
Mathieu Ardyna – PhD

Marie Skłodowska-Curie post-doctorate fellow

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Website: ocean.stanford.edu/ardyna

RESEARCH INTERESTS

Phytoplankton ecology, bio-physical interactions, light availability, primary production, autonomous platforms, remote sensing, polar regions.

EDUCATION

- 2010-2015 ● PhD in Oceanography
Université Laval, Québec City, Canada
- 2007-2010 ● M.Sc in Oceanography
ISMER (Institut des sciences de la mer)-UQAR, Rimouski, Canada
- 2007-2008 ● M.Sc in Oceanography
Mediterranean Institute of Oceanography (MIO), Marseille, France
- 2006-2007 ● B.Sc in Environment and Ocean Science
Mediterranean Institute of Oceanography (MIO), Marseille, France

RESEARCH AND PROFESSIONAL EXPERIENCES

- 2018- ● **Visiting Scholar at Stanford University/LOV, Palo Alto/Villefranche, Marie Curie Fellowship**
Collaborators: Kevin Arrigo, Hervé Claustre
“[CAP-ICE: Carbon production of under-ice phytoplankton blooms in a changing Arctic Ocean](#)”
- 2015-2017 ● **Post-Doctoral project at LOV, Villefranche, CNES Fellowship**
Collaborator: Hervé Claustre
“SOAR: Southern Ocean bio-Argo and Remote sensing”
- 2013 ● **Research project at SCRIPPS Institute of Oceanography, UCSD, San Diego**
Supervisors: Peter Franks
“Modeling of the phytoplankton productivity and biomass of subsurface chlorophyll maximum in the Arctic Ocean”
- 2010-2014 ● **PhD research project in oceanography, Université Laval, Québec**
Supervisors: Marcel Babin, Michel Gosselin, Jean-Éric Tremblay
“Phytoplankton communities in a changing Arctic Ocean: Biogeography, Phenology, Productivity”
- 2008-2010 ● **M.Sc research project in oceanography, ISMER-UQAR, Rimouski**
Supervisors: Michel Gosselin, Christine Michel, Michel Poulin
“Environmental forcing of phytoplankton community structure and function in the Canadian High Arctic: contrasting oligotrophic and eutrophic regions”

PUBLICATIONS

PEER-REVIEWED ARTICLES - Total citations (Google Scholar): 1220, H-index: 15, i10-index: 18

- 28) **Ardyna M.**, K.R. Arrigo, 2020. Phytoplankton dynamics in a changing Arctic Ocean. *Nature Climate Change*. doi:[10.1038/s41558-020-0905-y](https://doi.org/10.1038/s41558-020-0905-y).
- 27) **Ardyna M.**, C.J. Mundy, N. Mayot, L. Matthes, L. Oziel, C. Horvat, E. Leu, P. Assmy, V. Hill, M. Gale, P. Matrai, I. Melnikov, K.R. Arrigo, 2020. Under-ice phytoplankton blooms: shedding light on the 'invisible' part of Arctic primary production. *Frontiers in Marine Science*. doi:[10.3389/fmars.2020.608032](https://doi.org/10.3389/fmars.2020.608032).
- 26) **Ardyna M.**, C.J. Mundy, M. Mills, L. Oziel, P.-L. Grondin, L. Lacour, G. Verin, G. van Dikjen, J. Ras, E. Alou, M. Babin, M. Gosselin, J.-É. Tremblay, P. Raimbault, P. Assmy, M. Nicolaus, H. Claustre, K. R. Arrigo, 2020. Environmental drivers of under-ice phytoplankton bloom dynamics in the Arctic Ocean. *Elementa: Science of the Anthropocene*. doi:[10.1525/elementa.430](https://doi.org/10.1525/elementa.430). Cited: 4.
- 25) Chaffron S., E. Delage, M. Budinich, D. Vintache, N. Henry, C. Nef, **M. Ardyna**, A. Zayed, P. Junger, P. Galand, C. Lovejoy, A. Murray, H. Sarmento, Tara Oceans coordinators, S. Acinas, M. Babin, D. Iudicone, O. Jaillon, E. Karsenti, P. Wincker, L. Karp-Boss, M.B. Sullivan, C. Bowler, C. De Vargas, D. Eveillard. Environmental vulnerability of the global ocean plankton community interactome. *BioRxiv*.
- 24) Oziel L., A. Baudena, **M. Ardyna**, A. Randelhoff, P. Massicotte, L. Lacour, J.-B. Sallée, R. Ingvaldsen, E. Devred, M. Babin, 2020. Faster Atlantic currents drive poleward expansion of temperate marine species in the Arctic Ocean. *Nature Communications*. doi:[10.1038/s41467-020-15485-5](https://doi.org/10.1038/s41467-020-15485-5). Cited: 11.
- 23) Sergi S., A. Baudena, C. Cotté, **M. Ardyna**, S. Blain, F. d'Ovidio, 2020. Interaction of the Antarctic Circumpolar Current with seamounts fuels moderate blooms but vast foraging grounds for marine predators. *Frontiers in Marine Science*. doi:[10.3389/fmars.2020.00416](https://doi.org/10.3389/fmars.2020.00416).
- 22) Mayot N., P. Matrai, A. Arjona, S. Bélanger, C. Marchese, T. Jaegler, **M. Ardyna**, M. Steele, 2020. Springtime export of Arctic sea ice drives the phytoplankton production in the Greenland Sea. *Journal of Geophysical Research*, doi:[10.1029/2019JC015799](https://doi.org/10.1029/2019JC015799). Cited: 5.
- 21) Massicotte et al, 2020. Green Edge ice camp campaigns: understanding the processes controlling the Arctic phytoplankton spring bloom. *Earth System Science Data*, doi:[10.5194/essd-12-151-2020](https://doi.org/10.5194/essd-12-151-2020). Cited: 7.
- 20) **Ardyna M.**, L. Lacour, S. Sergi, F. D'Ovidio, J.-B. Sallée, M. Rembauville, S. Blain, C. Jeandel, R. Schlitzer, A. Tagliabue, K.R. Arrigo, H. Claustre, 2019. Hydrothermal vents trigger massive phytoplankton blooms in the Southern Ocean. *Nature Communications*, doi:[10.1038/s41467-019-09973-6](https://doi.org/10.1038/s41467-019-09973-6). Cited: 25.
- 19) Lacour, L., H. Claustre, N. Briggs, **M. Ardyna**, G. Dall'Olmo, 2019. Intra-seasonal dynamics of the mixed layer pump in the North Atlantic Subpolar Gyre: a Bio-Argo float approach. *Global Biogeochemical Cycles*, doi:[10.1029/2018GB005997](https://doi.org/10.1029/2018GB005997). Cited: 10.
- 18) Gregory A.C., A.A. Zayed, N. Conceição-Neto, B. Temperton, B. Bolduc, A. Alberti, **M. Ardyna**, K. Arkhipova, C. Cruaud C., Dimier C., J. Ferland, S. Kandels-Lewis, Y. Liu, C. Marec, S. Pesant, M. Picheral, S. Pisarev, J. Poulain, J.-É. Tremblay, D. Vik, Tara Oceans coordinators, M. Babin, C. Bowler, B.E. Dutilh, D. Iudicone, L. Karp-Boss, S. Roux, S. Sunagawa, P. Wincker, M.B. Sullivan, 2019. Marine viral macro- and micro-diversity from pole to pole. *Cell*, doi:[10.1016/j.cell.2019.03.040](https://doi.org/10.1016/j.cell.2019.03.040). Cited: 123.
- 17) Hill, V., **M. Ardyna**, S.H. Lee, D. Varela, 2018. Decadal trends in phytoplankton production in the Pacific Arctic Region from 1950 to 2012. *Deep Sea Research Part 2*, doi:[10.1016/j.dsr2.2016.12.015](https://doi.org/10.1016/j.dsr2.2016.12.015). Cited: 38.
- 16) Joli, N., M. Gosselin, **M. Ardyna**, M. Babin, J.-É. Tremblay, , D.F. Onda, C. Lovejoy, 2018. Need for focus on microbial species following ice melt and changing freshwater regimes in a Janus Arctic Gateway. *Scientific Report*, doi:[10.1038/s41598-018-27705-6](https://doi.org/10.1038/s41598-018-27705-6). Cited: 14.
- 15) **Ardyna M.**, H. Claustre, J.-B. Sallée, F. D'Ovidio, B. Gentili, G. van Dijken, F. D'Ortenzio, K.R. Arrigo, 2017. Delineating environmental control of phytoplankton productivity and phenology in the Southern Ocean *Geophysical Research Letters*, doi:[10.1002/2016GL072428](https://doi.org/10.1002/2016GL072428). Cited: 37.
- 14) **Ardyna, M.**, M. Babin, E. Devred, A. Forest, P. Raimbault, M. Gosselin, J.-É. Tremblay, 2017. Shelf-basin gradients shape ecological phytoplankton niches and community composition in the coastal Arctic Ocean (Beaufort Sea). *Limnology and Oceanography*, doi:[10.1002/lno.10554](https://doi.org/10.1002/lno.10554). Cited: 33.
- 13) Lacour L., **M. Ardyna**, K. Stec, H. Claustre, L. Prieur, M. Ribera D'Alcala, D. Iudicone, 2017. Unexpected winter phytoplankton blooms in the North Atlantic subpolar gyre. *Nature Geoscience*, doi:[10.1038/ngeo3035](https://doi.org/10.1038/ngeo3035). Cited: 29.
- 12) Blais, M., **M. Ardyna**, M. Gosselin, D. Dumont, S. Bélanger, J.-É. Tremblay, Y. Gratton, C. Marchese, M. Poulin, 2017. Contrasting interannual changes in phytoplankton productivity and community structure in the coastal Canadian Arctic Ocean. *Limnology and Oceanography*, doi:[10.1002/lno.10581](https://doi.org/10.1002/lno.10581). Cited: 43.

- 11) Rembauville M., N. Briggs, **M. Ardyna**, J. Uitz, C. Penkerčh, A. Poteau, H. Claustre, S. Blain. Plankton assemblage estimated from BGC-Argo floats in the Southern Ocean. *Journal of Geophysical Research*, doi:[10.1002/2017JC013067](https://doi.org/10.1002/2017JC013067). Cited: **19**.
- 10) Oziel L., G. Neukermans, **M. Ardyna**, C. Lancelot, J-L. Tison, P. Wassmann, D. Ruiz-Pino, J. Sirven, and J. C. Gascard, 2017. Role for Atlantic inflows and sea ice loss on shifting phytoplankton blooms in the Barents Sea. *Journal of Geophysical Research*, doi:[10.1002/2016JC012582](https://doi.org/10.1002/2016JC012582). Cited: **48**.
- 9) Simo Matchim, A.G., M. Gosselin, M. Poulin, **M. Ardyna**, S. Lessard, 2017. Summer and fall distribution of phytoplankton in relation to environmental variables in Labrador fjords, northeastern Canada, with a wink to *Phaeocystis pouchetii*. *Marine Ecology Progress Series*, doi:[10.3354/meps12125](https://doi.org/10.3354/meps12125). Cited: **7**.
- 8) Bouchard-Marmen M., E. Kenchington, **M. Ardyna**, P. Archambault, 2017. Influence of seabird colonies and other environmental variables on benthic community structure, Lancaster Sound Region, Canadian Arctic. *Journal Marine Systems*, doi:[10.1016/j.jmarsys.2016.11.021](https://doi.org/10.1016/j.jmarsys.2016.11.021). Cited: **6**.
- 7) Babin, M., S. Bélanger, I. Ellinsten, A. Forest, V. Le Fouest, T. Lacour, **M. Ardyna**, D. Slagstad, 2015. Estimation of primary production in the Arctic Ocean using ocean colour remote sensing and coupled physical-biological models: strengths, limitations and how they compare. *Progress in Oceanography*, doi:[10.1016/j.pocean.2015.08.008](https://doi.org/10.1016/j.pocean.2015.08.008). Cited: **45**.
- 6) Lee, Y., P. Matrai, M. Friedrichs, V. Saba, D. Antoine, **M. Ardyna**, I. Asanuma, M. Babin, S. Bélanger, M. Benoît-Gagné, E. Devred, M. Fernández-Méndez, B. Gentili, T. Hirawake, S.-H. Kang, T. Kameda, C. Katlein, S. Lee, Z. Lee, F. Mélin, M. Scardi, T. Smyth, S. Tang, K. Turpie, K. Waters, T. Westberry, 2015. An assessment of phytoplankton primary productivity in the Arctic Ocean from satellite ocean color/in situ chlorophyll-a based models. *Journal of Geophysical Research*, doi:[10.1002/2015JC011018](https://doi.org/10.1002/2015JC011018). Cited: **78**.
- 5) **Ardyna, M.**, M. Babin, M. Gosselin, E. Devred, L. Rainville, J.-É Tremblay, 2014. Recent Arctic Ocean sea-ice loss allows novel fall phytoplankton blooms. *Geophysical Research Letters*, 41. doi:[10.1002/2014GL061047](https://doi.org/10.1002/2014GL061047). Cited: **219**.
- 4) **Ardyna M.**, M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2013. Parameterization of vertical chlorophyll a in the Arctic Ocean: Impact of the subsurface chlorophyll maximum on regional, seasonal and annual primary production estimates. *Biogeosciences*, doi:[10.5194/bg-10-4383-2013](https://doi.org/10.5194/bg-10-4383-2013). Cited: **137**.
- 3) **Ardyna M.**, M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2011. Environmental forcing of phytoplankton community structure and function in the Canadian High Arctic: contrasting oligotrophic and eutrophic regions. *Marine Ecology Progress Series*, doi:[10.3354/meps09378](https://doi.org/10.3354/meps09378). Cited: **138**.
- 2) Forest A., J.-É. Tremblay, Y. Gratton, J. Martin, J. Gagnon, G. Darnis, M. Sampei, L. Fortier, **M. Ardyna**, M. Gosselin, H. Hattori, D. Nguyen, R. Maranger, R. Vaqué, C. Marrasé, C. Pedrós-Alió, A. Sallon, C. Michel, C. Kellogg, Deming, E. Shadwick, H. Thomas, H. Link, P. Archambault, D. Piepenburg, 2011. Biogenic carbon flows through the planktonic food web of the Amundsen Gulf (Arctic Ocean): A synthesis of field measurements and inverse modeling analyses. *Progress in Oceanography*, doi:[10.1016/j.pocean.2011.05.002](https://doi.org/10.1016/j.pocean.2011.05.002). Cited: **138**.
- 1) May I., D. Carlson, **M. Ardyna**, M. Geoffroy, M. Heikkilä, 2011. Using new technologies to make sciences more accessible and transparent to the general public. *Polar Research*, doi:[10.3402/polar.v30i0.15315](https://doi.org/10.3402/polar.v30i0.15315). Cited: **3**.

SUBMITTED/IN PREP

- Ardyna M.**, T. Harmel, D.S. Hamilton, L. Lacour, D. Bernstein., J. Laliberté, C. Horvat, M. Mills, G. van Dijken, I. Polyakov, H. Claustre, N. Mahowald, K.R. Arrigo, 2020. Wildfire aerosol deposition amplifies Arctic phytoplankton blooms. *In preparation*.
- Baya A., M. Gosselin, **M. Ardyna**, H. Hintelmann, 2020. Drivers of mercury methylation and demethylation in Arctic marine waters. In revision for *Environmental Science & Technology*.
- Trudnowska E., Lacour L., **Ardyna M.**, Rogge A., Irisson J.-O., Waite A., Babin M., Stemmann L., 2020. Marine snow morphology reflects the evolution of phytoplankton blooms and determines their subsequent vertical export. In revision for *Nature Communications*
- Ibarbalz F., N. Henry, **M. Ardyna**, F. Lombard, O. Jaillon, D. Iudicone, S. Malviya, C. Lovejoy, L. Zinger, Tara Oceans Coordinators, M. Babin, E. Boss, S. Chaffron, P. Wincker, C. de Vargas, C. Bowler, L. Karp-Boss. Dimensions of biodiversity of plankton ecosystems in the Arctic Ocean. *In preparation*.

BOOKS/MONOGRAPHS/REPORTS

- Ardyna, M.**, 2015. Phytoplankton communities in a changing Arctic Ocean: Biogeography, phenology, productivity. Ph.D. thesis in oceanography (Laval University).
Canadien lors des étés 2005 à 2008. M.Sc thesis in oceanography (ISMER-UQAR). Cited: **1**.
- Gosselin M., C.J. Mundy, **M. Ardyna**, S. Belt, T. Brown, A. Comeau, P. Larouche, E.A. Font, C. Lovejoy, G. Massé, E. Medrinal, C. Nozais, B. Philippe, M. Poulin, A. Sallon, S. Roy, R. Terrado, M. Thaler, 2012. Light, nutrients and primary production, dans: D. Barber, Tjaden, T., Leitch, D., Barber, L., Chan, W. (Eds.). On the edge: From knowledge to action during the Fourth International Polar Year Circumpolar Flaw Lead (CFL) system study (2007-2008). University of Manitoba, Winnipeg, Manitoba.

OUTREACH

- Ardyna, M.**, M. Babin, 2015. Phytoplankton communities in a changing Arctic Ocean: Biogeography, phenology & productivity. *Annual SOLAS Newsletter 2015*.
- Ardyna, M.**, M. Babin, M. Gosselin, E. Devred, L. Rainville, J.-É Tremblay, 2015. Deux printemps arctiques. *Québec Science Magazine*. Les 10 découvertes de l'année au Québec.
- Findlay, H., F. Cottier, N. Morata, R. Hindshaw, A. Nikolopoulos, **M. Ardyna**, C. März, B. Queguiner, M. Roca-Martí, S. Bourgois, 2015. Arctic Oceanography: Atmosphere-Ocean Exchange, Biogeochemistry & Physics. *Arctic in Rapid Transition : Priority Sheets & Future Directions of Arctic Sciences*. doi:[10.2312/ART.0329.18991](https://doi.org/10.2312/ART.0329.18991). Cited: **2**.

DATA DISSEMINATION

- Ardyna, M.**, d'Ovidio, F., Speich, S., Leconte, J., Chaffron, S., Audic, S., Garczarek, L., Pesant, S., Tara Oceans Consortium, Coordinators, Tara Oceans Expedition, Participants, 2017. Environmental context of all samples from the Tara Oceans Expedition (2009-2013), about mesoscale features at the sampling location. *Pangaea*, doi: [10.1594/PANGAEA.875577](https://doi.org/10.1594/PANGAEA.875577).
- Ardyna, M.**, Tara Oceans Consortium, Coordinators; Tara Oceans Expedition, Participants, 2017. Environmental context of all stations from the Tara Oceans Expedition (2013), about the annual cycle of key parameters estimated daily from remote sensing products. Pangaea, dataset, doi: [10.1594/PANGAEA.883614](https://doi.org/10.1594/PANGAEA.883614).
- Speich, S., Chaffron, S., **Ardyna, M.**, Pesant, S., Tara Oceans Consortium, Coordinators, Tara Oceans Expedition, Participants, 2017. Environmental context of all samples from the Tara Oceans Expedition (2009-2013), about the water column features at the sampling location. *Pangaea*, doi:[10.1594/PANGAEA.875579](https://doi.org/10.1594/PANGAEA.875579).
- Ferland, J., Blais M., **Ardyna, M.**, Gosselin, M., 2013. Production, biomass, abundance and taxonomic composition of phytoplankton in the High Canadian Arctic during summer and fall 2010. *Polar Data Catalogue*. doi [id=10619](https://doi.org/10.10619).
- Ferland, J., **Ardyna, M.**, Gosselin, M., 2013. Production, biomass, abundance and taxonomic composition of phytoplankton in the High Canadian Arctic during summer and fall 2010. *Polar Data Catalogue*. doi [id=10621](https://doi.org/10.10621)

FIELD CAMPAIGNS

- 2016 ● **Green Edge (Sea-Ice Camp)** – Qikiqtarjuaq Inuit community, Canada
- **ArcticNet (CCGS Amundsen)** – Canadian High Arctic – Labrador fjords
- 2011 ● leg 1 (18 July-1 August)
- 2010 ● leg 1a & 1b: (1 July-12 August)
- 2009 ● leg 4a & 4b: (8 October -15 November)
- 2008 ● leg 11: (5 September – 10 October)
- **Circumpolar flaw lead (CFL) (NGCC Amundsen)** – Beaufort Sea
- 2008 ● leg 9 & 10: (1 July-12 August)
- 2007 ● **UQAR-ISMER (Coriolis 2)** – St Lawrence estuary
- 2006 ● **IRD (Echantillonnage lagonnaire)** – New Caledonia lagoons

RESEARCH PROJECTS

[CAP-ICE](#), Marie Skłodowska-Curie Fellowship, 2017-2020, P.I.: Dr. **M. Ardyna**, Stanford U. - UPMC, USA - France
SOAR, CNES Fellowship, 2015-2017, P.I.: Dr. **M. Ardyna**, CNES, France
[SOCLIM](#), 2015-17, P.I.: Prof. S. Blain, UPMC, France
[Green Edge](#), 2015-17, P.I.: Prof. M. Babin, CERC-Takuvik, Université Laval, Canada
[Tara Oceans Polar Circle](#), 2013-2017, P.I.: Prof. C. Bowler, ENS, France
[ERC remOcean](#), 2012-16, P.I.: Dr. H. Claustre, UPMC, France
[Malina](#), 2009-12, P.I.: Prof. M. Babin, CERC-Takuvik, Université Laval, Canada
[ArcticNet](#), 2007-14, P.I.: Dr. L. Fortier, Québec-Océan, Université Laval, Canada
[Circumpolar flaw lead](#), 2007-08, P.I.: Dr. D. Barber, Manitoba University, Canada

FUNDING RECORDS

[CAP-ICE](#), Marie Skłodowska-Curie Fellowship, 2018-2021, 265 K€
SOAR, CNES Fellowship, 2015-2017, 80K€
Canadian Excellence Research Chair scholarship, 2010-2014, 80K€

TEACHING EXPERIENCE

2016 ● **Organizer**, LOV - Prof. Emmanuel Boss: Marine Optics
2013 ● **Teaching Assistant**, Université Laval - Dr. Frederic Maps: Biostatistic
2011 ● **Teaching Assistant**, Université Laval - Prof. Marcel Babin: Plant diversity and ecology

CONFERENCE PRESENTATIONS

32 oral presentations in international conferences including **27 as 1st author**
33 poster presentations in international conferences including **25 as 1st author**

WORKSHOPS/SUMMER SCHOOLS

IOCCG Summer Lecture Series, Villefranche-sur-Mer, France, 1-15 July, 2012
5th International SOLAS Summer school, Cargèse, France, 29 août-10 September 2011
IPY/APECS Early Career Scientist Workshop, Montréal, Canada, 3-11 February 2011
Arctic Frontiers Young Scientists Forum, Tromsø, Norvège, 25 January - 3 February 2011
IPY/APECS Early Career Scientist Workshop, Oslo, Norvège, 3-11 February 2010
APECS Early Career Scientist Workshop, Victoria, Canada, 5-9 December 2009

STUDENT SUPERVISION

One co-supervising PhD student, UPMC, Villefranche-sur-Mer, France, Period: 2015 – 2018

VISITING EXPERIENCE

2015-2016 ● **Midi-Pyrénées/LEGOS Observatory** – Dr. Véronique Garçon, Toulouse, France
2014 ● **SCRIPPS Institute** – Prof. Peter Franks, San Diego, CA, USA, 5 month
2009 ● **Freshwater Institute** – Dr. Christine Michel, Winnipeg, MB, Canada, 2 month

COMMUNITY SERVICES

REVIEWING ACTIVITIES

Manuscript Reviewer (see the records [here](#)): Nature Communications, Global Change Biology, Geophysical Research Letters, Limnology and Oceanography, Progress in oceanography, Journal of Geophysical Research, Oceanologia, Biogeosciences, Marine Ecology Progress Series, Journal of Marine Systems, Polar Biology

Proposal Reviewer: Natural Environment Research Council (NERC)

WORKING GROUPS

Prospective Chantier Arctique - (French prospective in Arctic Science; since 2012)

Arctic in Rapid Transition (ART): Future Arctic research

MEMBERSHIP

Active member of the Association of Polar Early Career Scientists (APECS) (since 2008)

Member of The Oceanography Society (TOS) (since 2011), and the American Geophysical Union (since 2015)

AWARDS

Étudiants-chercheurs étoiles, Fond de recherche du Québec, 2015

Attestation of excellence, Université Laval, 2014 & 2015

Fond Richard-Bernard fellowship, 2014

1th Poster Award: CMOS Meeting, 2014

1th Poster Award: Québec-Océan Annual Meeting, 2013

3rd Poster Award: ArcticNet Annual Meeting, 2011

OUTREACH

Early career network "[Mon océan et moi](#)"

Project "[Adopt a Float](#)", scientific tutor of a Bachelor class (INTECHMER)

Dissemination of scientific works in podcasts and newspapers: see the metrics of the [Nature Communications](#) in 2019 and the [Geophysical Research Letters](#) in 2014.

APECS Webinar. Making science animation: New possibilities for making science accessible to the public

REFERENCES

Marcel Babin, Takuvik, Canada,
Marcel.Babin@takuvik.ulaval.ca

Kevin Robert Arrigo, Stanford, USA,
arrigo@stanford.edu

Hervé Claustre, LOV, France,
claustre@obs-vlfr.fr

Michel Gosselin, ISMER, Canada,
Michel_Gosselin@uqar.ca

Peter Franks, SCRIPPS, USA,
pfranks@ucsd.edu

2018

Ardyna M., Recent changes in phytoplankton productivity and phenology in the Arctic Ocean, OCB meeting, Woods Hole, USA, June 25-28 (Oral presentation).

Karp-Boss L., L. Zinger, F. Ibarbalz, S. Malviya, N. Henry, F. Lombard, **M. Ardyna**, P.L. Grondin, C. de Vargas, C. Bowler, The Tara Oceans Consortium. Tara Oceans: a pan Arctic view on plankton diversity and community structure from gene to ecosystem. SCAR & IASC Conference, Davos, Switzerland, June 15-26 (Oral presentation).

Peeken I., **Ardyna M.**, Assmy P., Bruyant F., Flores H., Grondin P.-L., Huot Y., Janout M., Katlein C., Kauko H.M., Koenig Z., Kowalczyk P., Lange B., Massicotte P., Metfies K., Meyer A.; Michel C., Nikolopoulos A., Nöthig E.M., Olsen L., Tremblay J.-É., Babin M. Atlantic inflow structuring early phytoplankton blooms in the Arctic. SCAR & IASC Conference, Davos, Switzerland, June 15-26 (Oral presentation).

Lacour L., H. Claustre, N. Briggs, **M. Ardyna**, G. Dall'Olmo, Intra-seasonal dynamics of the mixed layer pump in the North Atlantic Subpolar Gyre: a BGC-Argo float approach. Ocean Science Meeting, Portland, USA, February 11-16 (Oral presentation).

Scheurle C., Jessin T., Claustre H., Uitz J., Penkerch C., Rembauville M., **Ardyna M.**, Gueneugues A., Laxenaire R., Obernosterer I., Cornec M., Poteau A., Speich S., Blain S., Taboni S., M TEAM. Integration of Biogeochemical Argo Science and Technology in Dissemination and Outreach – Selected Activities with a Focus on the Southern Ocean and Climate. Ocean Science Meeting, Portland, USA, February 11-16 (Oral presentation).

Scheurle C., Jessin T., Claustre H., Uitz J., Penkerch C., Rembauville M., **Ardyna M.**, Gueneugues A., Laxenaire R., Obernosterer I., Cornec M., Poteau A., Speich S., Blain S., Taboni S., M TEAM. Integration of Biogeochemical Argo Science and Technology in Dissemination and Outreach – Selected Activities with a Focus on the Southern Ocean and Climate. Ocean Science Meeting, Portland, USA, February 11-16 (Poster presentation).

Rembauville M., H. Claustre, N. Briggs, **M. Ardyna**, J. Uitz, P. Catala, C. Penkerch, A. Poteau, S. Blain, First phytoplankton community time-series inferred from BGC-Argo float-derived optical proxies. Ocean Science Meeting, News Orleans, USA, February 11-16 (Oral presentation).

Lacour L., **Ardyna M.**, Guidi L., Forest A., Lombard F., Ras J., Dimier C., Picheral M., Bricaud A., Stemmann L., Claustre H., Babin M. Linking phytoplankton dynamics and carbon flux in the Baffin Bay. Annual meeting Green Edge, Paris, France, February 4-8 (Oral presentation).

Ardyna M., Oziel L., Phytoplankton productivity and phenology in a changing Arctic Ocean. Annual meeting Green Edge, Paris, France, February 4-8 (Oral presentation).

2017

Ardyna M., Capturing phytoplankton dynamics in polar regions: From satellite to BGC-Argo floats. Séminaire invité LEGOS, Toulouse, France, 20 octobre (Oral presentation).

Ardyna M., E. Rehm, M. Benoît-Gagné, E. Devred, M.-H. Forget, P. Massicotte, M. Babin, Computational Phenology: Assessing Arctic phytoplankton bloom states from space over two decades. Arctic Change, Québec, Canada, December 11-15 (Oral presentation).

Ardyna M., Mechanisms behind bloom initiation and magnitude in the Southern Ocean: From global to regional scale. SOCLIM Annual meeting, Villefranche-sur-Mer, France, September 15-16 (Oral presentation).

Ardyna M., Phytoplankton phenology in a changing Arctic Ocean, Tromsø, Norway, 11-15 juin (Oral presentation).

Ardyna M., Capturing phytoplankton dynamics in polar regions: From satellite to BGC-Argo floats. Séminaire invité LOCEAN, Paris, France, 23 mars (Oral presentation).

Ardyna M., H. Claustre H., J.-B. Sallée, F. D'ovidio, B. Gentili, G. van Dijken, F. D'ortenzio, K.R. Arrigo. Delineating environmental control of phytoplankton biomass and phenology in the Southern Ocean. 2e colloque de restitution du TOSCA, Paris, France, 21-22 mars (Poster).

Oziel L., **M. Ardyna**, E. Devred, M. Babin, Satellite Chlorophyll-a concentration and Primary Production in the Arctic Ocean from the late 70's to present: impact of receding sea ice. GRC polar marine science, Ventura Beach, 21-23 mars (Poster).

Oziel L., G. Neukermans, **M. Ardyna**, C. Lancelot, J.L. Tison, P. Wassmann, J. Sirven, D. Ruiz-Pino, J.C. Gascard, Northward expansion of phytoplankton blooms in the Barents Sea. GRC polar marine science, Ventura Beach, 21-23 mars (Poster).

Ardyna M., Biogeography and bio-optical specificities of the Southern Ocean: Coupling satellite with Bio-Argo floats. Journée CNES, Villefranche-sur-Mer, France, 12 janvier (Oral presentation).

2016

Ardyna M., Tara Oceans Polar Circle: Oceanographic context, Québec, Canada, 1-2 janvier (Oral presentation)
Benoît-Gagné M., Matsuoka A., Devred E., Dessailly D., Bélanger S., Babin M., **Ardyna M.**, Rehm E. Arctic Primary

2014

Ardyna M., M. Babin, E. Devred, E. Rehm, M. Benoît-Gagné, M. Gosselin, J.-É Tremblay, 2014. Vertical dynamics and environmental forcing of phytoplankton communities in the Beaufort Sea: Validation and application of novel satellite-derived phytoplankton indicators. Arctic Change, Ottawa, France, 8-12 décembre (Poster).

Benoît-Gagné M., E. Rehm, **M. Ardyna**, E. Devred, M. Babin, 2014. Satellite-based primary production model for the Arctic Ocean. Arctic Change, Ottawa, France, 8-12 décembre (Poster).

Simo, Blais M., **M. Ardyna**, M. Gosselin, 2014. Taxonomic composition of protist community in four subarctic fjords (Labrador, Canada) during summer and fall. Arctic Change, Ottawa, France, 8-12 décembre (Poster).

Benoît-Gagné M., E. Rehm, **M. Ardyna**, E. Devred, M. Babin, 2014. Satellite-based primary production model for the Arctic Ocean. Québec Océan, Rivière-du-Loup, Canada, 17-19 novembre (Poster).

Simo, Blais M., **M. Ardyna**, M. Gosselin, 2014. Taxonomic composition of protist community in four subarctic fjords (Labrador, Canada) during summer and fall. Québec Océan, Rivière-du-Loup, Canada, 17-19 novembre (Poster)

Ardyna M., M. Babin, E. Devred, E. Rehm, M. Benoît-Gagné, M. Gosselin, J.-É Tremblay, 2014. Vertical dynamics and environmental forcing of phytoplankton communities in the Beaufort Sea: Validation and application of novel satellite-derived phytoplankton indicators. Programme National de Télédétection Spatiale, Paris, France, 13 novembre (Poster).

Ardyna M., M. Babin, E. Devred, E. Rehm, M. Benoît-Gagné, S. Bélanger, 2014. Remote sensing in the Arctic Ocean: Vertical distribution, phenology, productivity. Atelier Télédétection, Rimouski, Canada, 7 novembre (Oral presentation).

Ardyna M., M. Babin, E. Devred, E. Rehm, M. Benoît-Gagné, M. Gosselin, J.-É Tremblay, 2014. Vertical dynamics and environmental forcing of phytoplankton communities in the Beaufort Sea: Validation and application of novel satellite-derived phytoplankton indicators, Ocean Optic, Portland, USA, 26-31 octobre (Poster).

Ardyna M., M. Babin, M. Gosselin, E. Devred, L. Rainville, J.-É. Tremblay, 2014. Recent Arctic Ocean sea-ice loss triggers novel fall phytoplankton blooms. ART Workshop, Brest, France, 21-24 octobre (Oral presentation).

Ardyna M., 2014. Les communautés phytoplanctoniques dans un océan Arctique en mutation: Biogéographie, phénologie and productivité. Séminaire du laboratoire d'optique de Villefranche-sur-mer (LOV), Villefranche-sur-Mer, France, 4 juillet (Présentation orale).

Ardyna M., M. Babin, M. Gosselin, E. Devred, L. Rainville, J.-É Tremblay, 2014. Recent Arctic Ocean sea-ice loss allows novel fall phytoplankton blooms, Canadian Meteorological and Oceanographic Society congress, Rimouski, Canada, 1-5 June (Oral presentation).

Simo A., **M. Ardyna**, M. Blais, M. Gosselin, 2014. Environmental control of phytoplankton size structure and taxonomic composition in Labrador fjords, Canadian Meteorological and Oceanographic Society congress, Rimouski, Canada, 1-5 June (Oral presentation).

Ardyna M., M. Babin, P. Franks, M. Gosselin, J.-É. Tremblay, 2014. Physical control of subsurface chlorophyll maximum in the Arctic Ocean. 4e assemblée annuelle des chaires d'excellence en recherche du Canada, Québec, Canada, 15-16 April (Poster).

Ardyna M., M. Babin, M. Gosselin, E. Devred, J.-É Tremblay, 2014. Recent Arctic Ocean sea-ice loss allows novel fall phytoplankton blooms, Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February (Oral presentation).

Ardyna M., M. Babin, M. Gosselin, J.-É. Tremblay 2014. Les communautés phytoplanctoniques dans un océan Arctique en mutation: Biogéographie, phénologie and productivité. 4ème Atelier National Couleur de l'Océan, Boulogne sur Mer, France, 3-5 February (Oral presentation).

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Ardyna M., M. Babin, P. Franks, M. Gosselin, J.-É. Tremblay, 2013. Physical control of subsurface chlorophyll maximum in the Arctic Ocean. Québec-Océan, Halifax, Canada, 9-12 December (Poster).

Ardyna M., M. Babin, P. Franks, M. Gosselin, J.-É. Tremblay, 2013. Physical control of subsurface chlorophyll maximum in the Arctic Ocean. Québec-Océan, Rivière-du-Loup, Canada, 8-11 novembre (Poster).

Ardyna M., 2013. Phytoplankton communities in a changing Arctic Ocean: Biogeography, phenology and productivity. SCRIPPS Institute of Oceanography, San Diego, USA, 24 mai (Oral presentation).

Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. Colloque Chantier Arctique, Paris, France, 3-6 juin (Poster).

Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. Colloque GHER Production primaire, Liège, Belgique, 13-17 mai (Poster).

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Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. Québec-Ocean Annual Meeting, Montréal, Canada, 7-9 November (Poster).

Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. Ocean Optics, Glasgow, 8-12 October (Oral presentation).

Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. Ocean Optics, Glasgow, 8-12 October (Poster).

Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. Malina Annual Meeting, Villefranche-sur-Mer, France, 18-21 September (Oral presentation).

Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. IOCCG Summer Lecture Series, Villefranche-sur-Mer, France, 1-15 July (Oral presentation).

May I., D. Carlson, **M. Ardyna**, M. Geoffroy, M. Heikkilä, 2012. Making science animations: new possibilities for making science accessible to the public. International Polar Year Conference, Montréal, Canada, 5-9 May (Poster).

Ardyna M., M. Babin, M. Gosselin, E. Devred, S. Bélanger, A. Matsuoka, J.-É. Tremblay, 2012. Parameterization of the vertical chlorophyll a in the Arctic Ocean: Impact of subsurface chlorophyll maximum to regional, annual and seasonal primary production estimates. International Polar Year Conference, Montréal, Canada, 5-9 May (Poster).

Ardyna M., M. Geoffroy, 2012. Making science animation: New possibilities for making science accessible to the public. APECS Webinar, 27 February (Oral presentation).

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Ardyna M., M. Babin, M. Gosselin, J.-É. Tremblay, 2011. Vertical distribution of phytoplankton communities in the Arctic Ocean: Impact of subsurface chlorophyll maxima (SCM) on annual primary production estimates. Québec-Ocean Annual Meeting, Lac Beauport, Canada, 12-13 November (Poster).

Ardyna M., M. Babin, M. Gosselin, J.-É. Tremblay, 2011. Vertical distribution of phytoplankton communities in the Arctic Ocean: Impact of subsurface chlorophyll maxima (SCM) on annual primary production estimates. Solas Summer School, Cargèse, France, 29 août -11 September (Oral presentation).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2011. Influence of environmental factors on the structure and function of High Canadian Arctic phytoplankton communities: Distinction between oligotrophic and eutrophic waters regimes. Arctic Frontiers, Tromsø, Norway, 20-25 January (Oral presentation).

2010

Bruyant F., Y. Huot, **M. Ardyna**, M. Babin, 2010. Photosynthetic parameters in the Beaufort Sea, en route to a diagnostic primary production model in the Arctic Ocean. MALINA cruise summer 2009. ArcticNet 7th Annual Scientific Meeting, Ottawa, Canada, 14-17 December (Poster).

Tang S., P. Larouche, **M. Ardyna**, J. Ferland, M. Gosselin, C. Michel, 2010. Gradients in bio-optical properties in the Hudson Bay Complex. ArcticNet 7th Annual Scientific Meeting, Ottawa, Canada, 14-17 December (Poster).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2010. Influence of environmental factors on the structure and function of High Canadian Arctic phytoplankton communities: Distinction between oligotrophic and eutrophic waters regimes. Québec-Ocean Annual Meeting, Lac Beauport, Canada, 12-13 November (Oral presentation).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2010. Influence of environmental factors on the structure and function of Arctic phytoplankton communities: Discrimination between oligotrophic and eutrophic waters in the High Canadian Arctic. Malina Annual Meeting, Villefranche-sur-Mer, France, 5-9 May (Oral presentation).

I. May, D. Carlson, **M. Ardyna**, M. Geoffroy, M. Heikkilä, 2010. Using new technologies to make sciences more accessible and transparent to the general public. International Polar Year Oslo Science Conference, Oslo, Norway, 8-12 June (Oral presentation).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2010. Influence of environmental factors on the structure and function of Arctic phytoplankton communities: Discrimination between oligotrophic and eutrophic waters in the High Canadian Arctic. International Polar Year Oslo Science Conference, Oslo, Norway, 8-12 June (Poster).

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Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2009. Influence of environmental factors on structure and function of Arctic phytoplankton communities. School on board program onboard the NGCC Amundsen, 14 November (Oral presentation).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2009 Influence of environmental factors on the structure and function of Arctic phytoplankton communities. ArcticNet 6th Annual Scientific Meeting, Victoria, Canada, 8-11 December (Oral presentation).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay. 2009, Influence of environmental factors on structure and function of Arctic phytoplankton communities. Association of Polar Early Career Scientists (APECS) symposium, Victoria, Canada, 5-8 December (Oral presentation).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2009. Influence of environmental factors on the structure and function of Arctic phytoplankton communities. International Polar Year – Circumpolar Flaw Lead (CFL) system study All-Hands Meeting, Winnipeg, Canada, 1-5 November (Poster).

Ardyna M., M. Gosselin, C. Michel, M. Poulin, J.-É. Tremblay, 2009 Influence des facteurs environnementaux sur la structure et le fonctionnement des communautés phytoplanctoniques arctiques. Forum québécois en sciences de la mer, Rimouski, Canada, 10-11 November (Poster).

Ferland, J., **M. Ardyna**, 2009. Canadian High Arctic Ocean: bleu desert or green oasis? School On Board program onboard the CCGS Amundsen, 11 November (Oral presentation). December (Poster).

2008

Ardyna M., M. Gosselin, C. Michel, M. Poulin, 2008. Spatio-temporal variability of phytoplankton production and biomass in the Canadian High Arctic in summers 2005 to 2008. ArcticNet 6th Annual Scientific Meeting, Montréal, 8-11 December (Poster).

Ardyna, M., M. Gosselin, C. Michel, M. Poulin, 2008. Spatio-temporal variability of phytoplankton production and biomass in the Canadian High Arctic in summers 2005 to 2008. Québec-Océan Annual Meeting, Rivière-du-Loup, 8-11