

Wednesday 24 th of August				Wednesday 24 th of August parallel session			
Main auditorium University				Break out room			
CET	Session	Presenter	Presentation title	CET	Session	Presenter	Presentation title
09:20	Opening ceremony/welcome 54H 2022 (Chairs Stefan Kraan, Susan L. Holdt, Ditte B. Hermund)	Gonzalo Pérez Jácome (Mayor of Ourense) Elena Rivo (Vice Chancellor of University of Vigo, campus Ourense)	Welcome to 54H 2022	09:20			
09:40	Key note 1 (Chair Susan L. Holdt)	Prof. Wei Zhang, Research Director of Marine Bioproducts Cooperative Research Centre, Australia Inaugural President at Australia New Zealand Marine Biotechnology Society	Advanced biorefinery of seaweeds for applications in human health, nutrition and biomaterials	09:40	see keynote		
10:10	Session 1 Pharma and Drugs (Chair Nathalie Borgougnon)	Intro by chair (5 min) Monique Mulder, Netherlands	56. Brown seaweeds activating liver X receptors: potential role in the prevention of neurodegenerative and cardiometabolic diseases.	10:10	Session 5 Animal Health (Chair Aoife O'Sullivan)	Move room/intro by chair (5 min) Pi N. Collen, France	77. The sulphated polysaccharides extract ulvans from Ulva sp activates chicken immune cells in vitro and in vivo
10:30	Coffee and posters			10:30	Coffee and posters		
10:55	Session 2 Composition (Chair Cecile B. Wirenfeldt)	Intro by chair (5 min) Ditte B. Hermund, Denmark	87. Optimized drying for preservation of bioactive compounds in Ulva spp and Fucus vesiculosus – a comparison study of drying methods	10:55	Session 6 Upscaling Aquaculture and processing (chair Stefan Kraan)	Intro by chair (5 min) Amir Neori, Israel	9. Algae are the main aquaculture crop and can catch agriculture by 2100
11:20		Arne Duinker, Norway	95. Warm seawater rinsing of farmed kelp (Alaria and Saccharina)	11:20		Diane Purcell, Ireland	46. Aquaculture of Macrocytis pyrifera: Optimised hatchery-scale cultivation of sporophytes for bioproduct production
11:40		Torstein Skåra, Norway	96. Pulsed electric field: A greener technology for reducing the iodine content in sugar kelp	11:40		tba	
12:00	Coffee and snacks (20 min)			12:00	Coffee and snacks (20 min)		
12:20	Keynote 2 (Chair Stefan Kraan)	Prof Nathalie Borgougnon, France	Conventional and sustainable bioprocesses for the extraction of antiviral sulfated polysaccharides from the red seaweeds	12:20	see keynote		
12:50	Session 3 Extraction optimizations and bioactives (Chair Ditte B. Hermund)	Intro by chair (5 min) Signe Hjerrild, Denmark	13. Biochemical composition and process-induced changes of green seaweed (Ulva sp.) upon different processing methods	12:50	Session 7 Projects and future perspectives (Chair Susan L. Holdt)	Move room/intro by chair (5 min) Arne Duinker, Norway	66. SusKelpFood – Sustainable ingredients from cultivated kelp to the food industry
13:15		Michela Caprani, Ireland	27. The investigation of antidiabetic activities of protein extracts from Irish Macroalgae species	13:15		Jen L. Banach, Netherlands	38. Safe Seaweed by Design: Guidance for the Seaweed Sector
13:35		Asmi Citra Malina A. Tasakka, Indonesia	126. Evaluation of the potential of green algae extracts (Caulerpa racemosa) as an antiviral candidate for SARS-COV-2	13:35		Heidi Meland, Norway	115. Norwegian Seaweed Association (NSA)
13:55	Bus to the Spa Laías Caldera			13:55	Bus to the Spa Laías Caldera		
14:30	Lunch			14:30	Lunch		
15:35	Session 4 Gastronomy and Nutrition (Chair Lienke Hohmann)	Intro by chair (5 min) Mendes Gonçalves, Portugal	78. Exquisite cuisine: development of novel pudding and mousse recipes based on red macroalgae	15:35	Session 8 Control of compounds (Chair Susan L. Holdt)	Intro by chair (5 min) Florentina Piña, Chile	73. Effects of abiotic factors on xanthophyll synthesis in Porphyra/Pyropia species.
16:00		Wilson Fernandes, Portugal	61. Seaweeds as nutritional ingredient in vegan burgers	16:00		Jorge Rivas, Chile	92. The effects of nutrients by means of different culture media for indoor scaling of Gracilaria chilensis as nutraceutical source
16:20		Mendes Gonçalves, Portugal	76. Characterization of the nutritional composition of four macroalgae species from the Western Portuguese coast to food diet alternatives	16:20		Maryam Maccorquodale, United Kingdom	114. Red or white which colour is right? Exploring biochemical composition, bioactivity, and iron-mediated fertility in the kelp Saccharina latissima gametophyte using a transcriptome approach
16:50	End of session			16:50	End of session		
				16:50	Session 9 Cosmetics workshop (Chair Félix L. Figueroa)		
				18:30	Bus to town from where it possible to (1) or go by own hand to (2) :	1) a free guided tour in the downtown, 2) a visit to the termal waters near the Mino river (for this optional tour you are on your own and should leave earlier than 18.30)	

POSTERS Sessions in three rooms at faculty- 2 screens during coffee breaks

Extraction technologies

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|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15 Juliette André, France | 15 Ulva lactuca green seaweed as source of bioactive compounds extracted using microwave assisted extraction |
| 18 Ronan O'Brien, Ireland | 18. Extraction of proteins from the red seaweed Porphyra sp. using enzymes and assessment of potential health benefits of resultant hydrolysates |
| 23 Jong-il Choi, South Korea | 23. Effect of extraction method on antioxidant activities of fucoidan |
| 50 Milena Álvarez Viñas, Spain | 50. Study of ultrasonic technology on Chondrus crispus extract with potential for bioactive properties |
| 69 Noelia Flores-Fernández, Spain | 69. Microwave assisted extraction to recovery high value compounds from an invasive brown seaweed, Rugulopteryx okamurae |
| 70 Noelia Flores-Fernández, Spain | 70. Membrane fractions from Sargassum muticum fucoidan extract obtained by subcritical water extraction to formulate polymeric nanoparticles with biomedical potential |
| 119 Ingrid Maribu, Norway | 119. Chemical and Enzyme-Assisted Extraction of Fucoidan from two Species of Brown Macroalgae (Ascophyllum nodosum and Saccharina latissima) |
| 120 Pablo C. Varelo, Spain | 120. A sequential recovery extraction and biological activity of water-soluble sulfated polysaccharides from the polar red macroalga Sarcopeltis skottsbergii. |

Antioxidants

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| 22 Jong-il Choi, South Korea | 22. Melanogenesis inhibitory effect of polysaccharides from Undaria pinnatifida |
| 24 L. López-Hortas, Spain | 24. Personal care products formulated with extracts from red macroalgae Chondrus crispus by environmental friendly technologies |
| 31 Valentína Figueroa, Chile | 31. Influence of cooking methods on antioxidants content of three species of Chilean seaweeds |
| 42 Alba Pérez-Pérez, Spain | 42. Extraction of antioxidant compounds from invasive seaweed Sargassum muticum using deep eutectic solvents (DES) |
| 101 Marta Barral-Martínez, Spain | 101. Evaluation of the antioxidant potential of Undaria pinnatifida and Saccharina latissima algae extracts |

Drugs and nutraceuticals

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| 26 Noelia González Ballesteros, Spain | 26. Codium tomentosum gold nanoparticles as a potential chemotherapeutic adjuvant in hepatocellular carcinoma |
| 47 Emer Shannon, Ireland | 47. Peptides, polysaccharides and polyphenols from Phyllospora comosa, Ulva ohnoi and Ecklonia radiata as potential nutraceuticals for the management of disease associated with metabolic syndrome |
| 60 Ana Valado, Portugal | 60. Carrageenans: bioactive properties and therapeutic uses |
| 82 Ana Valado, Portugal | 82. Bioactivity of carrageenan in metabolic syndrome and cardiovascular diseases |
| 98 Hirota Kakita, Japan | 98. Hyaluronidase inhibitory activities derived from two brown algae, Ecklonia kuroume and Sargassum macrocarpum, in Japan |

Control of compounds

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| 55 Vanesa Sanz, Spain | 55. Seasonal variation of the carrageenan content of the macroalga Mastocarpus stellatus from northern Portugal and its rheological capacities as a gelling agent |
| 57 Madalena Mendes, Portugal | 57. Food additive potential source: a comparative study of estuarine seaweed Gracilaria sp. agar content using different cultivation methods |
| 65 Harriet Fletcher, Leeds | 65. The Seasonal Variation in Chemical Content of Prevalent Fucoids Common to the UK |
| 97 Hirota Kakita, Japan | 97. Effects of light intensity on the biological components of the green alga, Ulva prolifera |
| 117 Randi Sund, Norway | 117 The Effects of Freezing and Thawing of Saccharina latissima and Alaria esculenta |

Day 2 54H conference

Thursday 25 th of August				Thursday 25 th of August parallel session			
Main auditorium University				Break out room			
CET	Session	Presenter	Presentation title	CET	Session	Presenter	Presentation title
09:20	Keynote 3 (Chair Ditte B. Hermund)	Rósa Jónsdóttir, Matis Iceland	Innovative application of seaweed and its unique bioactive compounds		see keynote		
Coffee and posters				Coffee and posters			
10:30	Session 10 Valorization (Chair Monique Mulder)	Intro by chair (5 min)		10:30	Session 14 Other (Chair Luis M. Botana)	Intro by chair (5 min)	
		Noelia G. Ballesteros, Spain	28. Valorisation of the invasive macroalgae <i>Undaria pinnatifida</i> for the development of new nanomaterial as antibiotic and antifungal agents			Madalena Mendes, Portugal	45. Biobanking and genetic validation of farmed Atlantic Nori
10:55		Diego Méndez Paz, Spain	123. Valorization of residual green seaweeds. ALEHOOP Project	10:55		Inês Oliveira, Portugal	71. Farmed Atlantic seaweed as an important source of phytochemicals, cultivated in a land-based IMTA system, in Portugal
11:15		João Rui Tanoeiro, Portugal	62. Is a <i>Chondrus crispus</i> aquaculture/biorefinery system viable?	11:15		Angela Willard, Canada	94. Seaweed Monographs
Coffee and snacks (20 min)				Coffee and snacks (20 min)			
11:55	Keynote 4 (Chair Susan L. Holdt)	Prof. Luis M Botana, Farmatox Research Group, Facultad de Veterinaria, Lugo, Spain.	An update on the need to review toxicological data for marine toxins	11:55	see keynote		
12:25	Session 11 Legislation, risk and safety (Chair Arne Duinker)	Intro by chair (5 min)		12:25	Session 15 Mineral, Microstructure, Cosmetic and Control of compounds (Chair Rósa Jónsdóttir)	Moving room/intro by chair (5 min)	
		Frederik Eberth, Denmark	80. How to use seaweed in cosmetics and be regulatory compliant			Jamaluddin Fitrah Alam, Indonesia	127. Future protein supply from tropical seaweed: an exploration
12:50		Jen L. Banach, Netherlands	39. Discovering the safe use of seaweed across the food value-chain	12:50		Marta V. Freitas, Portugal	43. The identity of a lab-grown seaweed: nutritional profile of <i>Gracilaria gracilis</i> grown in controlled conditions
13:10		Sophie Koch, Netherlands	63. Pilot case study of the Safe Seaweed by Design Project	13:10		Félix L. Figueroa, Spain	100. The use of the invasive alien species <i>Rugulopteryx okamurae</i> (Ochrophyta) as source of cosmeceutical compounds
13:30		Jennifer Mildenerger, Norway	12. Antioxidative activities, phenolic compounds and marine food allergens in the macroalgae <i>Saccharina latissima</i> produced in integrated multi-trophic aquaculture systems	13:30		Patricia López-Sánchez, Spain	36. Effect of thermal and mechanical treatments on the microstructure and rheological properties of <i>Laminaria digitata</i> suspensions
13:50	to the bus to Spa Laia Caldera			13:50			
14:30	Lunch			14:30			
15:35	Session 12 Animal Health, The Seaweed Company (Chair Stefan Kraan)	Intro by chair (5 min)		15:35			
		Stefan Kraan, Ireland	Plant....				
16:00		Lieneke Hohmann, The Netherlands	Human health	16:00			
16:20		Aoife O'Sullivan, Ireland	Animal health	16:20			
16:40		Vladana Grabež, Norway	75. Brown seaweed in finishing lamb diet provides new nutrient labeling opportunities and improves meat quality	16:40			
17:00	Session 13 Cooking Demo	At spa hotel	The company Porto-Muiños with chefs	17:00			
18:00	Closing ceremony (Susan L. Holdt, Herminia Domínguez, María Dolores Torres, Ditte B. Hermund, Stefan)	Best poster		18:00			
		Best paper					
		Announcement next place					
19:30	Bar			19:00			
20:00	Conference banquet till party time			20:00			
until 00:00							

Day 3 tour			
	Friday 26th of August		
	Beach and Seaweed tour		
CET	Tour	What	How
8.45	Bus for tour	Beach and Seaweed collecting	Pick up central in town (Parque San Lázaro) and ½h later at spa hotel
Around 16.00	Return to hotels		Drop off first at spa hotel and then central in town