylobacter jejuni infection in humans. [Journal of infectious diseases, 157\(3\), 472-479, May 2021](#). Authors: **Luyao Ma**, Michael E. Konkel, Xiaonan Lu
- Undernutrition and Anemia Prevalence Among Indigenous San Women of Child-Bearing Age and Young Children in Rural Botswana. [Current Developments in Nutrition, 5\(Supplement 2\), 660, June 2021](#). Authors: **Tebogo Leepile**, Akira Takada, Andrew Jones, **Jennifer Black**, **Eduardo Jovel**, **Crystal Karakochuk**
- Anemia Prevalence and Iron Supplementation Practices Among Pregnant Women in Vancouver, Canada. [Current Developments in Nutrition, 5\(Supplement 2\), 733-733, June 2021](#). Authors: Kelsey Cochrane, Rajavel Elango, Angela Devlin, Jennifer Hutcheon, **Crystal Karakochuk**
- High Prevalence of Vitamin D Inadequacy During Late Postpartum in Canadian Mothers. [Current Developments in Nutrition, 5\(Supplement 2\), 790-790, June 2021](#). Authors: Sarah Montgomery, Angella Lee, Nasime Sarbar, Deborah Zibrik, **Yvonne Lamers**
- Turmeric and its bioactive constituents trigger cell signaling mechanisms that protect against diabetes and cardiovascular diseases. [Molecular and Cellular Biochemistry, 1-30, June 2021](#). Authors: **Huiying Amelie Zhang**, **David D. Kitts**

- Supplementation of Choline-Deficient Diet With Pterostilbene Attenuates Cancer Development and Epigenetic Dysregulation of Gene Expression in Rat Livers. [Current Developments in Nutrition, 5\(Supplement 2\), 280, June 2021](#). Authors: **Barbara Stefanska, Cayla Boycott, Megan Beetch, Aline de Conti, Igor Pogribny**
- BRUNOL5 as a Novel Oncogene Is Epigenetically Regulated by Stilbenoids in Primary Liver Cancer Cells. [Current Developments in Nutrition, 5\(Supplement 2\), 287, June 2021](#). Authors: **Tony Yang, Cayla Boycott, Katarzyna Lubecka, Barbara Stefanska**
- Changes in Dietary Intake After an 8-week Meal-Kit Delivery Program in Adults With an Overweight Condition or Obesity. [Current Developments in Nutrition, 5\(Supplement 2\), 978-978, June 2021](#). Authors: **Maryam KheirmandParizi, Sara Sorrini, Hugues Plourde, Tamara Cohen**
- Qualitative Evaluation of a Diet Self-Monitoring Tool in a Sample of Older Adults. [Current Developments in Nutrition, 5\(Supplement 2\), 965-965, June 2021](#). Authors: **Celeste Bouchaud, May Slim, Jean-Philippe Gouin, Hugues Plourde, Tamara Cohen**
- Suitability of a Post-Operative Bariatric Nutrition Education Tool. [Current Developments in Nutrition, 5\(Supplement 2\), 1194-1194, June 2021](#). Authors: **Patricia Angeles, Yolanda Wang, Alexandra Heidl, Biagina-Carla Farnesi, Angela Alberga, Tamara Cohen**
- Development and validation of a predictive algorithm for risk of dementia in the community setting. [J Epidemiol Community Health, June 2021](#). Authors: **Stacey Fisher, Douglas G Manuel, Amy T Hsu, Carol Bennett, Meltem Tuna, Anan Bader Eddeen, Yulric Sequeira, Mahsa Jessri, Monica Taljaard, Geoffrey M Anderson, Peter Tanuseputro**

SciVal

- Ethanol adaptation in foodborne bacterial pathogens. [Critical reviews in food science and nutrition, 1-11, 2021](#). Authors: **Shoukui He, Karen Fong, Siyun Wang, Xianming Shi**
- Plant-based dietary practices in Canada: examining definitions, prevalence and correlates of animal source food exclusions using nationally representative data from the 2015 Canadian Community Health Survey–Nutrition. [Public Health Nutrition, 24\(5\), 777-786, April 2021](#). Authors: **Mirjana Valdes, Annalijn Conklin, Gerry Veenstra, Jennifer L Black**
- Emergence of cold plasma and electron beam irradiation as novel technologies to counter mycotoxins in food products. [World Mycotoxin Journal, 14\(1\), 75-83, 2021](#). Authors: **Xanyar Mohammadi, Golsahn Matinfar, Amin Mousavi Khaneghah, Anika Singh, Anubhav Pratap-Singh**
- Knowledge and Perceptions of Carbohydrates among Nutrition-Major and Nutrition-Elective Undergraduate Students in Canada. [Journal of the American College of Nutrition, 40\(2\), 164-171, 2021](#). Authors: **Ye (Flora) Wang, Nick Bellissimo, David D. Kitts, Huguette Turgeon O'Brien, W. L. David Ma, Miyoung Suh, Bohdan Luhovyy, Chiara DiAngelo, Laura Pasut, Sandra Marsden, Mei Chung, Anil Gurcan**
- Encapsulation of betacyanins from the peel of red dragon fruit (*Hylocereus polyrhizus* L.) in alginate microbeads. [Food Hydrocolloids, 113, 106535, April 2021](#). Authors: **Farahnaz Fathordoobady, Maciej Jarzȳbski, Anubhav Pratap-Singh, Yigong Guo, Yazid Abd-Manap**
- Malaria is a cause of iron deficiency in African children. [Nature Medicine, 27\(4\), 653-658, April 2021](#). Authors: **John Muthii Muriuki, Alexander J. Mentzer, [...]Crystal D. Karakochuk, [...]Sarah H. Atkinson**
- Active Biodegradable Films Based on Sweet Lime Peel Residue and Its Effect on Quality of Fish Fillets. [Polymers, 13\(8\), 1240, April 2021](#). Authors: **Yasir Arafat, Ammar Altemimi, Anubhav Pratap-Singh, Laxmikant S. Badwaik**
- An Approach for Integrating and Analyzing Sustainability in Food-Based Dietary Guidelines. [Frontiers in Sustainable Food Systems, 5, 544072, April 2021](#). Authors: **Rachel Mazac, Kerry Renwick, Barbara Seed, Jennifer L. Black**
- Detectable Unmetabolized Folic Acid and Elevated Folate Concentrations in Folic Acid-Supplemented Canadian Children With Sickle Cell Disease. [Frontiers in Nutrition, 8, 642306, April 2021](#). Authors: **Brock A. Williams, Cara Mayer, Heather McCartney, Angela M. Devlin, Yvonne Lamers, Suzanne M. Vercauteren, John K. Wu, Crystal D. Karakochuk**

- In Vitro Antimicrobial, Antioxidant and Anticancer Activities of Egyptian Citrus Beebread. [Molecules, 26\(9\), 2433, April 2021](#). Authors: Nesren Elsayed, Hatem Sharaf El-Din, Ammar B. Altemimi, Hanaa Y. Ahmed, **Anubhav Pratap-Singh**, Tarek Gamal Abdelmaksoud
- Multidisciplinary Studies of Folk Medicine “Five Thieves’ Oil” (Olejek Pięciu Złodziei) Components. [Molecules, 26\(10\), 2931, May 2021](#). Authors: Przemysław Siejak, Wojciech Smutek, **Farahnaz Fathordobady**, [...] **Anubhav Pratap-Singh**
- Impact of high-dose folic acid supplementation in pregnancy on biomarkers of folate status and 1-carbon metabolism: An ancillary study of the Folic Acid Clinical Trial (FACT). [The American Journal of Clinical Nutrition, 113\(5\), 1361-1371, May 2021](#). Authors: Malia S Q Murphy, Katherine A Muldoon, Hauna Sheyholislami, Nathalie Behan, **Yvonne Lamers**, Natalie Rybak, Ruth Rennicks White, Alysha L J Harvey, Laura M Gaudet, Graeme N Smith, Mark C Walker, Shi Wu Wen, Amanda J MacFarlane
- Nutritional quality of the food choices of Canadian children. [BMC Nutrition, 7\(1\), 16, May 2021](#). Authors: Salma Hack, **Mahsa Jessri**, Mary R. L’Abbé
- Acceptability of a structured diet and exercise weight loss intervention in breast cancer survivors living with an overweight condition or obesity: A qualitative analysis. [Cancer Reports, 4\(3\), e1337, June 2021](#). Authors: Hailee Beckenstein, May Slim, Helene Kim, Hugues Plourde, Robert Kilgour, **Tamara R. Cohen**
- Daily Oral Supplementation with 60 mg of Elemental Iron for 12 Weeks Alters Blood Mitochondrial DNA Content, but Not Leukocyte Telomere Length in Cambodian Women. [Nutrients, 13\(6\), 1877, May 2021](#). Authors: **Shannon L. Steele**, Anthony Y. Y. Hsieh, Izabella Gadawski, Hou Kroeun, **Susan I. Barr**, Angela M. Devlin, Hélène C. F. Côté, **Crystal D. Karakochuk**
- Electro-based technologies in food drying-a comprehensive review. [LWT, 145, 111315, June 2021](#). Authors: Alireza Mousakhani-Ganjeh, Amir Amiri, Farzaneh Nasrollahzadeh, Artur Wiktor, Azadeh Nilghaz, **Anubhav Pratap-Singh**, Amin Mousavi Khaneghah
- Sunroot snack bar: Optimization, characterization, consumer perception, and storage stability assessment. [Food Science & Nutrition, June 2021](#). Authors: Tarek Gamal Abdelmaksoud, Sayed Saad Smuda, Ammar B. Altemimi, Reda Mahgoub Mohamed, **Anubhav Pratap-Singh**, Marwa Rashad Ali

Priority Area: Ensuring the Health and Welfare of Animals in Society

Google Scholar

- Changes in gill and air-breathing organ characteristics during the transition from water-to air-breathing in juvenile *Arapaima gigas*. [Journal of Experimental Zoology Part A: Ecological and Integrative Physiology, April 2021](#). Authors: **Andrea Y. Frommel**, Garfield T. Kwan, Kaelan J. Prime, Martin Tresguerres, Henrik Lauridsen, Adalberto L. Val, Ligia U. Gonçalves, Colin J. Brauner
- Climate change and companion animals: Identifying links and opportunities for mitigation and adaptation strategies. [Integrative and Comparative Biology, April 2021](#). Authors: **Alexandra Protopopova**, Lexis H Ly, **Bailey H Eagan**, Kelsea M Brown
- Effects of positive reinforcement training for heifers on responses to a subcutaneous injection. [Journal of Dairy Science, 104\(5\), 6146-6158, May 2021](#). Authors: **J. Lomb**, **A. Mauger**, **M.A.G. von Keyserlingk**, **D.M. Weary**
- Animal welfare during a period of intensification: The views of confinement and alternative pig producers. [Animal Welfare, 30\(2\), 121-129, May 2021](#). Authors: M. Molnár, **D. Fraser**
- The Freestall Reimagined: Effects on Stall Hygiene and Space Usage in Dairy Cattle. [Animals, 11\(6\), 1711, June 2021](#). Authors: **Annabelle Beaver**, **Emma Strazhnik**, **Marina A. G. von Keyserlingk**, **Daniel M. Weary**
- A break from the pups: The effects of loft access on the welfare of lactating laboratory rats. [PloS one, 16\(6\), e0253020, June 2021](#). Authors: **Anna S. Ratuski**, **Daniel M. Weary**

- Interviews with 12 laboratory animal facility managers regarding institutional transparency. [Scholars Portal Dataverse, June 2021](#). Authors: **Michael Brunt, Daniel Weary**
- Using Realistic Evaluation to understand how interventions work on dairy farms. [Animal, 15\(6\), 100233, June 2021](#). Authors: **K.E.Koralesky, K.E.Mills, M.A.G.von Keyserlingk, D.M.Weary**
- Animal-assisted Interventions as an Adjunct to ABA Services: Clinician Practices and Perceptions. [Behavior Analysis in Practice, 1-18, June 2021](#). Authors: **Jessica L Ghai, Donna H Lehr, Nancy E Harayama, Fred Spooner, Alexandra Protopopova**

SciVal

- Public attitudes toward dairy farm practices and technology related to milk production. [PloS one, 16\(4\), e0250850, April 2021](#). Authors: **Lexis H. Ly, Erin B. Ryan, Daniel M. Weary**
- The Dispensable Surplus Dairy Calf: Is This Issue a “Wicked Problem” and Where Do We Go From Here?. [Frontiers in Veterinary Science, 8, 660934, April 2021](#). Authors: **Sarah E. Bolton, Marina A. G. von Keyserlingk**
- Valid oxygen uptake measurements: using high r² values with good intentions can bias upward the determination of standard metabolic rate. [Journal of Fish Biology, 98\(5\), 1206-1216, May 2021](#). Authors: **Denis Chabot, Yangfan Zhang, Anthony P. Farrell**
- Gene Editing for Improved Animal Welfare and Production Traits in Cattle: Will This Technology Be Embraced or Rejected by the Public?. [Sustainability, 13\(9\), 4966, April 2021](#). Authors: **Maria Cristina Yunes, Zimbábwe Osório-Santos, Marina A. G. von Keyserlingk, Maria José Hötzel**
- Factors associated with estrous expression and subsequent fertility in lactating dairy cows using automated activity monitoring. [Journal of Dairy Science, 104\(5\), 6267-6282, May 2021](#). Authors: **C.M. Tippenhauer, J.-L. Plenio, A.M.L. Madureira, R.L.A. Cerri, W. Heuwieser, S. Borchardt**
- Employee management and animal care: a comparative ethnography of two large-scale dairy farms in China. [Animals, 11\(5\), 1260, April 2021](#). Authors: **Maria Chen, Marina A. G. von Keyserlingk, Sabina Magliocco, Daniel M. Weary**
- Corrigendum to “Addition of straw to the early-lactation diet: Effects on feed intake, milk yield, and subclinical ketosis in Holstein cows”(J. Dairy Sci. 104: 3008–3017). [Journal of Dairy Science, 104\(6\), 7343, June 2021](#). Author: **Hesam A. Seifi, Julianna M. Huzzey, M.A. Khan, Daniel M. Weary, Marina A.G. von Keyserlingk**

Publications related to Teaching and Learning

- Virtual and in-person teaching and learning activities for core food science courses. [Journal of Food Science Education, 20\(2\), 72-75, April 2021](#). Authors: **Patricia Hingston, Rosalia Garcia-Torres, Vinay Mannam**