

Elena Kazamia

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Employment

2016- present **Marie Curie Research Fellow**, Institut de Biologie, École Normale Supérieure, (adviser: Prof Chris Bowler), Paris, France.

2015-2016 **Postdoctoral Associate**, Parsons Laboratory, MIT (adviser: Prof Sallie W. Chisholm) and Harvard Medical School (adviser: Prof Jon Clardy), Boston, MA, USA (**1 year**).

2013-2015 **Postdoctoral Research Associate** (Dept. Plant Sciences, University of Cambridge, UK) and **Research Fellow** (Corpus Christi College, University of Cambridge) (**2 yrs 7 months**).

2012- 2013 **Postdoctoral Research Assistant**, University of Cambridge, UK, (**3 months**).

2012 **Science Adviser**, Houses of Parliament, Westminster, UK (**5 months**).

Education

2008-2012 **PhD Plant Sciences, University of Cambridge (UK) (awarded 23rd March 2013).**

2007-2008 **MSc Conservation, University College London (UK) and Stanford University, CA, USA (awarded Sept 2009).**

2004-2007 **BA Hons Natural Sciences, University of Cambridge (UK).** Year 3: Zoology. Year 2: History and Philosophy of Science, Ecology, Biochemistry. Year 1: Physiology of Organisms, Cell Biology, Chemistry and Quantitative Biology (**awarded June 2007**).

Awards, Grants and Fellowships

2017-2019 **Marie Curie Fellowship**, IRONCOMM, European Commission, Horizon 2020 programme.

2013-2016 **Research Fellowship**, Corpus Christi College, University of Cambridge, UK.

2013-2016 **European Union FP7 funding** (Direct Ethanol from Microalgae project).

2012 **Winton Fund** scholarship (3 months).

2012 **Natural Environment Research Council** scholarship to fund secondment to the Parliamentary Office of Science and Technology (Houses of Parliament, Westminster, UK) (5 months).

2008-2012 **UK Energy Research Centre (UKERC)** PhD scholarship for 3.5 years of studies.

2008-2012 **Gates Cambridge Scholarship** Awarded for the duration of the doctoral degree. Declined by candidate in preference for the UKERC studentship.

2008, 2009 **Cambridge Trusts** (University of Cambridge, UK) awards for academic excellence.

2007-2008 **Natural Environment Research Council** scholarship for the duration of the Masters' degree.

2004-2007 **George and Marie Vergottis Award** (University of Cambridge, UK) for academic excellence.

Publications

- Kazamia E.***, Helliwell K.E., Purton S. and Smith A.G. (2016) How mutualisms arise in phytoplankton communities: building eco-evolutionary principles for aquatic microbes. *Ecology Letters*, 19: 810–822.
- Abalde-Cela S., Gould A., Liu X., **Kazamia E.**, Smith A.G. and Abell (2015) High- throughput analysis of cyanobacteria ethanol producers using fluorescence in a microdroplet platform. *Journal of Royal Society Interface*, 12 (106), 20150216.
- Helliwell K.E., Collins S, **Kazamia E.**, Purton S., Wheeler G.L. and Smith A.G. (2014) Fundamental shift in vitamin B12 eco-physiology of a model alga demonstrated by experimental evolution. *ISME J* 9(6), 1446-1455.
- Kazamia E.** and Smith A.G. (2014). Ensuring the sustainability of biofuels. *Trends in Plant Science* 19(10): 615-618.
- Kazamia E.**, Riseley A.S., Howe C.J. and Smith A.G. (2014). An engineered community approach for industrial cultivation of microalgae. *Industrial Biotechnology* 10(3): 184-190.
- Grant M.A.A.* , **Kazamia E.***, Cicuta P., Smith A.G. (2014). Direct exchange of vitamin B12 is demonstrated by modelling the growth dynamics of algal-bacterial cocultures. *ISME Journal* 8(7): 1418-1427.
*I am a joint first author on this paper.
- Kazamia E.**, Aldridge D.C and Smith A.G. (2012). Synthetic ecology- A way forward for sustainable algal biofuel production? *Journal of Biotechnology* 162: 163-169.

8. **Kazamia E.**, Czesnick H., Nguyen T. T. V., Croft M. T., Sherwood E., Sasso S., Hodson S. J., Warren M. J. and Smith A. G. (2012). Mutualistic interactions between vitamin B12-dependent algae and heterotrophic bacteria exhibit regulation. *Environmental Microbiology* 14(6): 1466-1476.
9. Pan J., Stephenson A.L., **Kazamia E.**, Huck W.T.S., Dennis, J.S., Smith, A.G and Abell, C. (2011). Quantitative tracking of individual algal cells in microdroplet compartments. *Integrative Biology* 3: 1043–1051.
10. Stephenson A.L., **Kazamia E.**, Dennis J.S., Howe C.J., Scott S.A. and Smith A.G. (2010). Life-cycle assessment of potential algal biodiesel production in the United Kingdom: comparison of raceways and air-lift tubular bioreactors. *Energy & Fuels* 24: 4062–4077.

Academic Presentations

<i>July 2017</i>	Molecular Life of Diatoms, The 73 rd Fujihara seminar, Kobe (Japan).
<i>August 2016</i>	International Symposium on Microbial Ecology (ISME), Montreal (Canada).
<i>March 2015</i>	Microbial Systems Seminar at MIT (Boston, USA).
<i>Feb. 2015</i>	Invited seminar presentation at ENS (Paris, France).
<i>Feb. 2015</i>	Invited seminar presentation at University of Edinburgh (UK) on Synthetic Ecology.
<i>Jan. 2015</i>	Invited seminar presentation at Delft University of Technology (Netherlands).
<i>Sept. 2014</i>	CeBiTec Conference: Advances in Industrial Biotechnology (Bielefeld, Germany).
<i>April 2014</i>	Young Algaeneers Symposium (Montpellier, France).
<i>Feb. 2014</i>	Ocean Sciences Meeting (Honolulu, Hawaii).
<i>Feb. 2014</i>	Invited seminar presentation at the California Centre for Algae Biotechnology, University of California, San Diego (USA).
<i>Feb. 2014</i>	Invited presentation at Sapphire Energy, Inc. (San Diego (USA)).
<i>Sept. 2013</i>	1 st EMBO Conference on Aquatic Microbial Ecology (Stresa, Italy), poster presentation.
<i>Sept. 2011</i>	ESF Conference: Sun to Fuel Technologies-Microorganisms for Biofuel Production from Sunlight (Bielefeld, Germany).
<i>May 2012</i>	UKERC meeting place: Bioenergy Policy Principles (Oxford, UK).
<i>March 2011</i>	Keystone Symposium on Biofuels (Singapore).
<i>June 2010</i>	14th International Conference on the Cell and Molecular Biology of <i>Chlamydomonas</i> (Wheaton College, Boston, USA).
<i>Sept. 2009</i>	SGM Meeting- Bioenergy fuel sources session (Edinburgh, UK).

Academic Reviewing

I regularly review publications submitted to *Ecology Letters*, *PNAS*, *ISME J*, *Journal of Biotechnology*, *Algal Research*, *Plant Biotechnology* and *Aquatic Microbial Ecology*. I have also reviewed grants submitted to the National Science Foundation in the USA.

Supervising and mentoring

I have more than 200 hours of small group (supervising) teaching for the BA Natural Sciences course at the University of Cambridge, covering ecology, biochemistry and conservation biology modules (between 2008-2015). I have organised and ran a practical course for the Cell and Developmental Biology module, taken by 140 students in their second year reading for Natural Sciences in 2014. I have mentored a range of visiting summer students, exchange programme and Masters' students at Prof Alison G. Smith's laboratory at the University of Cambridge.

Policy work

I authored a government publication under the guidance of Dr John Wentworth during my secondment to the UK Parliament (2013/2013). The briefing, on the subject of bioenergy, brings together the expert witness of key stakeholders involved in the field, from the CEOs of BP and Drax Energy, to CSOs at Friends of the Earth and WWF.

Kazamia E., Wentworth J. (2012). Bioenergy POSTnote410, Parliamentary Office of Science and Technology, Parliamentary Publications, UK.

Following my work in Parliament, I was an active member of the Cambridge Forum for Sustainability and the Environment, <http://www.cfse.cam.ac.uk> (2013-2015).

Research Expeditions

April 2016 I participated in the Hawaii Ocean Timeseries (HOT) programme (<http://hahana.soest.hawaii.edu/hot/>), collecting samples and conducting on-board experiments at station ALOHA (22°45' N 158° W) in the Pacific Ocean. I was the lead scientist from MIT during this expedition, responsible for organising and executing three projects, including on-deck experiments for my colleagues at MIT in Boston (USA).

Industrial innovation

My doctorate work and the two-year postdoc that followed was closely linked to algal biotechnology. To test the principles of the synthetic ecology framework I was proposing, in the laboratory I studied the community metabolism of a range of algal-bacterial model systems, conducting physiological studies that contributed to the biological foundations for this nascent field. Synthetic ecology received considerable research attention globally and was adopted by a range of biotechnology companies, including Sapphire Energy (California, USA), Photanol (Amsterdam, Netherlands) and A4F (Lisbon, Portugal). In spring 2014 I spent two weeks on secondment to A4F as a visiting consultant, developing protocols and procedures for how synthetic ecology could be implemented at the industrial facilities at A4F. I have also advised Sapphire Energy on their methodologies, having been invited to company visits in California. For both companies, references are available on request.

Public outreach

- **Writing** I enjoy popularising scientific findings and have authored the following non-academic publications:

Kazamia E., Ridley C.J.A., Smith, A.G. (2013). Biofuels from algae: untapped. *Microbiology Today*. November issue: 162-165.

Kazamia E., Helliwell K.E. and Smith A.G. Vitamin B12- Keeping a Clear Head. (2010). *The Biochemist* 32(6): 20 -24.

I write a science blog for a lay audience on Medium corporation: <https://medium.com/@elena.kazamia>

- **Organising**

I helped organise a public outreach event at MIT, for the 100th anniversary of the university on its Cambridge (Massachusetts) campus, as well as numerous events at the University of Cambridge (UK). The most noteworthy was the Royal Summer Science exhibit in 2010, attended by the Royal family and Fellows of the Royal Society.

- **Presenting and networking**

I have represented the University of Cambridge in a series of outreach talks to Cambridge University Alumni across the United States as part of the Corpus Christi College Development Programme (March 2014).

I gave regular talks hosted by Corpus Christi College to underprivileged students in the UK under the Higher Education (HE+) program. By sharing with highschool students my own experiences, my goal was to inspire them to aim as high as possible when making their university choices.