Placements 2019-2020

Project number	Project topic/ title	Country	Keywords	Supervisor	Duration	Key pre-requisites
1	Proteomics to facilitate marine resources	Austria	Gel electrophoresis (1D and 2D) Fluorescence Imaging MALDI-ToF/ToF-MS (nano)LC-MS^n Lab on a chip technology for Separation Sciences	Vienna University of Technology Institute of Chemical Technologies and Analytics	Up to 6 months	Proteomics Protein characterization Imaging Mass Spectrometry
2	Identification of novel bioactive substances from marine organisms (cone snails and sea anemones) & drug discovery.	Belgium	Conus, sea anemone, peptide, toxin, ion channel, receptor	University of Leuven	6-12 months	
3	Research of anti-UV molecules in marine Gigartinales (Red seaweeds): extraction, purification, characterization and evaluation of anti-UV activity	France		University South Brittany, Vannes	6 months between January and June	Biochemistry (analytic technics of extraction, purification and characterization of natural compounds)
4	Intensified extraction by ultrasound process from proliferative marine seaweeds	France		University South Brittany, Lorient	6 months between January and June	Biochemistry (analytic technics of extraction, purification and characterization of natural compounds)
5	Screening for bioactive compounds from marine organisms	France		Biodimar LEMAR/IUEM/UBO Brest	6-9 months	Biochemistry Microbiology
6	Purification and characterization of bio-adhesives from oysters	France		Biodimar LEMAR/IUEM/UBO Brest	6-9 months	Biochemistry
7	Fish nutrition, feeding, biochemistry	Greece		Institute of Marine Biology, Biotechnology and Aquaculture, Heraklion	3-6 months	
8	Larval rearing,	Greece		Institute of Marine	3-6 months	

	aquaculture technologies			Biology, Biotechnology and Aquaculture, Heraklion		
9	Genetics, molecular biology	Greece		Institute of Marine Biology, Biotechnology and Aquaculture, Heraklion	3-6 months	
10	Studying the chemical diversity of marine invertebrates using natural product chemistry and marine metabolomics	Ireland		University of Ireland, School of Chemistry, Marine Biodiscovery, Galway	6 months from January to June 2017	Knowledge in natural product chemistry or metabolomics or marine ecology
11	Development of an enzyme toolbox for production of plant Biostimulants from marine biomass derived carbohydrates	Ireland		Institute of Technology Tralee, South Campus, Clash, Tralee, Co Kerry	6 - 12 Months starting October 2016.	Enzymology, molecular biology and Marine biotechnology
12	Marine Sponges for Biomaterial Applications	Ireland		National University of Ireland, Galway	6-9 months	
13	Extraction of bioactive compounds from marine organisms and evaluation of the effects in cell culture for pharmaceutic als and cosmetics application	Italy	Antioxidants, polyphenols, carotenoids, supercritical fluid extraction, GC-Ms, HPLC.-DAD, cancer cells, staminal cells, biomarkers, aging, oxidative stress	University of Palermo, laboratory of Trapani	3-6 month	Basic knowledge of laboratory techniques. Specific techniques will be transferred to the student in relation to the time of the grant
14	Drug discovery, like antimicrobials and anticancer from marine organisms (bacteria, algae, sponges and fungi)	Italy		National Research Council, Naples	3-6 months	
15	novel marine ingredients from micro – and macroalgae in feed for	Norway		Nord University, Faculty of Biosciences and Aqua-culture, Bodø.	From Jan to Dec 2017	Knowledge in fish biology, physiology, nutrition

	Atlantic salmon. The experiments will aim to study nutrient digestibility, growth, feed utilization and health aspects of the fish.					
16	The effect of a marine dietary supplement on hypertension in rats.	Norway		Arctic University of Norway, Tromsø	3-12 months (1 Sep – 20 Dec, Feb/June)	key pre-requisites: Basic knowledge in biochemistry, chemistry and biotechnology (Bachelor Degree). Experience from laboratory work and biochemical analysis.
17	Seasonal variation of macroalgae chemical composition in Tromso.	Norway		Arctic University of Norway, Tromsø	3-12 months (1 Sep – 20 Dec, Feb/June)	key pre-requisites: Basic knowledge in biochemistry, chemistry and biotechnology (Bachelor Degree). Experience from laboratory work and biochemical analysis.
18	Protein determination of macroalgae.	Norway		Arctic University of Norway, Tromsø	3-12 months (1 Sep – 20 Dec, Feb/June)	key pre-requisites: Basic knowledge in biochemistry, chemistry and biotechnology (Bachelor Degree). Experience from laboratory work and biochemical analysis.
19	NMR investigation of marine algae as source of high added value compounds: metabolomics; food and waste aspects.	Norway		Department of Biotechnology Norwegian University of Science and Technology (NTNU), Sem Selands veg 6/8, Trondheim, Norway	Duration: 3-12 months (more you work better is).	Key pre-requisites: Willingness to work, enthusiasm.
20	Several projects in genomics, transcript-omics and epigenetics within the ERC Consolidator Grant "Innovative Epigenetic Markers for Fish Domesti-cation" (EPIFISH). Please see	Norway		Faculty of Biosciences and Aquaculture Nord University Bodø	Min 3 months	Solid background in a relevant discipline, namely epigenetics, evolutionary biology, genetics, genomics, bioinformatics, molecular biology and aquaculture.

	www.epifish.com for further details.					
21	Antifouling nanocoatings	Oman		Centre of Excellence in Marine Biotechnology Muscat	3-6 months, better winter time;	pre-requisites; microbiology. Biotechnology students are welcome. Students should be prepared to cover some of their expenses.
22	Seafood safety in the ocean of tomorrow - bioaccumulation and elimination of emerging contaminants in seafood species	Portugal		Portuguese Institute for the Sea and Atmosphere	Min 3 months between October 2016 and June 2017	Preferably with experience in the maintenance of live marine organisms, and quantification of chemical contaminants in biological samples
23	Macroalgae as biotechnological tool for remediation of marine environments	Portugal		Portuguese Institute for the Sea and Atmosphere	Min 3 months between October 2016 and June 2017	Preferably with experience in the maintenance of live marine organisms, and quantification of chemical contaminants in biological samples
24	Use of marine organisms as sources of biofuels, valuable bioproducts and bioactive molecules	Portugal		University of Algarve	6 months (from February 2017)	Biochemistry, Marine Biology, Biotechnology students are welcome
25	Marine-inspired hydrogels for cell encapsulation envisaging diabetes therapies	Portugal		University of Minho	6 months (from October 2016-March 2017 or January 2017 - June 2017)	Good academic marks; experience with marine compounds and materials; motivation of biomedical application
26	Marine-based compounds and devices for tackling breast cancer	Portugal		University of Minho	6 months (from October 2016-March 2017 or January 2017 - June 2017)	Good academic marks; experience with marine compounds and materials; motivation of biomedical application
27	Evaluation of new sources of marine collagen	Portugal		University of Minho	6 months (from October 2016-March 2017 or January 2017 - June 2017)	Good academic marks; experience with marine compounds and materials; motivation of biomedical application

28	Silica and silica-based materials to guide stem cell differentiation	Portugal		University of Minho	6 months (from October 2016- March 2017 or January 2017 - June 2017)	Good academic marks; experience with marine compounds and materials; motivation of biomedical application
29	Proteomics and proteo-genomics	Portugal		Universidade Nova de Lisboa	Min 3 months, any date restric-tions for the academic year 2016-2017	
30	Quorum-quenching marine molecules	Portugal		University of Porto	3-12 months	Bachelor degree in biology, microbiology or biochemistry
31	Light effect modelling on cyano-bacterial photo-synthesis	Spain	Photosynthesis, bio-optics, modelling, cyanobacteria	University of Valencia	3 - 12 months (to start not later than 1.3.2017)	No specific master or bachelor degree is required. Motivation to learn mathematical modelling and additional tools is expected.
32	To determine the pathogenic potential and environmental persistence of different strains of Vibrio toranzoniae	Spain		Universidad de Santiago de Compostela	3-9 months	
33	Mussel-inspired active surfaces and interfaces based on catechol and polyphenol systems	Spain		UAB	3-6 months	Willing to gain experience in synthesis, materials science and nanotechnology
34	Modulation of the fish immune system	Spain		University of Murcia.	more than 3 months	interest in fish biology, some English or Spanish competences
35	Light effect modelling on cyano-bacterial photo-synthesis	Spain	Photo-synthesis, bio-optics, modelling, cyanobacteria	University of Valencia	3 - 12 months (to start not later than 1.3.2017)	No specific master or bachelor degree is required. Motivation to learn mathematical modelling and additional tools is expected.
36	Synthesis of alanine mutants of these peptides, and their evaluation.	Sweden		Linnaeus University Kalmar		Students should have a bachelor in chemistry or biology, but with some laboratory experience. Of special value in this respect is experience of chromatography, mass-spectrometry,

	This project would involve Fmoc-based solid-phase peptide synthesis, their oxidation, folding and purification, and subsequent fast evaluation for toxicity (using artemia assay) and the purpose is to be able to conclude which positions in the peptides that are crucial for activity.					electrophoresis and organic synthesis, although none of these prerequisites are mandatory.
37	Evaluation of a method for evaluation of peptide toxicity to crustaceans. An optical assay based on artemia salina is being adapted in our lab. This method is expected to replace a former method where shore crabs have been sacrificed. It's not a faster method, but a more sustainable one.	Sweden		Linnaeus University Kalmar		Students should have a bachelor in chemistry or biology, but with some laboratory experience. Of special value in this respect is experience of chromatography, mass-spectrometry, electrophoresis and organic synthesis, although none of these prerequisites are mandatory.
38	Pull-down studies to find the natural targets for the nemertean peptides. Biotinylated peptides will be synthesized and mixed with shore crab and/or lobster muscle membrane	Sweden		Linnaeus University Kalmar		Students should have a bachelor in chemistry or biology, but with some laboratory experience. Of special value in this respect is experience of chromatography, mass-spectrometry, electrophoresis and organic synthesis, although none of these prerequisites are mandatory.

	extracts, followed by a photo-chemical cross-linking reaction. Streptavidin covered magnetic beads are then used to bind the biotinylated peptide, in turn bound to the receptor in question. After subsequent washing, these complexes are identified via electrophoresis, cut-out, and the identity of the receptor is solved via LC-MS/MS.					
39	Remote video tracking analysis of the pre-settlement behaviour of barnacle larvae.	UK		Newcastle University	6 months	This project will require a biologist with an interest in behavioural ecology and interactions of organisms with their environment and each other. The project will require use of software developed in-house for this purpose, and therefore technical competence with computers and non-standard software would be an advantage. The ability to manipulate and analyse large data sets will be essential. Conversational English language skills are essential for both projects.
40	Development and modification of tracking software to monitor the pre-settlement behaviour of multiple marine invertebrate fouling species	UK		Newcastle University	6 months	This project will require a a computing scientist or biologist with significant experience/interest in programming/software design. The project will require existing programs written in MATLAB and/or other programming environments to be manipulated for use with alternative test organisms and environments. Conver-sational English language

						skills are essential for both projects.
41	Printing of patterned adhesives	UK		The University of Edinburgh	3-6 months	Background in Engineering or physical sciences... and motivation and creativity!
42	Fluid dynamics around attached cells on surfaces	UK		The University of Edinburgh	3-6 months	Background in Engineering or physical sciences... and motivation and creativity!
43	Development of photo-bioreactors at lab and industrial scale.	UK (Scotland)		Oban	Three months from January 2017	students with experience of growing algae; bioprocess engineers; electronic engineers etc.