

SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH (SCAR): NATIONAL REPORTS FOR 2011-2012

MEMBER COUNTRY: BELGIUM

Activity	Contact Name	Address	Telephone	Fax	Email	web site
National SCAR Committee						
Belgian National Committee on Antarctic Research	Dr Annick Wilmotte Secretary	Centre for Protein Engineering, Institute of Chemistry B6, University of Liège, B-4000 Liège	+32 4 366.33.87/38.56	+32 4 366.33.64	awilmotte@ulg.ac.be	http://www.cip.ulg.ac.be/newsite/pages/themes/CyanoDiversityAntarctica.php?id=13
SCAR Delegates						
1) Delegate	Prof. Frank Pattyn	Université Libre de Bruxelles Département des Sciences de la Terre et de l'Environnement Avenue Roosevelt 50 - CP 160/03 B-1050 Brussels	+32 2 650.28.46	+32 2 650.22.26	fpattyn@ulb.ac.be	http://dev.ulb.ac.be/glaaciol/BNCAR/
2) Alternate Delegate	Dr. Annick Wilmotte	Centre for Protein Engineering, Institute of Chemistry B6, University of Liège, B-4000 Liège	+32 4 366.33.87/38.56	+32 4 366.33.64	awilmotte@ulg.ac.be	http://www.cip.ulg.ac.be/newsite/pages/themes/CyanoDiversityAntarctica.php?id=13
Standing Scientific Groups						
Life Sciences						
1)	Dr. Claude De Broyer	IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627.41.27	+32 2 627.42.77	claude.debroyer@naturalsciences.be	www.naturalsciences.be/amphi/
2)	Prof. Ann Vanreusel	Universiteit Gent Department of Biology Marine Biology Section Krijgslaan 281, S8 B-9000 Gent	+32 92 64.52.15	+32 92 64.53.44	ann.vanreusel@ugent.be	
3)	Dr. Annick Wilmotte	University of Liège Center for Protein Engineering (CIP) Institute of Chemistry, B6 Sart Tilman B-4000 Liège	+32 4 366.38.56 or +32 4 366.33.87	+32 4 366.33.64	awilmotte@ulg.ac.be	
Geosciences						
1)	Prof. Frank Pattyn	Université Libre de Bruxelles Département des	+32 2 650.28.46	+32 2 650.22.26	fpattyn@ulb.ac.be	

		Sciences de la Terre et de l'Environnement Avenue Roosevelt 50 - CP 160/03 B-1050 Brussels				
Activity	Contact Name	Address	Telephone	Fax	Email	web site
Geosciences (cont/d) 2)	Prof. Philippe Huybrechts	Vrije Universiteit Brussel Earth System Sciences & Département Géographie Pleinlaan, 2 B-1050 Brussels	+32 2 629 35 93 or 33 82	+32 2 629 33 78	phuybrec@vub.ac.be	
Physical Sciences 1)	Prof. Hugues Goosse	Université Catholique de Louvain Centre de recherches sur la terre et le climat Georges Lemaître Place Louis Pasteur, 3 B-1348 Louvain-La- Neuve	+32 10 47.32.98	+32 10 47.47.22	hugues.goosse@uclouvain.be	http://www.climate.be/u/goosse
2)	Prof. Jean-Louis Tison	Université Libre de Bruxelles Département des Sciences de la Terre et de l'Environnement Avenue Roosevelt 50 CP 160/03 B-1050 Brussels	+32 2 650.22.16	+32 2 650.22.26	jtison@ulb.ac.be	
Antarctic Geographic Information 1)	Mr. Jean-Yves Pirlot	Institut Géographique National Abbaye de la Cambre, 13 B-1050 Brussels	+32 2 629.82.20	+32 2 629.82.67	jyp@ngi.be	www.ign.be

Scientific Research Program						
Activity	Contact Name	Address	Telephone	Fax	Email	web site
ACE						
AGCS						
CLIC	Prof. Thierry Fichet	Université Catholique de Louvain Institut d'Astronomie et de Géophysique G. Lemaître Chemin du Cyclotron, 2 B-1348 Louvain-la-neuve	+32 10 47.32.95	+32 10 47.47.22	thierry.fichet@uclouvain.be	clic.npolar.no
1) EBA	Dr. Claude De Broyer	IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627.41.27	+32 2 627.42.77	claude.debroyer@naturalsciences.be	www.naturalsciences.be /amphi/
2)	Dr. Annick Wilmotte	University of Liège Center for Protein Engineering (CIP) Institute of Chemistry, B6 Sart Tilman B-4000 Liège	+32 4 366.38.56 or +32 4 366.33.87	+32 4 366.33.64	awilmotte@ulg.ac.be	
ICESTAR						
AAA (2010-)						
1)						
Action Groups						
1) Steering Committee	Dr Claude De Broyer	IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627.41.27	+32 2 627.42.77	claude.debroyer@naturalsciences.be	www.naturalsciences.be /amphi/
2)Expert	Dr Bruno Danis	IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627 41 39	+32 2 627.42.77	bruno.danis@scarmarbin.be	www.scarmarbin.be www.biodiversity.aq
1) Steering Committee	Dr Claude De Broyer	IRScNB	+32 2 627.41.27	+32 2 627.42.77	claude.debroyer@naturalsciences.be	www.scarmarbin.be

2) Steering Committee	Dr Bruno Danis	Rue Vautier, 29 B-1000 Brussels IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627 41 39	+32 2 627.42.77	bruno.danis@scarmarbin.be	www.scarmarbin.be
Expert Groups						
Geosciences						
Life Sciences						
Physical Sciences						
1) Antarctic Sea-Ice and Climate (AsPect)	Prof. Jean-Louis Tison	Université Libre de Bruxelles Département des Sciences de la Terre et de l'Environnement Glaciologie Avenue Roosevelt 50 - CP 160/03 B-1050 Brussels	+32 2 650.22.16	+32 2 650.22.26	jtison@ulb.ac.be	
2) ISMASS (SCAR/IASC Expert Group on Ice Sheet Mass Balance and Sea Level)	Prof. Frank Pattyn	Université Libre de Bruxelles Département des Sciences de la Terre et de l'Environnement Glaciologie Avenue Roosevelt 50 - CP 160/03 B-1050 Brussels			fpattyn@ulb.ac.be	

Activity	Contact Name	Address	Telephone	Fax	Email	web site
SCADM						
1)	Maaïke Van Cauwenberghe	Belgian Federal SPP Science Policy Rue de la Science 8 B-1000 Brussels	+32 2 238.35.42	+32 2 230.59.12	vcau@belspo.be	http://www.belspo.be/antar/
2)	Dr Bruno Danis (Deputy Chief Officer)	IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627 41 39	+32 2 627.42.77	bruno.danis@gmail.com	www.antabif.be
SCAGI						
	Mr. Jean-Yves Pirlot	Institut Géographique National Abbaye de la Cambre, 13 B-1050 Brussels	+32 2 629.82.20	+32 2 629.82.67	jyp@ngi.be	www.ign.be
National Antarctic Data Centre						
1)	Maaïke Van Cauwenberghe	Belgian Federal SPP Science Policy Rue de la Science 8 B-1000 Brussels	+32 2 238.35.42	+32 2 230.59.12	vcau@belspo.be	http://www.belspo.be/antar/
ANTABIF Database						
Antarctic Biodiversity Information Facility (ANTABIF)						
1)	Dr Hendrik Segers	IRScNB Rue Vautier, 29 B-1000 Brussels			Hendrik.segers@naturalsciences.be	www.antabif.be
2)	Dr Bruno Danis	IRScNB Rue Vautier, 29 B-1000 Brussels			bruno.danis@gmail.com	www.antabif.be
SCAR Database						
Antarctic Marine Biodiversity Information Network (SCAR- MarBIN)						
1)	Dr Claude De Broyer	IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627.41.27	+32 2 627.42.77	claudio.debroyer@naturalsciences.be	www.scarmarbin.be
2)	Dr Bruno Danis	IRScNB Rue Vautier, 29 B-1000 Brussels	+32 2 627 41 39	+32 2 627.42.77	bruno.danis@scarmarbin.be	www.scarmarbin.be www.biodiversity.aq

A BRIEF SUMMARY OF SCIENTIFIC HIGHLIGHTS:

* Please include any scientific activities you believe might be considered bioprospecting (<http://www.scar.org/treaty/atcmxxxiii/> see WP2)

Current Research Projects

Subjects	Investigations	Locality	Duration	Principal investigators	E-mail address	Website
Geosciences						
ICECON Constraining ice mass changes in Dronning Maud Land	Determining coastal uplift and ice mass change over the last 20,000 years using geodetic GPS, radar, GPS monitoring, ice coring, and ice sheet modelling	Princess Ragnhild Coast (PEA)	2012-2016	F. Pattyn J.L. Tison C. Bruyninx	fpattyn@ulb.ac.be jtison@ulb.ac.be carine.bruyninx@oma.be	icecon2012.blogspot.com
LISSA Lithospheric and Intraplate Structure and Seismicity in Antarctica	Studying the crustal and upper-mantle structure and detection and analysis of global and local seismicity in the vicinity of the Princess Elisabeth Station	Princess Elisabeth base	2009-2013	T. Camelbeek D. Lombardi G. Rapagnani	Thierry.Camelbeek@oma.be Denis.Lombardi@oma.be giovanni.rapagnani@oma.be	
GIANT Geodesy for Ice in Antarctica	Studying ice mass variation and lithospheric movement in the vicinity of the Princess Elisabeth station.	Princess Elisabeth base	2009-2013	N. Bergeot C. Bruyninx T. Camelbeek O. Francis M. van Camp	nicolas.bergeot@oma.be carine.bruyninx@oma.be Thierry.Camelbeek@oma.be olivier.francis@uni.lu mvc@oma.be	
SAMBA Search for Antarctic Meteorites: Belgian Activities	Search, recovery and study of meteorites and from ice fields to document solar system evolution and planetary formation	Ice fields surrounding the Princess Elisabeth station, Sør Rondane Mountains, Nansen, Balchenfjella	2009-2014	Ph. Claeys, V. Debaille S. Goderis	phclaeys@vub.ac.be vdebaille@ulb.ac.be steven.goderis@vub.ac.be	
MICROMETA Micro meteorites from Antarctica	Collection and study of micrometeorites to document solar system evolution and planetary formation	Sør Rondane Mountains,	2010-2014	S. Goderis V. Debaille Ph. Claeys	steven.goderis@vub.ac.be vdebaille@ulb.ac.be phclaeys@vub.ac.be	

YROSIAE Year-Round survey of Ocean-Sea Ice-Atmosphere Exchanges	Study of landfast sea ice biogeochemistry during a whole year growth-decay cycle with focus on C, S, N and Si fluxes to Atmosphere and/or Ocean	McMurdo Sound, Antarctica - Scott Base (NZ)	2011-2013	B. Delille J.-L. Tison T. Fichefet M. Vancoppenolle B. Heinesch V. Schoemann G. Dieckmann T. Haskell (NZ)	Bruno. Delille@ulg.ac.be jtison@ulb.ac.be thierry.fichefet@uclouvain.be mvlod@locean-ipsl.upmc.fr heinesch.b@ulg.ac.be Veronique.Schoemann@nioz.nl gdieckmann@awi-bremerhaven.de t.haskell@irl.cri.nz	www.fnrs.be - dev.ulb.ac.be/glacial/index.htm
BIGSOUTH BloGeochemical cycles in the SOUTHERN ocean: role within the earth system	Understanding processes controlling functioning and strength of the oceanic biological pump for representative areas of the Southern ocean (open ocean, sea ice) to assess carbon sequestration capacity and nutrient cycling in the Southern ocean with impacts on Global ocean	Southern ocean incl. sea ice covered areas	2011-2014	F. Dehairs B. Delille J.-L. Tison H. Goosse L. André F. Fripiat M. Vancoppenolle V. Schoemann	fdehairs@vub.ac.be Bruno. Delille@ulg.ac.be jtison@ulb.ac.be goosse@astr.ucl.ac.be landre@ulb.ac.be ffripiat@ulb.ac.be mvlod@locean-ipsl.upmc.fr Veronique.Schoemann@nioz.nl	http://www.belspo.be/belspo/SSD/science/projects/BIGSOUTH.FR.pdf

Subjects	Investigations	Locality	Duration	Principal investigators	E-mail address	Website
<p>Life Sciences</p> <p>BIANZO II Biodiversity of three representative groups of the Antarctic zoobenthos: Coping with change</p>	Biodiversity patterns and processes. Experimental trophodynamics related to temperature changes. Modeling studies of community structure changes.	Weddell Sea Scotia Sea Scotia Arc	2007 - 2010	A. Vanreusel C. De Broyer P. Martin C. De Ridder P. Dauby B. David	ann.vanreusel@ugent.be claude.debroyer@naturalsciences.be patrick.martin@naturalsciences.be cridder@ulb.ac.be pdauby@ulg.ac.be bruno.david@u-bourgogne.fr	www.belspo.be/belspo/BePoles/science/today/act/phase6/bianzo2_en.stm
<p>CCAMBIO Climate Change and Antarctic Microbial Biodiversity</p>	study the diversity, biogeographic zoning, evolutionary history, and genomic make-up of lacustrine microbial mat communities in the Antarctic Realm in order to assess their resilience and local and regional responses to global change	Antarctic continent and surrounding (sub-) Antarctic islands	2012-2015	A. Wilmotte W. Vyverman E. Verleyen A. Willems B. Van de Vijver A. Van de Putte	awilmotte@ulg.ac.be wim.vyverman@ugent.be elie.verleyen@ugent.be anne.willems@ugent.be vandevijver@br.fgov.be antonarctica@gmail.com	www.ccambio.ulg.ac.be
<p>ANTAR-IMPACT Inventory and study of the environmental impact of the Belgian station 'Princess Elisabeth'</p>	Baseline data on the biodiversity (lichens, mosses, birds, microorganisms, invertebrates) before the construction.	Dronning Maud Land, Utsteinen nunatak and ridge	2008-2011	A. Wilmotte A. Willems W. Vyverman E. Verleyen D. Ertz B. Van De Vijver	awilmotte@ulg.ac.be anne.willems@ugent.be wim.vyverman@ugent.be elie.verleyen@ugent.be damien@br.fgov.be bart.vandevijver@br.fgov.be	www.antar-impact.ulg.ac.be
<p>BELDIVA Exploration of the microbial diversity around the Belgian station</p>	Database of diversity (lichens, mosses, bacteria, cyanobacteria, algae, micro-arthropods) in the region and support for management plans.	Dronning Maud Land, Sør Rondane Mountains	2009-2013	W. Vyverman E. Verleyen A. Willems A. Wilmotte D. Ertz B. Van De Vijver	wim.vyverman@ugent.be elie.verleyen@ugent.be anne.willems@ugent.be awilmotte@ugent.be Damien@br.fgov.be Bart.vandevijver@br.fgov.be	Blog: www.antarcticbelgium.blogspot.com
<p>COLD LIFE Cold adaptations in Antarctic microorganisms</p>	Proteomic studies of Antarctic microorganisms. Biophysical studies of the activity, stability and conformation of enzymes from psychrophilic microorganisms	Terre Adélie Antarctic continent	unlimited	G. Feller	gfeller@ulg.ac.be	http://www2.ulg.ac.be/bi ochlab/

Subjects	Investigations	Locality	Duration	Principal investigators	E-mail address	Website
Life Sciences (cont/d)						
SCAR-MarBIN Antarctic Marine Biodiversity Information Network	Development of an integrated network of interoperable marine biodiversity databases. Elaboration of a Register of Antarctic Marine Species		2006 – 2010	C. De Broyer B. Danis	claude.debroyer@naturalsciences.be bruno.danis@scarmarbin.be	
ANTABIF Antarctic Biodiversity Information Facility	Setup of web-based information system on Antarctic Biodiversity. Free and Open access to data	Antarctic and Sub-Antarctic	2010-2011	Bruno Danis Anton Van de Putte	Bruno.danis@gmail.com antonarctica@gmail.com	http://www.antabif.be
Neuropole	Psychophysiological investigation of adaptation to overwintering and testing exercise as a countermeasure	Concordia Station	2010-2013	R.Meeusen N.Pattyn	rmeeusen@vub.ac.be Nathalie.pattyn@rma.ac.be	
COALA	Assessing psychological adaptation through linguistic and voice analysis of diary recordings	Concordia Station	2012-2015	N.Pattyn Hungary: L.Balazs Italy: A.Esposito Russia:V.Gushin Canada:P.Suedfeld	Nathalie.pattyn@rma.ac.be	
HASTE	The effect of hypoxia on sleep during an Antarctic overwintering	Concordia Station	2012-2015	N.Pattyn Slovenia:I.Mekjavic Sweden:O.Eiken	Nathalie.pattyn@rma.ac.be	

Subjects	Investigations	Locality	Duration	Principal investigators	E-mail address	Website
Physical Sciences						
ice2sea (FP7)	Improving the contribution of ice sheets and glaciers to future sea-level change	Global	2009-2013	P. Huybrechts F. Pattyn	phuybrec@vub.ac.be fpattyn@ulb.ac.be	http://www.ice2sea.eu/
iCLIPS Constraining long-term climate and sea-level projections using the Last Interglacial	Improving projections of climate and sea-level changes over the next century and millennium, and to better understand their causes and mechanisms. Future rates of climate change are constrained based on simulations of the Last Interglacial (LIG, 130-115 kyr BP). Focus on two polar areas.	Global	2010-2015	P. Huybrechts T. Fichefet	phuybrec@vub.ac.be thierry.fichefet@uclouvain.be	http://homepages.vub.ac.be/~hgoelzer/iclips/
AMANDA / IceCube Neutrino Astrophysics	Galactic and extra-galactic neutrino detection using a ice-Cherenkov telescope	Amundsen-Scott Base	1997 - 2015	D. Bertrand P. Herquet C. De Clercq	bertrand@hep.iihe.ac.be Philippe.Herquet@umh.ac.be declercq@hep.iihe.ac.be	
Climatology Climate evolution of the Southern Ocean during the Holocene	Modelling with a coupled atmosphere-ocean-sea-ice model	The whole Southern Ocean	2002 - 2015	H. Goosse	hugues.goosse@uclouvain.be	
Climatology / Physical oceanography Modelling the evolution of the Southern Ocean and of its ice cover during the last 50 years	Modelling using a coupled ocean-sea-ice model driven by atmospheric reanalysis	The whole Southern Ocean	2002 – 2015	T. Fichefet H. Goosse	thierry.fichefet@uclouvain.be hugues.goosse@uclouvain.be	
BELISSIMA Belgian Ice Sheet – Shelf Ice Measurements in Antarctica	Improving the knowledge of the interaction between the ice sheet, ice shelf and the ocean through melting and accretion	Princess Elisabeth station, East Antarctica; Coastal Dronning Maud Land	2008-2012	F. Pattyn J.L. Tison	fpattyn@ulb.ac.be jtison@ulb.ac.be	
BELATMOS Monitoring of ozone and related trace gases, UV radiation and aerosol particles in support of atmospheric chemistry and climate research	Long-term monitoring of the chemical and particle composition of the Antarctic atmosphere and quantification of the UV radiation reaching the surface, using a suite of complementary ground-based instruments	Princess Elisabeth station, East Antarctica, Dronning Maud Land, Sor Rondane Mountains	2008-2013 ff	H. De Backer A. Mangold M. Van Roozendaal C. Hermans W. Maenhaut	alexander.mangold@meteo.be hugo.debacker@meteo.be christian.hermans@aeronomie.be	http://ozone.meteo.be/meteo/view/en/1550481-ANTARCTIC.html

HYDRANT Measuring and modelling meteorology, clouds and precipitation in Antarctica	Establishing a cloud and precipitation observatory containing in-situ and ground-based remote sensing instrumentation for evaluation of regional climate models.	Princess Elisabeth station, East Antarctica, Dronning Maud Land, Sor Rondane Mountains	2008-2013	N. van Lipzig, I. Gorodetskaya, H. De Backer, A. Mangold; S. Crewell, M. Vandenbroeke	Nicole.vanlipzig@ees.kuleuven.be; Irina.gorodetskaya@ees.kuleuven.be; hugo.debacker@meteo.be; alexander.mangold@meteo.be; crewell@meteo.uni-koeln.de; m.r.vandenbroeke@phys.uu.nl	http://ees.kuleuven.be/hydrant/
PREDANTAR Understanding and predicting Antarctic sea ice variability at the decadal timescale	Analyse of observations and simulations with different types of models to understand the changes over the last 50 years and to improve the predictions	The whole Southern Ocean	2011-2015	H. Goosse A. Barth S. Vannitsem	hugues.goosse@uclouvain.be	www.belspo.be/belspo/SSD/science/projects/PREDANTAR.E.pdf

Web site for description of national scientific programme activities

<http://www.belspo.be/antar/>

SPECIAL SCIENTIFIC HIGHLIGHTS:

- 1) On 14 July 2012, an ISMASS (ice sheets and sea level) workshop was organized in Portland (Oregon, USA) prior to the SCAR Open Science Conference. F. Pattyn was the SCAR co-organizer of this meeting. A website was setup (<http://www.climate-cryosphere.org/en/events/2012/ISMASS/Home.html>) and a review paper for Nature is currently in preparation.
- 2) On 11-12 October 2012, APECS Belgium organized a Polar Science Event in Ghent.
- 3) On 21th November 2012, the Workshop 'Next Generation Sequencing at the Poles' was organized by the BELSPO CCAMBIO project and SCAR-EBA at the University of Liège (<http://www.cip.ulg.ac.be/workshopCCAMBIO/>). It was followed by a Two-days training on NGS sequence analysis with Dr A. Murray, C. Herbold and T. Pommier

Concerning 'Bioprospecting', the projects BIANZO, CCAMBIO, ANTAR-IMPACT, BELDIVA, and COLD LIFE imply the collection of samples. For the 4 latter projects, microbial strains are sometimes isolated and deposited in culture collections. Therefore, these activities could be considered as a first step of bioprospecting.