

Curriculum vitae

Dr. Subba Rao Chaganti

Assistant Research Scientist

Cooperative Institute for Great Lakes Research (CIGLR),

School for Environment and Sustainability

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EDUCATION

2008 Ph.D. in Biotechnology, Jawaharlal Nehru Technological University, India
2003 M.Sc. in Biotechnology, Periyar University, India
2001 B.Sc. in Microbiology and Chemistry, Osmania University, India

RESEARCH AND PROFESSIONAL EXPERIENCE

2019 – present **Assistant Research Scientist**, CIGLR, University of Michigan, USA
2015 – 2019 **Adjunct Assistant Professor**, GLIER, U Windsor
2015 – 2017 **Mitacs Elevate Postdoctoral Fellow**
Trojan Technologies and GLIER, University of Windsor, Canada
2014 – 2015 **Mitacs Accelerate Postdoctoral Fellow**
Trojan Technologies and GLIER, University of Windsor, Canada
2011 – 2013 **MRI Postdoctoral Fellow**, GLIER, University of Windsor, Canada
2009 – 2010 **Postdoctoral Fellow**
Civil and Environmental Engineering, University of Windsor, Canada
2005 – 2008 **Ph.D. Candidate**
Bioengineering and Environmental Centre (BEEC), IICT, India
2003 – 2005 **Research Assistant**, BEEC, IICT, India

TEACHING EXPERIENCE

2014 – 2019 University of Windsor, Biological Sciences

- Introductory Molecular Biology (BIOL-2131): Winter 2019
- Medical Microbiology for nursing (BIOL-3070-2): Winter 2019
- Medical Microbiology (BIOL 55-351): Winter 2014 to 2018
- Introductory Microbiology (BIOL 55-237): Fall 2014 to 2018

AWARDS AND HONORS

2019 Early Career Environmental Research Award, American Society of Microbiology
2016 Excellence in research, scholarship and creative activity award by U of Windsor
2016 International Chair to Young Ambassadors, American Society of Microbiology
2015 MITACS Elevate Postdoctoral Fellowship
2014 MITACS Accelerate Postdoctoral Fellowship
2014 NSERC Visiting Scholar Fellowship, (*declined*)
2012 Young Ambassador to Canada, American Society of Microbiology
2011 Ministry of Research and Innovation Postdoctoral Fellowship
2008 Young Scientist Award, Andhra Pradesh Academy of Sciences, India
2008 Australian Endeavor Fellowship Govt. of Australia, (*declined*)
2007 Senior Research Fellowship, Council of Scientific and Industrial Research, India

FUNDING (LAST 5 YEARS) Co-Pi* AND COLLABORATOR^

- 2020-2022 **NOAA:** Environmental DNA and metabarcoding of gut contents for analysis of food web dynamics: Determining ecological impacts of an abundant invasive dreissenid veliger. (\$350,000 USD) **Applied**
(PI: SR Chaganti, N Marshall*, ME Fraker*, H Vanderploeg* E Rutherford*)
- 2019-2020 **NOAA:** Targeted 'Omics research to distinguish toxin-producing from non-toxin producing cyanobacterial blooms and improve short-term toxin forecasting (\$150,000 USD)
(PI: Tom Johengen, SR Chaganti*, Casey Godwin*)
- 2018-2021 **NSERC Strategic Partnership Grant,** Application of targeted transcriptomics for determining early nutrient sediment retention capacity (\$650,000 CDN)
(PI: C Weisener, DD Heath*, K Drouillard*, S Mundle*, SR Chaganti^)
- 2018-2021 **NSERC CRD,** Genomic, transcriptomic and culture-based assessment of UV irradiation effects on phytoplankton viability: applications for ballast water treatment systems. Collaborator (\$225,000 CDN) (PI: DD Heath, SR Chaganti^)
- 2018-2019 **Agricultural Adaption Council (AAC) CAP,** Trace element retention and release from Ontario Greenhouse Retention Ponds. (\$194,500 CDN)
(PI: C Weisener, SR Chaganti*, S Mundle*)
- 2017-2018 **Healthy Urban Waters Program,** Microbial Contamination of Beaches in Huron to Erie Corridor: Investigating Dynamics and Potential Sources. (\$34,500 USD).
(PI: Jeff Ram, SR Chaganti*, DD Heath*, R Seth*)
- 2016-2017 **NSERC Engage & Engage Plus,** Molecular genetic applications for evaluating the efficiency of UV irradiation as a phytoplankton control treatment in ballast water. Co-PI (\$50,000 CDN). (PI: DD Heath, SR Chaganti^)
- 2016-2017 **Ontario Genomics Institute, MITACS and NSERC Engage Plus (Project)**
Evaluating the microbial functional and community dynamics of BioCord technology in a full-scale wastewater treatment plant in Dundalk County. (\$65,000 CDN).
(PI: C Weisener, SR Chaganti*)
- 2015-2019 **NSERC Strategic Partnership Grant,** Great Lakes Recreational Water Security: Microbial community characterization, source tracking, and remediation through metagenomics. Collaborator/Co-ordinator. (\$564,500 CDN).
(PI: DD Heath, C Weisener*, R Seth*, D Haffner*, SR Chaganti^)

CITATION METRICS: (GOOGLE SCHOLAR)

[HTTPS://SCHOLAR.GOOGLE.COM/CITATIONS?HL=EN&USER=C6EIZVQAAAAJ&VIEW_OP=LIST_WORKS&SORTBY=PUBDATE](https://scholar.google.com/citations?hl=en&user=c6EizVQAAAAJ&view_op=list_works&sortby=pubdate)

Citations: 2206; h-index: 25; i10-index 46, Impact Factor = 236 (accessed on Feb 14th, 2020)

PUBLICATIONS: 71 LIFETIME PUBLICATIONS; 33 PUBLICATIONS IN PAST 6 YEARS (2013-2019).

Publications organized by year. (*HQP co-author) IF =Impact Factor

2020

1. D VanMensel*, **SR Chaganti**, IG Droppo, CG Weisener (2020) Exploring bacterial pathogen community dynamics in freshwater beach sediments: A tale of two lakes. **Environmental Microbiology** 17(1):37-49 (IF=5.1).

2019

2. AH Shahraki*, DD Heath, **SR Chaganti** (2019) Recreational water monitoring: Nanofluidic qRT-PCR chip for assessing beach water safety. **Environmental DNA** 1:305-315.
3. B Petri, **SR Chaganti**, P-S Chan, DD Heath (2019) Phytoplankton growth characterization in short term culture assay using 18S metabarcoding and qRT-PCR. **Water Research**. 164:114941 (IF = 7.9)
4. S Shahsavari, R Seth, **SR Chaganti**, N Biswas (2019) Inhibition of anaerobic biological sulfate reduction process by copper precipitates. **Chemosphere** 236:124246. (IF=5.1)
5. T Reid*, IG Droppo, **SR Chaganti**, CG Weisener (2019) Microbial strategies for overcoming low-oxygen conditions in naturalized freshwater reservoirs surrounding the Athabasca Oil Sands: A proxy for End-Pit Lakes? **Science of Total Environment** 665:113-124 (IF =5.5)
6. SC Butler*, J Pope, **SR Chaganti**, DD Heath, CG Weisener (2019), Biogeochemical characterization of metal behavior from novel mussel shell bioreactor sludge residues. **Geosceinces** 9 (1): 50(IF=1.8)

2018

7. AH Shahraki*, **SR Chaganti**, DD Heath (2018). Assessing high-throughput eDNA extraction methods for metabarcode characterization of aquatic microbial communities. **Journal of Microbiology Methods** 17(1):37-49 (IF =1.8)
8. X He*, **SR Chaganti**, DD Heath (2018) Population-specific responses to interspecific competition in the gut microbiota of two Atlantic salmon (*Salmo salar*) populations. **Microbial Ecology** 75(1):140-151 (IF = 3.6).
9. T Reid*, **SR Chaganti**, IG Droppo, CG Weisener (2018) Novel insights into freshwater hydrocarbon-rich sediments using metatranscriptomics: opening the black box. **Water Research** 136: 1-11 (IF = 7.9)
10. N Falk*, **SR Chaganti**, CG Weisener (2018) Evaluating the microbial community and gene regulation involved in crystallization kinetics of ZnS formation in reduced environments. **Geochimica et Cosmochimica Acta** 220, 201-216 (IF = 4.2).

2017

11. CG Weisener, J Lee*, **SR Chaganti**, T Reid*, N Falk*, K Drouillard (2017) Investigating sources and sinks of N₂O expression from freshwater microbial communities in urban watershed sediments. **Chemosphere** 188, 697-705 (IF =5.1)
12. M Johansson, **SR Chaganti**, N Simard, K Howland, G Winkler, A Rochon, F Laget, P Tremblay, DD Heath, HJ Maclsaac (2017) Attenuation and modification of the ballast water microbial community during voyages into the Canadian Arctic. **Diversity and Distribution** 23, 567–576 (IF = 4.0).
13. D VanMensel*, **SR Chaganti**, R Boudens, T Reid*, J Ciborowski, C Weisener (2017) The mixed microbial community response to gamma-irradiated oil sands fluid fine tailings. **Microbial Ecology** 74, 362-372 (IF = 3.6).
14. SS Veeravalli*, JA Lalman, **SR Chaganti**, DD Heath (2017) Continuous hydrogen production using upflow anaerobic sludge blanket reactors: Effect of organic loading rate on microbial dynamics and H₂ metabolism. **Journal of Chemical Technology and Biotechnology** 92 (3), 544-551 (IF = 2.6).

2016

15. ZA DiLoreto*, PA Weber, W Olds, J Pope, D Trumm, **SR Chaganti**, DD Heath, CG Weisener (2016) Novel cost effective full-scale mussel shell bioreactors for metal removal and acid neutralization. **Journal of Environmental Management** 183, 601-612 (IF = 4.8).

16. WA Shewa*, JA Lalman, **SR Chaganti**, DD Heath (2016) Electricity production from lignin photocatalytic degradation byproducts. **Energy** 111, 774-784 (IF = 5.5).
17. SR Shanmugam*, JA Lalman, **SR Chaganti**, DD Heath, PCK Lau, WA Shewa (2016) Long-term impact of stressing agents on fermentative hydrogen production: Effect on the hydrogenase flux and population diversity. **Renewable Energy** 88, 483-493 (IF = 5.4)
18. B Pendyala*, **SR Chaganti**, JA Lalman, DD Heath (2016) Optimizing the performance of microbial fuel cells fed a combination of different synthetic organic fractions in municipal solid waste. **Waste Management** 49, 73-82 (IF = 5.4).

2015

19. R Rafieenia*, **SR Chaganti** (2015) Flux balance analysis of different carbon source fermentation with hydrogen producing *Clostridium butyricum* using Cell Net Analyzer. **Bioresource Technology** 175, 613-618 (IF = 6.6).
20. C Moon, R Singh, SS Veeravalli*, SR Shanmugam*, **SR Chaganti**, JA Lalman, DD Heath (2015) Effect of COD: SO₄²⁻ Ratio, HRT and linoleic acid concentration on mesophilic sulfate reduction: reactor performance and microbial population dynamics. **Water** 7 (5), 2275-2292 (IF = 2.5).

2014

21. SR Shanmugam*, **SR Chaganti**, JA Lalman, DD Heath (2014) Effect of inhibitors on hydrogen consumption and microbial population dynamics in mixed anaerobic cultures. **International Journal of Hydrogen Energy** 39 (1), 249-257 (IF = 4.0).
22. SR Shanmugam*, **SR Chaganti**, JA Lalman, D Heath (2014) Using a statistical approach to model hydrogen production from a steam exploded corn stalk hydrolysate fed to mixed anaerobic cultures in an ASBR. **International Journal of Hydrogen Energy** 39 (19), 10003-10015 (IF = 4.0).
23. SS Veeravalli*, **SR Chaganti**, JA Lalman, DD Heath (2014) Fermentative H₂ production using a switchgrass steam exploded liquor fed to mixed anaerobic cultures: effect of hydraulic retention time, linoleic acid and nitrogen sparging, **International Journal of Hydrogen Energy** 39 (19), 9994-10002 (IF = 4.0).
24. SR Shanmugam*, **SR Chaganti**, JA Lalman, DD Heath (2014) Statistical optimization of conditions for minimum H₂ consumption in mixed anaerobic cultures: effect on homoacetogenesis and methanogenesis. **International Journal of Hydrogen Energy** 39 (28), 15433-15445 (IF = 4.0).
25. SS Veeravalli*, **SR Chaganti**, JA Lalman, DD Heath (2014) Optimizing hydrogen production from a switchgrass steam exploded liquor using a mixed anaerobic culture in an upflow anaerobic sludge blanket reactor. **International Journal of Hydrogen Energy** 39 (7), 3160-3175 (IF = 4.0).
26. WA Shewa, **SR Chaganti**, JA Lalman (2014) Electricity Generation and biofilm formation in microbial fuel cells using plate anodes constructed from various grades of graphite. **Journal of Green Engineering** 4 (1), 13-32.
27. R Singh, C Moon, SS Veeravalli*, SR Shanmugam*, **SR Chaganti**, JA Lalman (2014) Using a statistical model to examine the effect of COD: SO₄²⁻ Ratio, HRT and LA concentration on sulfate reduction in an anaerobic sequencing batch reactor. **Water** 6 (11), 3478-3494 (IF = 1.8).

2013

28. B Pendyala, **SR Chaganti**, S Thadikamala, PR Shetty (2013) Heterologous expression of CYP102A5 variant from *Bacillus cereus* CYPPB-1: Validation of model for predicting drug

- metabolism of human P450 probe substrates. **Applied Microbiology and Biotechnology** 97 (18), 8107-8119 (IF = 3.6).
29. JA Lalman, **SR Chaganti**, C Moon, DH Kim (2013) Elucidating acetogenic H₂ consumption in dark fermentation using flux balance analysis. **Bioresource Technology** 146, 775-778 (IF = 6.6).
 30. B Pendyala, **SR Chaganti**, JA Lalman, DD Heath, SR Shanmugam, SS Veeravalli (2013) Using a food and paper-cardboard waste blend as a novel feedstock for hydrogen production: Influence of key process parameters on microbial diversity. **International Journal of Hydrogen Energy** 38 (15), 6357-6367 (IF = 4.0).
 31. SS Veeravalli*, **SR Chaganti**, JA Lalman, DD Heath (2013) Effect of furans and linoleic acid on hydrogen production. **International Journal of Hydrogen Energy** 38 (28), 12283-12293 (IF = 4.0).
 32. **SR Chaganti**, B Pendyala, JA Lalman, SS Veeravalli, DD Heath (2013) Influence of linoleic acid, pH and HRT on anaerobic microbial populations and metabolic shifts in ASBRs during dark hydrogen fermentation of lignocellulosic sugars. **International Journal of Hydrogen Energy** 38 (5), 2212-2220 (IF = 4.0).
 33. C Moon, R Singh, **SR Chaganti**, JA Lalman (2013) Modeling sulfate removal by inhibited mesophilic mixed anaerobic communities using a statistical approach. **Water Research** 47 (7), 2341-2351 (IF = 7.9).

2012

34. **SR Chaganti**, JA Lalman, DD Heath (2012) 16S rRNA gene based analysis of the microbial diversity and hydrogen production in three mixed anaerobic cultures. **International Journal of Hydrogen Energy** 37 (11), 9002-9017 (IF = 4.0).
35. **SR Chaganti**, DH Kim, JA Lalman, WA Shewa* (2012) Statistical optimization of factors affecting biohydrogen production from xylose fermentation using inhibited mixed anaerobic cultures. **International Journal of Hydrogen Energy** 37 (16), 11710-11718 (IF = 4.0).
36. B Pendyala, **SR Chaganti**, JA Lalman, SR Shanmugam*, DD Heath, PCK Lau (2012) Pretreating mixed anaerobic communities from different sources: correlating the hydrogen yield with hydrogenase activity and microbial diversity. **International Journal of Hydrogen Energy** 37 (17), 12175-12186 (IF = 4.0).
37. NMC Saady, **SR Chaganti**, JA Lalman, SS Veeravalli, SR Shanmugam, DD Heath (2012) Effects of linoleic acid and its degradation by-products on mesophilic hydrogen production using flocculated and granular mixed anaerobic cultures. **International Journal of Hydrogen Energy** 37 (24), 18747-18760 (IF = 4.0).
38. NMC Saady, **SR Chaganti**, JA Lalman, SS Veeravalli, SR Shanmugam, DD Heath (2012) Assessing the impact of palmitic, myristic and lauric acids on hydrogen production from glucose fermentation by mixed anaerobic granular cultures. **International Journal of Hydrogen Energy** 37 (24), 18761-18772 (IF = 4.0).
39. NMC Saady, **SR Chaganti**, JA Lalman, DD Heath (2012) Impact of culture source and linoleic acid (C18: 2) on biohydrogen production from glucose under mesophilic conditions. **International Journal of Hydrogen Energy** 37 (5), 4036-4045 (IF = 4.0).
40. D Jayasree, S Tadikamal, **SR Chaganti**, J Venkateshwar Rao, M Lakshmi Narasu (2012) Enhancement of alkaline protease production isolated from *Streptomyces pulveraceus* using response surface methodology. **International Journal of Pharmacy and Pharmaceutical Sciences** 4 (3), 226-231
41. S Ghosh, **SR Chaganti**, RS Prakasham (2012) Polyaniline nanofiber as a novel immobilization matrix for the anti-leukemia enzyme l-asparaginase. **Journal of Molecular Catalysis B: Enzymatic** 74 (1), 132-137 (IF = 2.5).

42. **SR Chaganti**, DH Kim, JA Lalman (2012) Impact of oleic acid on the fermentation of glucose and xylose mixtures to hydrogen and other byproducts. **Renewable Energy** 42, 60-65 (IF = 5.4).
43. **SR Chaganti**, DH Kim, JA Lalman (2012) Dark fermentative hydrogen production by mixed anaerobic cultures: Effect of inoculum treatment methods on hydrogen yield. **Renewable Energy** 48, 117-121 (IF = 5.4).

2011

44. **SR Chaganti**, DH Kim, JA Lalman (2011) Flux balance analysis of mixed anaerobic microbial communities: effects of linoleic acid (LA) and pH on biohydrogen production. **International Journal of Hydrogen Energy** 36 (21), 14141-14152 (IF = 4.0).
45. KK Prasad, **SR Chaganti**, SV Mohan, PN Sarma (2011) Solid state fermentation of laccase from new pulse husks: process optimization and bioprocess study. **International Journal of Innovations in Biological and Chemical Sciences** 2, 22-34

2010

46. RS Prakasham, M Hymavathi, **SR Chaganti**, SK Arepalli, JV Rao, PK Kennady, K Nasaruddin, JB Vijayakumar, PN Sarma (2010) Evaluation of antineoplastic activity of extracellular asparaginase produced by isolated *Bacillus circulans*. **Applied Biochemistry and Biotechnology** 160 (1), 72-80 (IF = 2.1).
47. RS Prakasham, GS Devi, **SR Chaganti**, VSS Sivakumar, T Sathish, PN Sarma (2010) Nickel-impregnated silica nanoparticle synthesis and their evaluation for biocatalyst immobilization. **Applied Biochemistry and Biotechnology** 160 (7), 1888-1895 (IF = 2.1).
48. Y Mahalaxmi, T Sathish, **SR Chaganti**, RS Prakasham (2010) Corn husk as a novel substrate for the production of rifamycin B by isolated *Amycolatopsis* sp. RSP 3 under SSF. **Process Biochemistry** 45 (1), 47-53 (IF = 2.8).

2009

49. M Hymavathi, T Sathish, **SR Chaganti**, RS Prakasham (2009) Enhancement of L-asparaginase production by isolated *Bacillus circulans* (MTCC 8574) using response surface methodology. **Applied Biochemistry and Biotechnology** 159 (1), 191-198 (IF = 2.1).
50. MN Reddy, K Swathi, B Nagamani, S Venkateshwar, LV Rao, **SR Chaganti** (2009) Red gram husk - As a novel inexpensive substrate for the production of alkaline protease using *Bacillus subtilis* SVR – 07. **Asian Journal of Microbiology, Biotechnology and Environmental Sciences** 11 (2), 269-273
51. GS Lakshmi, **SR Chaganti**, RS Rao, PJ Hobbs, RS Prakasham (2009) Enhanced production of xylanase by a newly isolated *Aspergillus terreus* under solid state fermentation using palm industrial waste: A statistical optimization. **Biochemical Engineering Journal** 48 (1), 51-57 (IF = 3.3).
52. **SR Chaganti**, RS Prakasham, CS Lakshmi, AB Rao (2009) Effect of various immobilization matrices on *Lactobacillus delbrucekii* cells for optically pure L+ lactic acid production. **Current Trends in Biotechnology and Pharmacy** 3 (3), 311-319 (IF = 0.13).
53. RS Prakasham, T Sathish, P Brahmaiah, **SR Chaganti**, RS Rao, PJ Hobbs (2009) Biohydrogen production from renewable agri-waste blend: optimization using mixer design. **International Journal of Hydrogen Energy** 34 (15), 6143-6148 (IF = 4.0).
54. **SR Chaganti**, T Sathish, B Pendyala, TP Kumar, RS Prakasham (2009) Development of a mathematical model for *Bacillus circulans* growth and alkaline protease production kinetics. **Journal of Chemical Technology and Biotechnology** 84 (2), 302-307 (IF = 2.6).

55. **SR Chaganti**, T Sathish, P Ravichandra, RS Prakasham (2009) Characterization of thermo-and detergent stable serine protease from isolated *Bacillus circulans* and evaluation of eco-friendly applications. **Process Biochemistry** 44 (3), 262-268 (IF = 2.8).

2008

56. **SR Chaganti**, RS Prakasham, AB Rao, JS Yadav (2008) Functionalized alginate as immobilization matrix in enantioselective L (+) lactic acid production by *Lactobacillus delbrueckii*. **Applied Biochemistry and Biotechnology** 149 (3), 219-228 (IF = 2.1).
57. **SR Chaganti**, SS Madhavendra, RS Rao, PJ Hobbs, RS Prakasham (2008) Studies on improving the immobilized bead reusability and alkaline protease production by isolated immobilized *Bacillus circulans* (MTCC 6811) using overall evaluation criteria. **Applied Biochemistry and Biotechnology** 150 (1), 65-83 (IF = 2.1).
58. GS Laxmi, T Sathish, **SR Chaganti**, P Brahmaiah, M Hymavathi, RS Prakasham (2008) Palm fiber as novel substrate for enhanced xylanase production by isolated *Aspergillus* sp. RSP-6. **Current Trends in Biotechnology and Pharmacy** 2 (3), 447-455 (IF = 0.13).
59. Y Mahalaxmi, **SR Chaganti**, G Suvanalaxmi, T Sathish, P Sudhakar, RS Prakasham (2008) Rifamycin B production pattern in *Nocardia* RSP-3 strain and influence of barbital on antibiotic production. **Current Trends in Biotechnology and Pharmacy** 2 (1), 208-216 (IF = 0.13)
60. **SR Chaganti**, T Sathish, M Mahalaxmi, G Suvarna Laxmi, R Sreenivas Rao, RS Prakasham (2008) Modelling and optimization of fermentation factors for enhancement of alkaline protease production by isolated *Bacillus circulans* using feed-forward neural network and genetic algorithm. **Journal of Applied Microbiology** 104 (3), 889-898 (IF = 2.6).
61. RS Prakasham, PR Likhari, K Rajyalaxmi, **SR Chaganti**, B Sreedhar (2008) Octadecanoic acid/silica particles synthesis for enzyme immobilization: Characterization and evaluation of biocatalytic activity. **Journal of Molecular Catalysis B: Enzymatic** 55 (1), 43-48 (IF = 2.5).
62. T Sathish, GS Lakshmi, **SR Chaganti**, P Brahmaiah, RS Prakasham (2008) Mixture design as first step for improved glutaminase production in solid-state fermentation by isolated *Bacillus* sp. RSP-GLU. **Letters in Applied Microbiology** 47 (4), 256-262 (IF = 1.8).
63. **SR Chaganti**, RS Prakasham, AB Rao, JS Yadav (2008) Production of L (+) lactic acid by *Lactobacillus delbrueckii* immobilized in functionalized alginate matrices. **World Journal of Microbiology and Biotechnology** 24 (8), 1411-1415 (IF = 2.6).

2007

64. RS Prakasham, **SR Chaganti**, R Sreenivas Rao, PN Sarma (2007) Enhancement of acid amylase production by an isolated *Aspergillus awamori*. **Journal of Applied Microbiology** 102 (1), 204-211 (IF = 2.6).
65. RS Prakasham, **SR Chaganti**, RS Rao, GS Lakshmi, PN Sarma (2007) L-asparaginase production by isolated *Staphylococcus* sp.-6A: design of experiment considering interaction effect for process parameter optimization. **Journal of Applied Microbiology** 102 (5), 1382-1391 (IF = 2.6).
66. RS Prakasham, GS Devi, KR Laxmi, **SR Chaganti** (2007) Novel synthesis of ferric impregnated silica nanoparticles and their evaluation as a matrix for enzyme immobilization. **The Journal of Physical Chemistry C** 111 (10), 3842-3847 (IF = 4.3).

2006

67. RS Prakasham, **SR Chaganti**, PN Sarma (2006) Green gram husk—an inexpensive substrate for alkaline protease production by *Bacillus* sp. in solid-state fermentation. **Bioresource Technology** 97 (13), 1449-1454 (IF = 6.6).
68. RS Rao, CP Jyothi, RS Prakasham, **SR Chaganti**, PN Sarma, LV Rao (2006) Strain improvement of *Candida tropicalis* for the production of xylitol: biochemical and physiological characterization of wild-type and mutant strain CT-OMV5. **The Journal of Microbiology** 44 (1), 113-120 (IF = 2.3).

2005

69. RS Prakasham, **SR Chaganti**, RS Rao, S Rajesham, PN Sarma (2005) Optimization of alkaline protease production by *Bacillus* sp. using Taguchi methodology. **Applied Biochemistry and Biotechnology** 120 (2), 133-144 (IF = 2.1).
70. RS Prakasham, **SR Chaganti**, RS Rao, PN Sarma (2005) Alkaline protease production by an isolated *Bacillus circulans* under solid-state fermentation using agroindustrial waste: process parameters optimization. **Biotechnology Progress** 21 (5), 1380-1388 (IF = 2.0).
71. RS Prakasham, RS Rao, **SR Chaganti**, PN Sarma (2005) Cyclodextrin glycosyl transferases from *Bacillus circulans* and *Bacillus* sp. **Indian Journal of Biotechnology** 4 (4), 347-352 (IF = 0.34).

Manuscripts in review

1. D Sanghera*, **SR Chaganti**, A Grgicak-Mannion, KG Drouillard, DD Heath (2020) To assess the impact of land usage patterns on the aquatic microbial communities' diversity and distribution using metabarcoding approach . STOTEN-D-19-06397 (IF = 5.5)
2. A Skoyles*, **SR Chaganti**, SOC Mundle, CG Weisener, (2020) Nitrification kinetics and microbial community dynamics of attached biofilm in wastewater treatment. **Water Sci. Technol.** WST-EM191068 (IF = 1.624)
3. JG Mychek-Londer*, **SR Chaganti**, DD Heath (2020) The role of invasive and native zooplankton in offshore Lake Michigan fish diets: CO1 metabarcoding of stomach content DNA (scDNA). Plos One (IF = 2.7)

TEXTBOOK:

1. PR Shetty, **SR Chaganti** (2010) Bioproduction of protease and evaluation for eco-friendly application: Bio-strategies for improved protease productivity and its industrial potential, Lap Lambert Academic Publishing. Publ. ISBN: 978-3-8383-3182-9, 244 pages, April

BOOK CHAPTERS:

1. **SR Chaganti**, B Badra and RS Prakasham (2009) Wealth from waste: protease production by *Bacillus* sp. RSP12 and its biotechnological application. In: Emerging Trends in Modern Biology. 157-168, ISBN 978-81-908886-0-8.
2. RS Prakasham, GS Lakshmi, **SR Chaganti**, ChP Jyoti, LV Rao, PN Sarma (2007) The imperative role of ferric chloride on production of xylose during acid hydrolysis of hemicellulosic material. In: Mineral Biotechnology. Edited by BK Mishra, LB Sukla and KS Rao. pp. 228-234, 2007. ISBN 978-81-7525-814-4.
3. RS Prakasham, **SR Chaganti**, YV Swamy, PN Sarma (2007) Impact of tobacco industrial waste material in chromium removal from aqueous solutions. In: Mineral Biotechnology. Edited by BK Mishra, LB Sukla and KS Rao. pp. 241-249, ISBN 978-81-7525-814-4.
4. RS Prakasham, **SR Chaganti**, T Satish, PN Sarma (2004). Evidence for production of production of two different amylases by isolated *Aspergillus* sp., In: Biotechnological

Approaches for Sustainable Development. Edited by MS Reddy and S Khanna. Chapter 23, pp. 152-157, ISBN: 8177646699 Allied Publishers.

PATENT:

1. JA Lalman, S Ray, NMC Saady, **SR Chaganti**, DD Heath, E Egbosimba (2011) Method of improving the electrical power density of Microbial Fuel Cells for mixed bacterial culture systems in a single and two chamber configurations. (Provisional Patent Application Serial Number 61/272,552).
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PRESENTATIONS

INVITED LECTURES:

1. **SR Chaganti** (2019) Microbial Biotechnology and Aquatic Ecosystem Health. Acadia University, May 17th.
2. **SR Chaganti** (2019) Application of omics' to understand and predict the impact of nutrients and emerging pollutants on aquatic microbial dynamics, Environment Canada, Saskatoon, Feb 1st.
3. **SR Chaganti** (2017) Biomarker development for source tracking and pathogen detection in recreation water. Wayne State University, MI USA, Nov 17th.
4. **SR Chaganti** (2013) The role of functional genomics in soil microbiology. Agriculture and Agri-Food Canada, Potato Research Centre. Fredericton, NB, Canada, Dec 2nd.
5. **SR Chaganti** (2013) Industrial Biocatalysts: from metagenomics to fermentation process optimization and applications. University of Waterloo, ON, Canada, Nov 15th.
6. **SR Chaganti** (2013) Function, composition, and dynamics of mixed anaerobic cultures in hydrogen production and microbial fuel cells. International Conference on Green Energy Technologies, SASTRA University, India, July 26th and 27th.
7. **SR Chaganti** (2012) Regulating the microbial systems for converting the municipal solid waste into ethanol in microbial fuel cells. Essex-Windsor Solid Waste Authority. Canada.
8. **SR Chaganti** (2011) Effect of furfural on mixed anaerobic communities during glucose fermentation to hydrogen. Exploitation of agro-industrial biomass for integrated bio-fuel and novel products through novel production systems. Indo-Canada Workshop, India.
9. **SR Chaganti** (2009) The role of biotechnology in a cutback of water pollution: a case study. Organized by Water Environmental Association of Ontario, Canada.
10. **SR Chaganti** (2008) Bio-molecular storage devices (switches and chips). Refreshment course for the B.Tech Biotechnology lectures. Organized by MallaReddy Engineering College, JNT University, India.
11. **SR Chaganti** (2007) Alkaline Protease Production Optimization by Taguchi Methodology (OEC). 4th Annual Protein Process Development Optimizing Protein Expression through Scale-Up, USA.
12. **SR Chaganti** (2006) Molecular biology techniques for polytechnic teachers. Organized by Centre for Biotechnology, Institute of Science and Technology, JNT University, India.

CONFERENCES AND WORKSHOPS IN LAST FIVE YEARS:

STUDENT CO-AUTHOR INDICATED WITH * AFTER NAME

1. **SR Chaganti** (2019) Environmental Stress on Phenotype Plasticity: Is it Good or Bad or Worst for Natural and Engineered Ecosystems, ASM microbe 2019, San Francisco, CA June 20-24th.

2. **SR Chaganti**, AH Shahraki*, DD Heath (2018) Citizen Scientists for large-scale water quality testing in the Great Lakes: Metabarcoding Microbes. Jun 18-22nd, IAGLR, University of Toronto, Scarborough, On, Canada.
3. AH Shahraki*, **SR Chaganti**, DD Heath (2018) Spatial and Temporal Dynamics of Microbial Community Composition of Recreational Water. Jun 18-22nd, IAGLR, University of Toronto, Scarborough, On, Canada.
4. A Skoyles*, C Weisener, **SR Chaganti** (2018) Assessing the Microbial Community and Function of BioCord Bioreactors in Lagoon Wastewater Treatment. Jun 18-22nd, IAGLR, University of Toronto, Scarborough, On, Canada.
5. Jessica Owen*, **SR Chaganti**, E Hillis, Y Zhao, GD Haffner (2018) Phytoplankton Dynamics in the western basin of Lake Erie with a focus on Harmful Algal Blooms (HABs). Jun 18-22nd, IAGLR, University of Toronto, Scarborough, On, Canada.
6. D VanMensel*, **SR Chaganti**, I Droppo, C Weisener (2018) Metatranscriptomics to assess Great Lakes near shore sediment contribution to human pathogenicity. Jun 18-22nd, IAGLR, University of Toronto, Scarborough, On, Canada.
7. L Zhang, C Zhou, Z Xia, GD Haffner, **SR Chaganti**, P Hamilton, J Ni (2018) Microbial succession and its mechanism during an algal bloom event in Three Gorges Reservoir. Jun 18-22nd, IAGLR, University of Toronto, Scarborough, On, Canada.
8. C Weisener, **SR Chaganti**, S Mundle, D VanMensel, K Davis (2018) Unraveling the Microcystis Mystery of Pelee Island "Magic Sand". Jun 18-22nd, IAGLR, University of Toronto, Scarborough, On, Canada.
9. **SR Chaganti**, M Zaib*, D Sanghera*, X He, DD Heath (2017) Drivers behind the selection of core fish gut microbiome. Jun 20-23rd The Canadian Society of Microbiologists, 67th Annual Conference, University of Waterloo, Waterloo, ON, Canada.
10. M Zaib*, **SR Chaganti**, DD Heath (2017) Partitioning the effects of Heritability and local adaption in driving the gut microbiome of Chinook Salmon (*Oncorhynchus tshawytscha*). Jun 20-23rd The Canadian Society of Microbiologists, 67th Annual Conference, University of Waterloo, Waterloo, ON, Canada.
11. B Mikhael*, **SR Chaganti**, DD Heath (2017) Environmental effects on algal communities; implications for climate change response. Mar 19th, Ontario Biology Day, Sudbury, Canada
12. C Weisener, J Lee, **SR Chaganti**, T Reid, KG Drouillard (2016) Metatranscriptomic and metagenomic study of point source impacts on freshwater sediment microbial communities in Detroit River urban watershed. Aug 21-26, International Society for Microbial Ecology Conference, Montreal, Canada.
13. **SR Chaganti** D Sanghera*, KG Drouillard, DD Heath (2016) Environmental selects the biogeography of aquatic microbial communities. Jun 12-15, The Canadian Society of Microbiologists, 66th Annual Conference, University of Toronto. Toronto, ON, Canada.
14. **SR Chaganti**, LI Söderberg, H Farahmand, DD Heath (2015) Linking toxicity and adaptive responses across the Transcriptome in the brown bullheads (*Ameiurus nebulosus*): RNA-Seq *de novo* assembly using Trinity platform. Jan 08-11, Canadian Conference for Fisheries Research/Society of Canadian Limnologists, Ottawa, ON.
15. D Sanghera*, **SR Chaganti**, DD Heath (2013) The effect of pollution on the diversity, distribution, and abundance of microbial communities in the St. Clair River. June 17-20,

The Canadian Society of Microbiologists, 63rd Annual Conference, Carleton University, Ottawa, ON, Canada.

16. **SR Chaganti**, B Pendyala, JA Lalman, DD Heath (2013) Function and composition dynamics of electrochemical active biofilms enriched using different organic waste in microbial fuel cells. June 17-20, The Canadian Society of Microbiologists, 63rd Annual Conference, Carleton University, Ottawa, ON, Canada.
17. **SR Chaganti**, B Pendyala JA Lalman, DD Heath (2013) Conversion of trash into bioelectricity in a microbial fuel cell by exoelectrogenic bacteria: Its community metagenome sequencing using Ion Torrent (PGM) NGS platform. May 18-21st, American Society for Microbiology Annual meeting Denver, USA.
18. KW Wellband, **SR Chaganti**, DD Heath (2013) Transcription and Environment interactions: Evidence for local adaption of Babine Lake rainbow trout. Jan 3-5, Canadian Conference for Fisheries Research/Society of Canadian Limnologists (CCFFR), Windsor, ON, Canada.

SUPERVISORY EXPERIENCE

Ph.D. students

- Javad Sadeghi, Sep 2017 to present (co-advised with Dr. Daniel Heath)
- Abdolrazagh H Shahraki, Sep 2016 to present (co-advised with Dr. Daniel Heath)

M.Sc./M.A.Sc. Students

- Sarah St. Louis, Sep 2018 to present (co-advised with Dr. Daniel Heath)
- Shanoon Deehan, Sep 2017 to Oct 2019 (co-advised with Dr. Rajesh Seth)
- Adam Skoyles, Sep 2016 to May 2019 (co-advised with Dr. Chris Weisener)
- Jessica Owen, Jan 2016 to Jan 2019 (co-advised with Dr. Doug Haffner)
- Mubarak Ziab, Sep 2016 to Feb 2020 (co-advised with Dr. Daniel Heath)

GRADUATE SUPERVISORY COMMITTEES (GLIER, UNIVERSITY OF WINDSOR)

2016 - present	Danielle VanMensel	Ph.D.
2015 - 2019	Thomas Reid	Ph.D.
2015 - 2017	Nick Falk	Master's
2014 - 2015	Danielle VanMensel	Master's
2014 - 2015	Dilraj Sanghera	Master's

UNDERGRADUATE THESES MENTORED

2018 – 2019	Sukhraj Sanghera
2017 – 2018	Sarah Al-Zaher
2017 – 2018	Zahra Taboun
2016 – 2017	Brandon Mikhael
2016 – 2017	Reinnier S. Padilla
2015 – 2016	Mubarak Ziab
2012 – 2013	Dilraj Sanghera

Mentored HQP:

YEAR	NAME	DEGREE
2019-2020	Tohei Ichikawa	Undergraduate (UROP)
2019-2020	Abraham Chmelnik	Undergraduate (UROP)
2019-2019	Rachel Zarb	Undergraduate (UROP)
2017 – 2018	Subidsa Srikantha	Undergraduate (Outstanding Scholar)
2016 – 2017	Sarah St. Loius	Undergraduate (Work Study)
2016 – 2017	Zahra Taboun	Undergraduate (Outstanding Scholar)
2016-present	Sukhraj Sanghera	Undergraduate (Outstanding Scholar)
2017 – 2017	Sarah Al-Zaher	Undergraduate (Volunteer)
2017 – 2017	Sarah Laframboise	Undergraduate (Volunteer)
2017 – 2017	Austin Elliott	Undergraduate (Volunteer)
2015 – 2017	Amber Shaheen	Undergraduate (Outstanding Scholar)
2014 – 2017	Farwa Zaib	Undergraduate (work study)
2014 – 2016	Mubarak Ziab	Undergraduate (Work Study)
2014 – 2015	Sarah Chalabi	Undergraduate (work study)
2011 – 2013	Dilraj Sanghera	Undergraduate (Work Study)
2013 – 2013	Sameer Jafar	Undergraduate (Work Study)
2012 – 2013	Sharon Meng	Undergraduate (work study)
2012 – 2013	Yasina Somani	M.Sc. (work study)
2012 – 2013	Robert Tye	MA.Sc. (Thesis)
2009 – 2013	Sathyanarayan Veeravalli	Ph.D. (Thesis)
2009 – 2013	Sarvanan Ramiah	Ph.D. (Thesis)
2009 – 2011	Justin Philpot	MA.Sc. (Thesis)

CANADIAN COMMONWEALTH SCHOLARS TRAINED (SIX MONTHS):

YEAR	NAME	DEGREE
2013 - 2013	Mathew Fernandes	Undergraduate (Brazil)
2012 - 2013	Chiranjeevi Tulluri	Ph.D. (India)
2012 - 2013	Rajesh Singh	Ph.D. (India)
2012 - 2013	Bojje Goud	Ph.D. (India)
2011 - 2012	Sankar Kirupa	M.Tech. (India)
2010 - 2011	Brahamiah Pendyala	Ph.D. (India)

MITACS INTERNATIONAL EXCHANGE STUDENTS TRAINED (THREE MONTHS):

YEAR	NAME	DEGREE
2014	Anupama Sharan	Undergraduate (India)

PROFESSIONAL ASSOCIATIONS AND ACTIVITIES

- Young Ambassador to Canada for American Society of Microbiology (ASM) 2012 to 2016
- Chair to ASM Young Circle leader for 60+ countries worldwide. 2015 to 2016
- ASM international Board Member 2015-2016
- Canadian Society of Microbiology (CSM) Board member
- Society of Applied Microbiology Member 2015- present
- ASM member 2008-Present

Chaganti C.V.

- CSM member 2009-Present
- International Association for Great Lakes Research (IAGLR) member 2018-Present

Grant Peer-Review:

- Served on IC-IMPACTS and DBT grant review panel for Bi-national collaborative grants (2019)
- Served on National Science Foundation (NSF) review panelist for the NSF Graduate Research Fellowship Program (GRFP) 2018
- Served as a Research Review Coordinator for MITACS Global link Research Award program 2017

Conference Abstract Peer-Review/Moderator

- [Served as an Panel Moderator for the ASM microbe 2019](#)
- Served as an Abstract reviewer for the ASM microbe 2019
- Served as an Abstract reviewer panel for ASM microbe 2018
- Served as an Abstract reviewer panel for ASM microbe 2017

EDITORSHIPS:

American Journal of Microbiology Research, Editorial board member 2013 - present
Frontiers In Energy and Fuels Associate Editor 2015 - present

PUBLICATION PEER REVIEWER: (reviewed 150+ in the past 8 years)

Applied Environmental Microbiology; Applied Water Science; Bio-fouling, Bioresource Technology; Biotechnology and Bioengineering; Clean-Soil, Air, Water; Water Research Canadian Journal of Zoology; Frontiers in Bioenergy and Biofuel; Journal of Applied Microbiology; Journal of Biological Inorganic Chemistry; Journal of Chemical Technology and Biotechnology; Journal of Environmental Chemical Engineering; Journal of Microbiology and Biotechnology; Letters in Applied Microbiology; Process Biochemistry

WORKSHOPS ORGANIZED:

- Organized a networking workshop entitled "Science data to Social date" at Canadian Society of Microbiology conference, University of Toronto, June 14th 2016.
- Planned and organized a three-day workshop on "Genomics and Transcriptomics." Great Lakes Institute for Environmental Research, University of Windsor, Windsor, ON, Canada, May (7th to 9th) 2014.
- Planned and organized a one-day workshop on "Post analysis of massively parallel (NextGen) sequencing." Great Lakes Institute for Environmental Research, University of Windsor, Windsor, ON, Canada, April 2012.

News link

ASM Award link : <http://www.uwindsor.ca/dailynews/2018-09-18/award-honours-adjunct-professor-early-career-environmental-research>
<https://www.asm.org/Academy/Award-Winners>

Delegation Discusses research with Federal Officials: <http://www.uwindsor.ca/dailynews/2016-05-20/delegation-discusses-research-federal-officials>

Citizen Science: <http://www.uwindsor.ca/dailynews/2016-05-17/citizen-scientists-sought-beach-water-sampling>

Chaganti C.V

News Paper: <https://windsorstar.com/news/local-news/university-seeks-citizen-scientists-for-water-study>

TV News:

<https://windsor.ctvnews.ca/citizen-scientists-sought-for-water-quality-experiment-1.3548879>

tvo

<https://www.tvo.org/article/how-citizen-scientists-are-making-beaches-safer-in-windsor-essex>

CBC news

<https://www.cbc.ca/news/canada/windsor/we-re-not-finding-any-really-scary-pathogens-results-of-citizen-led-water-testing-released-1.4666437>

<https://www.cbc.ca/news/canada/windsor/great-lakes-institute-calling-for-hundreds-of-citizen-scientists-to-help-with-water-testing-1.4249558>

<https://www.wellandtribune.ca/news-story/7505974-uwindsor-researchers-calling-for-citizen-scientists-to-help-collect-water-samples/>