

1) PERSONAL INFORMATION

Name: Alexandre Magno Anesio

Born: September 26, 1969

Nationality: Brazilian and Swedish

Family status: married, one daughter (born 1998)

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Google Scholar link: <https://scholar.google.co.uk/citations?user=rL4i8egAAAAJ&hl=en>

2) EDUCATION

2000 **PhD in Limnology**, Department of Ecology/Limnology, University of Lund, Sweden

1994 **Master in Ecology**, Department of Ecology, Federal University of Rio de Janeiro, Brazil

1992 **BSc in Biology**, Institute of Biological Sciences, Federal University of Rio de Janeiro, Brazil

3) POSITIONS

2018 – today **Professor in Arctic Biogeochemistry**, Department of Environmental Sciences, Aarhus University, Denmark

2014 – 2018 **Professor of Biogeochemistry**, School of Geographical Sciences, University of Bristol, UK

2007 – 2014 **Lecturer** (2007), **Senior Lecturer** (2009), **Reader** (2012), School of Geographical Sciences, University of Bristol, UK

2004 – 2007 **Lecturer in Environmental Microbiology**, Institute of Biological Sciences, University of Wales, Aberystwyth, UK

2003 – 2004 **Marie Curie EC Fellow**, School of Biosciences, University of Nottingham, UK

2000 – 2003 **Research Associate**, Department of Ecology/Limnology, University of Lund, Sweden

1994 – 1996 **Research Assistant**, Department of Oceanography, University of Rio Grande, Brazil

1990 – 1994 **Research Assistant** (part time), Department of Ecology, Federal University of Rio de Janeiro, Brazil for CENIBRA (Celulose Nipo Brasileira S/A), Mineração Rio do Norte (Mining Co Rio do Norte), and PETROBRÁS (Brazilian State Oil Company)

4) FELLOWSHIPS AND AWARDS

2000 – 2018 Over £6.3M in research grants as PI and £4.3M as Co-I

2018 Leverhulme Trust Individual Research Fellowship (awarded competitively)

2016 Distinguished Lecturer of the European Association of Geochemistry

2003 Marie Curie fellowship 2003 (EU Commission - awarded competitively)

1996 PhD fellowship 1996 (Brazilian Research Council - awarded competitively)

5) SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2007 – 2018 7 Postdocs/ 13 PhD students/ 15 Master Students
School of Geographical Sciences, University of Bristol, UK

2004 – 2007 1 PhD student/6 Master Students

Institute of Biological Sciences, University of Wales, Aberystwyth, UK

2000 – 2003 2 PhD students, 7 Master Students

Department of Ecology/Limnology, University of Lund, Sweden

6) PROFESSIONAL ACTIVITIES AND RESPONSIBILITIES (few examples)

- 2018 – Associate Scientific Editor for the special issue on Biology in the Cryosphere for the journal *Annals of Glaciology*
- 2017 – Associate Editor for Frontiers in Environmental Sciences
- 2018 Expert evaluator EU 2020 - H2020-BG-2018-2 First Stage – Blue Growth in Aquaculture
- 2015 – 2018 Director of the Bristol Glaciology Centre
- 2015 Committee member of the European Science Foundation reviewing Mars Special Regions - Rettberg, P.; Anesio A.M. et al. (2015). Review of the MEPAG Report on Mars Special Regions. The National Academies Press, Washington, DC.
- 2013 Scientific committee and chair of the biodiversity session at the Polar and Alpine Microbiology meeting, Big Sky, US.
- 2013 Organiser of the “Life at glacial surface” UK workshop as part of a Royal Society grant with Japanese collaborators, April 2013.
- 2012 Co-convenor for a session at the European Geophysical Union Meeting entitled “Glacial retreat: implications for microbial ecology and biogeochemistry”, Vienna, Austria
- 2008 – 2012 Participation on the Coordination Action for Research Activities on Life in Extreme Environments – European Commission FP7 Coordination Action
- 2005 – 2008 Member of NERC Peer Review College, UK

7) LIST OF INVITED TALKS (selected 10 from more than 30)

1. Invited speaker to Gordon Research Conference in One Carbon Metabolism (Maine, USA July 2018)
 2. Invited talk for the opening of the iClimate Centre at Aarhus University (Roskilde, December 2017).
 3. Invited talk at the Polar and Alpine Microbiology Meeting (Nuuk, September 2017)
 4. Invited talk at the Grenoble Glaciology Research Group (Grenoble, April 2017)
 5. Invited speaker for the American Society for Microbiology Meeting for the Microbiology of the Anthropocene session (Boston, June 2016).
 6. 2016 Distinguished Lecturer of the European Association of Geochemistry with talks given in Kiev, Bucharest, Ljubljana and Krakov - <http://www.eag.eu.com/outreach/dlp/lecture-tour-2016/>
 7. Invited speaker at the COSPAR Colloquium to recommend planetary research policy, (Bern, Sep 2015).
 8. Invited Keynote speaker for the National Spanish Conference in Virology – Burgos. June 2013.
 9. Invited speaker at the Royal Society Frontiers in Science Meeting – Beijing May 2013
 10. Invited speaker to Gordon Research Conference on Marine Microbes. June 2012, Barga, Italy
- Several (more than 20) different outreach activities giving talks to children, young adults, public events and radio.

8) GRANT INCOME

8a) Grant income as the main PI (Chronological order)

11/2018-10/2021	Aarhus University Fund – Start grant from the Faculty of Science for the establishment of a Glacial Microbiology Research Group. DKK 4,500,000 . Anesio as PI.
03/2018-02/2021	NERC (NE/R012849/1) . Diatom Autecological Responses with Changes To Ice Cover (Diatom-ARCTIC). £476,217 . Anesio as PI.
01/2019-12/2019	Leverhulme Trust (Individual Research Fellowship) . A-CORE: Anthropogenic impact On European glaciers. £54,762 . Anesio as PI.
04/2017-03/2018	EU (INTERACT 2017) . MICROENGLA . Microorganisms in englacial ecosystems. €4,800 . Anesio as Coordinator.
04/2016-03/2020	EU (H2020-MSCA-ITN-2015) . MicroArctic - Microorganisms in Warming Arctic Environments. €3,897,006 . Anesio as Coordinator.
01/2014-02/2015	NERC Isotope Geosciences Laboratory – “Organic carbon budgets for allochthonous and autochthonous organic matter upon melting glaciers”. £15,000 in kind for isotopic analyses. Anesio as PI.
12/2012-05/2016	NERC (NE/J02399X/1) . Microbial succession from ice to vegetated soils in response to glacial retreat. £567,011 . Anesio as PI.
12/2012-11/2015	The Leverhulme Trust (RPG-2012-624) . Are viruses major ecological and evolutionary drivers of microbial community change in low temperature habitats? £158,000 . Anesio as PI.
06/2012-03/2013	NERC (NE/J013854/1) . Tapping into the virome of glaciers and ice sheets. £51,906 . Anesio as PI.
04/2012-03/2014	Royal Society International Exchange Scheme: The greening of glacial surfaces: microbial growth and albedo feedbacks on ice. £12,000 . Anesio as PI.
09/2011-09/2012	UK Ski Club : Snow Biogeochemistry. £4,000 . Anesio as PI
02/2009-01/2012	NERC (NE/G00496X/1) : Greening of retreating glaciers: storage versus export of autochthonous organic matter. £418,243 . Anesio as PI.
04/2007-03/2008	Royal Society (2006/R2) : Quantification and identification of microbes in aerosols from 3 different glaciers in Svalbard. £15,000 . Anesio as PI
03/2006-09/2007	NERC (NE/D007321/1) : Microbial community metabolism and carbon budget on glaciers. £22,832 . Anesio as PI
05/2005-04/2006	UWA University fund (AB11100713) : Viral ecology in biofilms. £5,000 . Anesio as PI
04/2005-03/2007	The Nuffield Foundation (NAL/01042/G) : Ecology of viruses in extreme cold environments. £5,000 . Anesio as PI
04/2003-12/2004	EC Postdoctoral fellowship (Marie Curie) : The role of viruses on bacterial production in polar habitats. €100,088 . Anesio as PI

8b) Grant income as Co-I

07/2018-06/2021	NERC (NE/S001670/1) . CRUS2LIFE. £576,596 . Martyn Tranter as PI and Anesio as Co-I.
10/2016-04/2018	International Continental Drilling Program . Drilling the Eger Rift: Magmatic fluids driving the earthquake swarms and the deep biosphere. €1,200,000 . Torsten Dahm, GFZ German Research Centre for Geosciences as PI and Anesio as co-I and member of the coordination team.
07/2016-04/2019	NERC (NE/P003133/1) . PISCES : Patagonian Ice field Shrinkage impacts on Coastal and fjord Ecosystems. £507,171 . Jemma Wadham as PI and Anesio as Co-I.
07/2015-06/2020	NERC (NE/M021025/1) . BLACK and BLOOM : variations in the albedo of the

- Greenland Ice Sheet as a result of interactions between microbes and particulates. **£1,469,668**. Martyn Tranter as PI and Anesio as WP1 leader responsible for 1 postdoctoral researcher and 1 PhD student.
- 10/2015-09/2019 **NERC (NE/N006518/1)**. Multimodal characterisation of engineered nanomaterials in the environment. **£453,904**. Thomas Scott as PI and Anesio as Co-I.
- 07/2013-07/2014 **Black Swan** – Faculty of Sciences (UoB). Soils and Weathering: Building a cohesive community to play a central role in soil security research initiatives. **£5,000**. Heather Buss, University of Bristol as PI and Anesio as Co-I.
- 09/2012-09/2013 **Royal Society (2012/R1)**: Studying the evolution of cyanobacteria from glacial ecosystems using a phylogenomic approach. **£15,000**. Patricia Sanchez-Baracaldo, University of Bristol as PI and Anesio as Co-I.
- 02/2012-02/2013 **INTERACT Transnational Access to Arctic Stations**. CryoLife. **€5,300**. Liane Benning, University of Leeds as PI and Anesio as Co-I
- 10/2010-09/2014 **NERC Open Case (NE/H019278/1)**: [WATER] Management and Control of Taste and Odour Problems associated with Geosmin and 2-MIB in Drinking Water Supplies. **£74,004**. (Marian Yallop, University of Bristol as PI and Anesio as Co-I).
- 10/2009-10/2011 **EC FP7 Marie Curie Reintegration Grant (249171)** – Productivity and carbon transformations on the Greenland Ice Sheet (ProGris). **£27,273**. Anesio as scientist in charge with Marek Stibal.
- 10/2009-09/2013 **NERC Open Case (NE/G012342/1)**: Pesticides as a structuring force of planktonic food webs in drinking water reservoirs. **£70,976**. (Marian Yallop, University of Bristol as PI and Anesio as Co-I).
- 11/2008-11/2011 **Freshwater Biological Association/ LESARS**: Biofilm dynamics: biodiversity, architecture and functioning in response to agrochemical gradients. **£45,000**. (Marian Yallop, University of Bristol as PI and Anesio as Co-I).
- 06/2000-03/2003 **Named Postdoctoral Researcher**: The effects of interactions between UV-B radiation and acidification on aquatic ecosystems. Swedish Environmental Agency (FORMAS and SNV). ca. **€120,000**. Named postdoctoral researcher in the proposal (with Prof. Granéli as PI)

9) PEER-REVIEWED PUBLICATIONS (last 10 years from over 100 in total)

1. Turpin-Jelfs, T, Michaelides, K, Blacker, J, Benning, LG, Williams, J & **Anesio, AM** 2019, 'Distribution of soil nitrogen and nitrogenase activity in the forefield of a High Arctic receding glacier', *Annals of Glaciology*. <https://doi.org/10.1017/aog.2018.35>
2. Turpin-Jelfs, T, Michaelides, K, Biederman, JA & **Anesio, AM** 2019, 'Soil nitrogen response to shrub encroachment in a degrading semi-arid grassland', *Biogeosciences*, vol. 16, no. 2, pp. 369-381. <https://doi.org/10.5194/bg-16-369-2019>
3. Mania, I, Gorra, R, Colombo, N, Freppaz, M, Martin, M & **Anesio, AM** 2019, 'Prokaryotic Diversity and Distribution in Different Habitats of an Alpine Rock Glacier-Pond System', *Microbial Ecology*. <https://doi.org/10.1007/s00248-018-1272-3>
4. Nash, MV, **Anesio, AM**, Barker, G, Tranter, M, Varliero, G, Eloie-Fadrosch, EA, Nielsen, T, Turpin-Jelfs, T, Benning, LG & Sánchez-Baracaldo, P 2018, 'Metagenomic insights into diazotrophic communities across Arctic glacier forefields', *FEMS Microbiology Ecology*, vol. 94, no. 9. <https://doi.org/10.1093/femsec/fiy114>
5. Christmas, NAM, **Anesio, AM** & Sánchez-Baracaldo, P 2018, 'The future of genomics in polar and alpine cyanobacteria', *FEMS Microbiology Ecology*, vol. 94, no. 4. <https://doi.org/10.1093/femsec/fiy032>
6. Williamson, CJ, **Anesio, AM**, Cook, J, Tedstone, A, Poniecka, E, Holland, A, Fagan, D, Tranter, M

- & Yallop, ML 2018, 'Ice algal bloom development on the surface of the Greenland Ice Sheet', *FEMS Microbiology Ecology*, vol. 94, no. 3. <https://doi.org/10.1093/femsec/fiy025>
7. Poniecka, E, Bagshaw, L, Tranter, M, Sass, H, Williams, C & **Anesio, AM** 2018, 'Rapid development of anoxic niches in supraglacial ecosystems', *Arctic, Antarctic, and Alpine Research*, vol. 50, no. 1. <https://doi.org/10.1080/15230430.2017.1420859>
 8. Fox, BG, Thorn, RMS, **Anesio, AM** & Reynolds, DM 2017, 'The in situ bacterial production of fluorescent organic matter; an investigation at a species level', *Water Research*. <https://doi.org/10.1016/j.watres.2017.08.040>
 9. Rafiq, M, Hayat, M, **Anesio, AM**, Jamil, SUU, Hassan, N, Shah, AA & Hasan, F 2017, 'Recovery of metallo-tolerant and antibiotic resistant psychrophilic bacteria from Siachen glacier, Pakistan', *PLOS ONE*, vol. 12, no. 7. <https://doi.org/10.1371/journal.pone.0178180>
 10. Frisia, S, Weyrich, LS, Hellstrom, J, Borsato, A, Golledge, NR, **Anesio, AM**, Bajo, P, Drysdale, RN, Augustinus, PC, Rivard, C & Cooper, A 2017, 'The influence of Antarctic subglacial volcanism on the global iron cycle during the Last Glacial Maximum', *Nature Communications*, vol. 8. <https://doi.org/10.1038/ncomms15425>
 11. Musilova, M, Tranter, M, Wadham, J, Telling, J, Tedstone, A & **Anesio, AM** 2017, 'Microbially-driven export of labile organic carbon from the Greenland Ice Sheet', *Nature Geoscience*, vol. 10, no. 5, pp. 360–365. <https://doi.org/10.1038/ngeo2920>
 12. Bradley, J, **Anesio, AM** & Arndt, S 2017, 'Microbial and Biogeochemical Dynamics in Glacier Forefields Are Sensitive to Century-Scale Climate and Anthropogenic Change', *Frontiers of Earth Science*, vol. 5. <https://doi.org/10.3389/feart.2017.00026>
 13. Lutz, S, **Anesio, AM**, Edwards, A & Benning, LG 2017, 'Linking microbial diversity and functionality of arctic glacial surface habitats', *Environmental Microbiology*, vol. 19, no. 2, pp. 551–565. <https://doi.org/10.1111/1462-2920.13494>
 14. **Anesio, AM**, Lutz, S, Christmas, NAM & Benning, LG 2017, 'The microbiome of glaciers and ice sheets', *npj Biofilms and Microbiomes*. <https://doi.org/10.1038/s41522-017-0019-0>
 15. Bradley, J, Arndt, S, Sabacka, M, Benning, LG, Barker, G, Blacker, J, Yallop, M, Wright, K, Bellas, C, Telling, J, Tranter, M & **Anesio, AM** 2016, 'Microbial dynamics in a High Arctic glacier forefield: a combined field, laboratory, and modelling approach', *Biogeosciences*, vol. 13, no. 19, pp. 5677–5696. <https://doi.org/10.5194/bg-13-5677-2016>
 16. Verde, C, Giordano, D, Bellas, CM, di Prisco, G & **Anesio, AM** 2016, Polar Marine Microorganisms and Climate Change. in *Advances in Microbial Physiology*. vol. 69, Elsevier, *Advances in Microbial Physiology*, pp. 187–215. <https://doi.org/10.1016/bs.ampbs.2016.07.002>
 17. Christmas, N, Barker, G, **Anesio, AM** & Sanchez-Baracaldo, P 2016, 'Genomic mechanisms for cold tolerance and production of exopolysaccharides in the Arctic cyanobacterium *Phormidesmis priestleyi* BC1401', *BMC Genomics*, vol. 17, pp. 533.
 18. Cooper, K, Whitaker, F, **Anesio, AM**, Naish, M, Reynolds, D & Evans, E 2016, 'Dissolved organic carbon transformations and microbial community response to variations in recharge waters in a shallow carbonate aquifer', *Biogeochemistry*, vol. 128, pp. 215–234. <https://doi.org/10.1007/s10533-016-0226-4>
 19. Rime, T, Hartmann, M, Stierli, B, **Anesio, AM** & Frey, B 2016, 'Assimilation of microbial and plant carbon by active prokaryotic and fungal populations in glacial forefields', *Soil Biology & Biochemistry*, vol. 98, pp. 30–41. <https://doi.org/10.1016/j.soilbio.2016.03.012>
 20. Rassner, SM, **Anesio, AM**, Girdwood, SE, Hell, K, Gokul, J, Whitworth, DE & Edwards, A 2016, 'Can the bacterial community of a High Arctic glacier surface escape viral control?', *Frontiers in Microbiology*, vol. 7. <https://doi.org/10.3389/fmicb.2016.00956>
 21. Lutz, S, **Anesio, AM**, Raiswell, R, Edwards, A, Newton, RJ, Gill, F & Benning, LG 2016, 'The biogeography of red snow microbiomes and their role in melting arctic glaciers', *Nature Communications*, vol. 7, pp. 11968. <https://doi.org/10.1038/ncomms11968>

22. Musilova, M, Tranter, M, Bamber, JL, Takeuchi, N & **Anesio, AM** 2016, 'Experimental evidence that microbial activity lowers the albedo of glaciers', *Geochemical Perspectives Letters*, vol. 2, no. 2, pp. 105-116. <https://doi.org/10.7185/geochemlet.1611>
23. Bradley, J, **Anesio, AM** & Arndt, S 2016, 'Bridging the divide: A model-data approach to Polar and Alpine microbiology', *FEMS Microbiology Ecology*, vol. 92, no. 3. <https://doi.org/10.1093/femsec/fiw015>
24. Rettberg, P, **Anesio, AM**, Baker, VR, Baross, JA, Cady, SL, Detsis, E, Foreman, CM, Hauber, E, Ori, GG, Pearce, DA, Renno, NO, Ruvkun, G, Sattler, B, Saunders, MP, Smith, DH, Wagner, D & Westall, F 2016, 'Planetary Protection and Mars Special Regions—A Suggestion for Updating the Definition', *Astrobiology*, vol. 16, no. 2, pp. 119-125. <https://doi.org/10.1089/ast.2016.1472>
25. Kminek, G, **Anesio, AM**, Hipkin, VJ, Anesio, A, Barengoltz, J, Boston, PJ, Clark, BC, Conley, CA, Coustenis, A, Detsis, E, Doran, P, Grasset, O, Hand, K, Hajime, Y, Hauber, E, Kolmasová, I, Lindberg, RE, Meyer, M, Raulin, F, Reitz, G, Rennó, NO, Rettberg, P, Rummel, JD, Saunders, MP, Schwehm, G, Sherwood, B, Smith, DH, Stabekis, PE & Vago, J 2016, COSPAR Panel on Planetary Protection Colloquium, Bern, Switzerland, September 2015 (Meeting Reports)..
26. Sattler, B, Weisleitner, K, Larch, P & **Anesio, AM** 2015, 'How to survive as a microbe in snow and ice and ecological implications', *Cryobiology*, vol. 71, no. 3, pp. 548-549. <https://doi.org/10.1016/j.cryobiol.2015.10.050>
27. Lutz, S, **Anesio, AM**, Field, K & Benning, LG 2015, 'Integrated 'Omics', Targeted Metabolite and Single-cell Analyses of Arctic Snow Algae Functionality and Adaptability', *Frontiers in Microbiology*, vol. 6, pp. 1323. <https://doi.org/10.3389/fmicb.2015.01323>
28. Boetius, A, **Anesio, AM**, Deming, JW, Mikucki, JA & Rapp, JZ 2015, 'Microbial ecology of the cryosphere: sea ice and glacial habitats', *Nature Reviews. Microbiology*, vol. 13, no. 11, pp. 677-690. <https://doi.org/10.1038/nrmicro3522>
29. Bradley, J, **Anesio, AM**, Singarayer, J, Heath, M & Arndt, S 2015, 'SHIMMER (1.0): a novel mathematical model for microbial and biogeochemical dynamics in glacier forefield ecosystems', *Geoscientific Model Development*, vol. 8, no. 10, pp. 3441-3470. <https://doi.org/10.5194/gmd-8-3441-2015>
30. Christmas, NAM, **Anesio, AM** & Sanchez-Baracaldo, P 2015, 'Multiple adaptations to polar and alpine environments within cyanobacteria: a phylogenomic and Bayesian approach', *Frontiers in Microbiology*, vol. 6. <https://doi.org/10.3389/fmicb.2015.01070>
31. Bellas, CM, **Anesio, AM** & Barker, GLA 2015, 'Analysis of virus genomes from glacial environments reveals novel virus groups with unusual host interactions', *Frontiers in Microbiology*, vol. 6. <https://doi.org/10.3389/fmicb.2015.00656>
32. Musilova, M, Tranter, M, Bennett, SA, Wadham, J & **Anesio, AM** 2015, 'Stable microbial community composition on the Greenland Ice Sheet', *Frontiers in Microbiology*, vol. 6. <https://doi.org/10.3389/fmicb.2015.00193>
33. Lutz, S, **Anesio, AM**, Edwards, A & Benning, LG 2015, 'Microbial diversity on icelandic glaciers and ice caps', *Frontiers in Microbiology*, vol. 6, no. MAR. <https://doi.org/10.3389/fmicb.2015.00307>
34. Bradley, JA, Singarayer, JS & **Anesio, AM** 2014, 'Microbial community dynamics in the forefield of glaciers', *Proceedings of the Royal Society B: Biological Sciences*, vol. 281, no. 1795. <https://doi.org/10.1098/rspb.2014.0882>
35. Benning, LG, **Anesio, AM**, Lutz, S & Tranter, M 2014, 'Biological impact on Greenland's albedo', *Nature Geoscience*, vol. 7, no. 10, pp. 691-691. <https://doi.org/10.1038/ngeo2260>
36. Anesio, AM, Wright, K, Blacker, J, Bradley, J, Barker, GLA, Yallop, ML, Tranter, M & Benning, LG
37. Edwards, A, Mur, LAJ, Girdwood, SE, **Anesio, AM**, Stibal, M, Rassner, SME, Hell, K, Pachebat, JA, Post, B, Bussell, JS, Cameron, SJS, Griffith, GW, Hodson, AJ & Sattler, B 2014, 'Coupled cryoconite ecosystem structure-function relationships are revealed by comparing bacterial communities in alpine and Arctic glaciers', *FEMS Microbiology Ecology*, vol. 89, no. 2, pp. 222-37.

38. Lutz, S, **Anesio, AM**, Jorge Villar, SE & Benning, LG 2014, 'Variations of algal communities cause darkening of a Greenland glacier', *FEMS Microbiology Ecology*, vol. 89, no. 2, pp. 402-14.
39. Telling, J, **Anesio, AM**, Tranter, M, Fountain, AG, Nylen, T, Hawkings, J, Singh, VB, Kaur, P, Musilova, M & Wadham, JL 2014, 'Spring thaw ionic pulses boost nutrient availability and microbial growth in entombed Antarctic Dry Valley cryoconite holes', *Frontiers in Microbiology*, vol. 5, no. DEC. <https://doi.org/10.3389/fmicb.2014.00694>
40. Bellas, C.M., **Anesio, A.M.**, Telling, J., Stibal, M., Tranter, M. and Davis, S.A. 2013. Viral impacts on bacterial communities in Arctic cryoconite. *Environmental Research Letters* **8**, 045021.
41. Bellas, C.M., and **Anesio, A.M.** 2013. High diversity and potential origins of T4-type bacteriophages on the surface of Arctic glaciers. *Extremophiles* **17**: 861-870.
42. Edwards, A., Rassner, S. M., **Anesio, A.M.**, Worgan, H. J., Irvine-Fynn, T.D.L., Williams, H.W., Sattler, B., and Griffith, G.W. 2013. Contrasts between the cryoconite and ice-marginal bacterial communities of Svalbard glaciers. *Polar Research* **32**, [19468]doi: 10.3402/polar.v32i0.19468.
43. Laybourn-Parry, J, **Anesio, A.M.**, Madan, N and Sawstrom, C 2013. Virus dynamics in a large epishelf lake (Beaver lake, Antarctica). *Freshwater Biology* **58**: 1484–1493.
44. Edwards, A., Douglas B., **Anesio A.M.**, Rassner S.M., Irvine-Fynn T., Sattler B., Griffith G.W. 2013. A distinctive fungal community inhabiting cryoconite holes on glaciers in Svalbard. *Fungal Ecology* **6**: 168-176.
45. Yallop, M.L., **Anesio, A.M.**, Perkins, R.G., Cook, J., Telling, J., Fagan, D., MacFarlane, J., Stibal, M., Barker, G., Bellas. C., Hodson, A., Tranter, M., Wadham, J. and Roberts, N.W. 2012. Photophysiology and albedo-changing potential of the ice algae community on the surface of the Greenland ice sheet. *ISME Journal* **6**: 2302–2313
46. Stibal M; Wadham J.L.; Lis G.P; Telling J.; Pancost R.D.; Dubnick A.; Sharp M.J.; Lawson E.C.; Butler C.E.H.; Hasan F.; Tranter M. and **Anesio A.M.** 2012. Methanogenic potential of Arctic and Antarctic subglacial environments with contrasting organic carbon sources. *Global Change Biology* **18**: 3332–3345.
47. Irvine-Fynn, T.D.L., Edwards, A., Newton, S., Langford, H., Rassner, S.M., Telling, J., **Anesio, A.M.** and Hodson, A.J. 2012. Microbial cell budgets of an Arctic glacier surface quantified using flow cytometry. *Environmental Microbiology* **14**: 2998–3012.
48. Cook, J.M., Hodson, A.J., **Anesio, A.M.**, Yallop, M., Hanna, E., Stibal, M., Telling, J., and Huybrechts, P. 2012. An improved estimate of microbially mediated carbon fluxes from the Greenland Ice Sheet. *Journal of Glaciology* **58**: 1098-1108.
49. Wadham, JL, Arndt, S, Tulaczyk, S., Stibal, M, Telling, J, Lis, GP, Lawson, EC, Ridgwell, AJ, Dubnick, A., Sharp, M.J., **Anesio, AM** and Butler, CEH. 2012. Large reservoirs of methane beneath Antarctica? *Nature*, **488**: 633-637.
50. Telling, J., Stibal, M., **Anesio, A. M.**, Tranter, M., Nias, I., Cook, J., Bellas, C., Lis, G., Wadham, J. L., Sole, A., Nienow, P., and Hodson, A. 2012. Microbial nitrogen cycling on the Greenland Ice Sheet, *Biogeosciences*, **9**: 2431-2442.
51. Stibal M.; Hasan F.; Wadham J.L.; Sharp M.J. and **Anesio A.M.** 2012. Prokaryotic diversity in sediments beneath two polar glaciers with contrasting organic carbon substrates. *Extremophiles* **16**: 255-265.
52. **Anesio, A.M.** and Laybourn-Parry, J. 2012. Glaciers and ice sheets as a biome. *Trends in Ecology and Evolution* **27**: 219-225.

53. Telling, J., **Anesio, A.M.**; Tranter, M.; Stibal, M.; Hawkings, J.; Irvine-Fynn, T.; Hodson, A.; Butler, C.; Yallop, M. and Wadham J. 2012. Controls on the autochthonous production and respiration of organic matter in cryoconite holes on High Arctic glaciers. *Journal of Geophysical Research – Biogeosciences* **117**: G01017.
54. Stibal, M.; Telling, J.; Cook, J.; Mak, K.M.; Hodson, A. and **Anesio, A.M.** 2012. Environmental controls on microbial abundance and activity on the Greenland Ice Sheet: a multivariate analysis approach. *Microbial Ecology* **63**:74-84.

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