

**Work And Budget Plan**  
**FA1301 Grant Agreement Period 2**  
 02/12/2014 to 31/12/2015

**Section I: Action Profile**

**Action General Information**

Action Code	FA1301	MC Chair	Dr Giovanna Ponte
Action Title	FA1301 - A network for improvement of cephalopod welfare and husbandry in research, aquaculture and fisheries (CephsInAction)		
MOU	015/13	Draft MOU	oc-2012-2-13105
CSO Approval Date	2013-05-16		
Action Start Date	2013-10-14	Action End Date	2017-10-13
Science Officer	Dr Ioanna Stavridou	Administrative Officer	Mr Christophe Peeters

**Participating COST Member Countries and Cooperating State:**

	ITC		Non-ITC		Total
Cost Countries having accepted the MOU	Number	6	Number	11	17
	% of all ITCs	35.29%	% of all non-ITCs	64.71%	
Number of MC Members	10		22		32

Country and Acceptance Date		
AT 28/02/2014	IE 28/06/2013	PT 11/09/2013
BG 03/07/2014	IL 11/06/2013	RS 22/01/2015
HR 14/02/2014	IT 09/07/2013	ES 04/06/2013
FR 17/06/2013	MT 12/02/2014	UK 30/05/2013
DE 17/06/2013	NL 03/09/2013	MK 14/05/2014
EL 01/10/2013	NO 26/08/2013	

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### International cooperation

	NNC	IPC	Specific Organisation	Total
Number of entities formally approved to join Action	1	0	0	1
Number of countries	1	0	0	1

### Working Groups

	WG Title	WG Leader	Number of Members
WG1	Research Needs in Cephalopods Welfare	Dr Michael Kuba	125
WG2	Stress & Disease	Dr Camino Gestal	115
WG3	Neurophysiology, Anaesthesia and Humane-end-points	Prof Binyamin Hochner	111
WG4	Development of a Cephalopod Welfare Index (CWI)	Dr Lars Helge Stien	110
WG5	Education and training	Prof Nadav Shashar	116

## Section II: MoU objectives and Grant Agreement Period Goals and Activities

### Action Objectives from MoU

Aim/primary Objective	The main objective of the Action is to provide the scientific basis for advancing knowledge about cephalopod welfare in research, aquaculture and public displays and promote their conservation.
Secondary objectives	<ul style="list-style-type: none"> <li>• Provide proper training on newly established cephalopod husbandry guidelines and experimental practices</li> <li>• Improve and implement existing general guidelines and experimental practices</li> <li>• Identify gaps of knowledge in cephalopod welfare, so that these can be addressed through the coordination of on-going national research projects</li> <li>• Review existing knowledge on species-specific differences in husbandry and treatment and develop species-specific guidelines</li> <li>• Further develop and establish new experimental practices for emerging scientific demands in cephalopod research</li> <li>• Promote cephalopod research and conservation</li> <li>• Promote information exchange and international cooperation</li> <li>• Advance the use of the 3 R's (replace, reduce, refine) principle in cephalopod research</li> <li>• review the best practices of anaesthetics currently used with cephalopods and systematically investigate dose- and species-specific responses, mode of action, depth and length of anaesthesia and recovery time and cardio-circulatory performance</li> <li>• test potential analgesics and evaluate their efficacy</li> <li>• assess long-term effects of anaesthetics and different environmental conditions on brain development</li> <li>• characterize behavioural responses to noxious stimuli and define behavioural indices of pain</li> <li>• characterize physiological parameters linked to stress, suffering or pain, including biomarkers of immune response linked to disease</li> <li>• review optimal and species-specific rearing conditions, including environmental and nutritional factors</li> <li>• develop non-invasive and if possible automated techniques for assessing physiological parameters, for monitoring brain changes and effects of treatments</li> <li>• develop a model for assessing cephalopod welfare through integration of all influencing factors and available indices</li> </ul>

### Grant Agreement Period

Grant Agreement Period Start Date	02/12/2014	Grant Agreement Period End Date	31/12/2015
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### Grant Agreement Period Goals

Number	Grant Agreement Period Goal	MoU Objective(s) it relates to
GAPG 1	Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare	Aim/Primary objective Secondary objective 1 Secondary objective 2 Secondary objective 3 Secondary objective 4 Secondary objective 7 Secondary objective 8 Secondary objective 9 Secondary objective 14 Secondary objective 16
GAPG 2	Monitoring the application of "Guidelines for the Care and Welfare of Cephalopods in Research", the improvement of experimental practices, and the impact of the transposition of Directive 2010/63/EU and MFSD in Member States.	Aim/Primary objective Secondary objective 1 Secondary objective 2 Secondary objective 5 Secondary objective 6 Secondary objective 7 Secondary objective 8 Secondary objective 14
GAPG 3	Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintainance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments.	Aim/Primary objective Secondary objective 1 Secondary objective 2 Secondary objective 3 Secondary objective 4 Secondary objective 6 Secondary objective 7 Secondary objective 14 Secondary objective 16
GAPG 4	Increase knowledge on nutritional requirements of different cephalopods species at various developmental stages including those required to improve health and welfare in aquaculture.	Aim/Primary objective Secondary objective 2 Secondary objective 3 Secondary objective 4 Secondary objective 5 Secondary objective 6 Secondary objective 7 Secondary objective 8 Secondary objective 14
GAPG 5	Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches.	Aim/Primary objective Secondary objective 1 Secondary objective 3 Secondary objective 5 Secondary objective 6

		<p>Secondary objective 7          Secondary objective 8          Secondary objective 13          Secondary objective 15          Secondary objective 16</p>
GAPG 6	<p>Increase of knowledge and identification of pathogens, mechanical damages, signs of stress and diseases in cephalopods. Study of the trophic relationship for cephalopods, with special attention to the transmission of parasites, thus allowing evaluation of animals well-being and ecosystem health. Development of protocols for assessment of health status of cephalopods, thus providing guidance for researchers, veterinarians and regulators.</p>	<p>Aim/Primary objective          Secondary objective 1          Secondary objective 2          Secondary objective 3          Secondary objective 5          Secondary objective 6          Secondary objective 7          Secondary objective 13          Secondary objective 16</p>
GAPG 7	<p>Evaluation of the impact of underwater human noise on cephalopods (in compliance with Directive 2010/63/EU and MSFD).</p>	<p>Aim/Primary objective          Secondary objective 3          Secondary objective 5          Secondary objective 6          Secondary objective 7          Secondary objective 8          Secondary objective 12          Secondary objective 13          Secondary objective 14          Secondary objective 16</p>
GAPG 8	<p>Development and application of consensus Severity Assessment of procedures (compliant with Directive 2010/63/EU) utilized with cephalopods.</p>	<p>Aim/Primary objective          Secondary objective 1          Secondary objective 2          Secondary objective 3          Secondary objective 4          Secondary objective 5          Secondary objective 6          Secondary objective 7          Secondary objective 8          Secondary objective 9          Secondary objective 10          Secondary objective 11          Secondary objective 12          Secondary objective 13          Secondary objective 16</p>
GAPG 9	<p>Analysis of biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods. Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane end-point.</p>	<p>Aim/Primary objective          Secondary objective 1          Secondary objective 2          Secondary objective 3          Secondary objective 5          Secondary objective 6          Secondary objective 7          Secondary objective 8          Secondary objective 9          Secondary objective 10</p>

		<p>Secondary objective 12</p> <p>Secondary objective 13</p> <p>Secondary objective 15</p> <p>Secondary objective 16</p>
GAPG 10	Evaluation of the current effort/interest for physiology and neurophysiological studies on cephalopods.	<p>Aim/Primary objective</p> <p>Secondary objective 1</p> <p>Secondary objective 3</p> <p>Secondary objective 6</p> <p>Secondary objective 7</p> <p>Secondary objective 8</p> <p>Secondary objective 9</p> <p>Secondary objective 11</p> <p>Secondary objective 15</p> <p>Secondary objective 16</p>
GAPG 11	Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods.	<p>Aim/Primary objective</p> <p>Secondary objective 1</p> <p>Secondary objective 2</p> <p>Secondary objective 3</p> <p>Secondary objective 6</p> <p>Secondary objective 7</p> <p>Secondary objective 8</p> <p>Secondary objective 15</p>
GAPG 12	Development of online databases as guidance and inventory of alternatives.	<p>Aim/Primary objective</p> <p>Secondary objective 1</p> <p>Secondary objective 4</p> <p>Secondary objective 6</p> <p>Secondary objective 7</p> <p>Secondary objective 8</p> <p>Secondary objective 14</p> <p>Secondary objective 15</p> <p>Secondary objective 16</p>
GAPG 13	Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare.	<p>Aim/Primary objective</p> <p>Secondary objective 1</p> <p>Secondary objective 2</p> <p>Secondary objective 3</p> <p>Secondary objective 4</p> <p>Secondary objective 6</p> <p>Secondary objective 7</p> <p>Secondary objective 8</p> <p>Secondary objective 9</p> <p>Secondary objective 14</p> <p>Secondary objective 16</p>
GAPG 14	Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.	<p>Aim/Primary objective</p> <p>Secondary objective 1</p> <p>Secondary objective 2</p> <p>Secondary objective 4</p> <p>Secondary objective 5</p>

	Secondary objective 6 Secondary objective 7 Secondary objective 8 Secondary objective 14 Secondary objective 15 Secondary objective 16
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## Section IV: Work and Budget Plan for the Grant Agreement Period

### Work and Budget Plan Summary

A. COST Networking Tools	EUR
(1) Meetings	65,900.00
(2) Training Schools	16,000.00
(3) STSMs	19,000.00
(4) Dissemination	12,000.00
(5) Other Expenses Related to Scientific Activities	143.50
<b>B. Total Science Expenditure (sum of (1) to (5))</b>	<b>113,043.50</b>
<b>C. FSAC (max. of 15% of B)</b>	<b>16,956.53</b>
<b>D. Total Expenditure (B+C)</b>	<b>130,000.03</b>



## Meetings

### Overview

Meeting Title	Meeting Type	Dates	Location	ITC	Total Cost(EUR)
CephsInAction meets Scand-LAS2015	Dissemination Meeting	10/06/2015 - 11/06/2015	Turku (Finland)	No	1,200.00
CephsInAction meets MSN	Working Group Meeting	15/06/2015 - 16/06/2015	Cagliari (Italy)	No	8,650.00
CephsInAction meets Conference on Disease of Fish and Shellfish	Working Group Meeting	11/09/2015 - 12/09/2015	Las Palmas de Gran Canaria (Spain)	No	8,650.00
CephsInAction@Aquaculture	Working Group Meeting	23/10/2015 - 24/10/2015	Rotterdam (Netherlands)	No	8,650.00
Dissemination Meeting CIAC2015	Dissemination Meeting	09/11/2015 - 14/11/2015	Hakodate (Japan)	No	2,000.00
CephsInAction@Lisbon	Management Committee Meeting, Working Group Meeting, Workshops/Conferences	25/11/2015 - 27/11/2015	Lisbon (Portugal)	Yes	36,750.00
				<b>Total</b>	<b>65,900.00</b>

### Details

Meeting Type	Dissemination Meeting
Title of the Meeting	CephsInAction meets Scand-LAS2015
Grant Period Goal(s) it will address	Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare, Monitoring the application of "Guidelines for the Care and Welfare of Cephalopods in Research", the improvement of experimental practices, and the impact of the transposition of Directive 2010/63/EU and MFSD in Member States., Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.
Description	Dissemination meeting. Directive 2010/63/EU places cephalopods as the sole representative among invertebrates in the list of 'Laboratory Animals'. Scand-Las ( <a href="http://www.scandlas.org/">http://www.scandlas.org/</a> ; together with FELASA, AALAS, ICLAS) is an organization aimed at to further the progress of Laboratory Animal Science (LAS). Acting at regional level (i.e. Nordic and the Baltic countries) Scand-Las is renowned to act by elevated standards and practice in relation with welfare issues for the use of animals in research. Baltic countries are also the first that promoted and raised the attention of welfare issues in fisheries and aquaculture, thus spreading the impact of "welfare", extending it over the walls of research laboratories. The meeting includes important topics to be discussed ( <a href="http://www.scandlas.org/?news=290">http://www.scandlas.org/?news=290</a> ) that are relevant to FA1301 COST Action

	We plan to contribute by 1. presenting CephInAction, its aims, objectives and results achieved 2. oral and poster presentations with topics relevant to care and management of cephalopods as Laboratory Animals.		
Output(s)	Tangible outputs: report on website as input for WGs. A short review paper will appear after the meeting focusing on cephalopods as laboratory animals. Less/non-tangible outputs: knowledge exchanges including strategic information; spreading of cephalopods as 'laboratory animals'; sharing ideas on good practices in education		
Location	Turku (Finland)	ITC	No
Start Date	2015-06-10 09:00:00	End Date	2015-06-11 18:00:00
Duration	2 days		
Number of expected total participants	80	Number of participants to be reimbursed from COST funds	1
Average reimbursement(per participant)(EUR)	1,200.00	Total Reimbursement costs (EUR)	1,200.00
Local Organiser Support (EUR)	0.00		
Total cost of the meeting (EUR)	1,200.00		

Meeting Type	Working Group Meeting
Title of the Meeting	CephInAction meets MSN
Grant Period Goal(s) it will address	Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare, Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintainance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments., Evaluation of the impact of underwater human noise on cephalopods (in compliance with Directive 2010/63/EU and MSFD)., Analysis of biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods. Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane end-point., Evaluation of the current effort/interest for physiology and neurophysiological studies on cephalopods., Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare., Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.
Description	The Mediterranean Neuroscience Society Meeting 2015 (MSN2015) is one of the key events of the neuroscience community for the 2015. The participation of members of FA1301 COST Action will i. facilitate networking between FA1301 'science' and compatible/complementary scientific endeavours, ii. allow beneficial interaction with other aspects of compatible disciplines and research

	done in other taxa, iii. extend the potential of research efforts on biology, neurophysiology and welfare of cephalopods. We plan to contribute with: 1. symposium included in the main program of MSN2015 (including COST Action CM1103) 2. oral and poster presentations included in different sessions of the main program 3. a WG3 satellite meeting. During the meeting we plan to discuss approaches, strategies and possible collaborations for the achievement of important deliverables, and results of FA1301 WG3. The participation of selected members of WG4 and WG5 will be also facilitated.		
Output(s)	Tangible outputs: report on website as input for WGs; publication of a special issue on neurophysiology in cephalopods. Less / non- tangible outputs: knowledge exchanges including strategic information, planning, technical know-how, policy development, and expected decisions to be taken.		
Location	Cagliari (Italy)	ITC	No
Start Date	2015-06-15 09:00:00	End Date	2015-06-16 19:00:00
Duration	2 days		
Number of expected total participants	150	Number of participants to be reimbursed from COST funds	11
Average reimbursement(per participant)(EUR)	750.00	Total Reimbursement costs (EUR)	8,250.00
Local Organiser Support (EUR)	400.00		
Total cost of the meeting (EUR)	8,650.00		

Meeting Type	Working Group Meeting
Title of the Meeting	CephInAction meets Conference on Disease of Fish and Shellfish
Grant Period Goal(s) it will address	Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare, Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintainance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments., Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches., Increase of knowledge and identification of pathogens, mechanical damages, signs of stress and diseases in cephalopods. Study of the trophic relationship for cephalopods, with special attention to the transmission of parasites, thus allowing evaluation of animals well-being and ecosystem health. Development of protocols for assessment of health status of cephalopods, thus providing guidance for researchers, veterinarians and regulators., Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods., Development of online databases as guidance and inventory of alternatives., Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare., Dissemination and Educational activities. Development of

	an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.		
Description	The 17th International Conference on "Diseases of Fish and Shellfish"™ organized by the European Association of Fish Pathologists is a key event for the 2015 for the scientific community (researchers, veterinarians, etc) related with pathologies of major taxa of marine organisms. The participation of members of FA1301 COST Action will i. facilitate networking between FA1301 'science' and compatible/complementary scientific endeavours, ii. allow beneficial interaction with other aspects of compatible disciplines and research done in other taxa, iii. extend the potential of research efforts on biology and welfare of cephalopods. We plan to contribute with: 1. symposium included in the main program 2. oral and poster presentations included in different sessions of the main program 3. a WG2 satellite meeting. During the meeting we plan to discuss approaches, strategies and possible collaborations for the achievement of important deliverables, and results of FA1301 WG2 and WG4. The participation of selected members of WG1, WG4 and WG5 will be also facilitated.		
Output(s)	Tangible outputs: report on website as input for WGs; at least a review paper to be published after the meeting. Less/non- tangible outputs: knowledge exchanges including strategic information, planning, technical know-how, policy development, and expected decisions to be taken.		
Location	Las Palmas de Gran Canaria (Spain)	ITC	No
Start Date	2015-09-11 09:00:00	End Date	2015-09-12 19:00:00
Duration	2 days		
Number of expected total participants	100	Number of participants to be reimbursed from COST funds	11
Average reimbursement(per participant)(EUR)	750.00	Total Reimbursement costs (EUR)	8,250.00
Local Organiser Support (EUR)	400.00		
Total cost of the meeting (EUR)	8,650.00		

Meeting Type	Working Group Meeting
Title of the Meeting	CephsInAction@Aquaculture
Grant Period Goal(s) it will address	Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare, Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintainance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments., Increase knowledge on nutritional requirements of different cephalopods species at various developmental stages including those required to improve health and welfare in aquaculture., Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches., Analysis of

	biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods. Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane endpoint.,Development of online databases as guidance and inventory of alternatives.,Further development of the CephsInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare.,Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.		
Description	FA1301 WG1 meeting for the 2015 is joining Aquaculture Europe2015 organized by the European Aquaculture Society in cooperation with IMARES (Institute for Marine Resources & Ecosystem Studies) and AFI Wageningen UR (a collaboration between Wageningen University & Research centre and DLO foundation). This will facilitate networking with specialists and SME working on topics of relevance to rearing and aquaculture of cephalopods, discuss approaches, strategies and possible collaborations for the achievement of important deliverables and results. We plan to contribute with: 1. symposium included in the main program 2. oral and poster presentations included in different sessions of the main program 3. a WG1 satellite meeting. During the meeting we plan to discuss approaches, strategies and possible collaborations for the achievement of important deliverables, and results of FA1301 WG1. The participation of selected members of WG2, WG4 and WG5 will be also facilitated.		
Output(s)	Tangible outputs: report on website as input for WGs; at least a review paper to be published after the meeting. Less / non- tangible outputs: knowledge exchanges including strategic information, planning, technical know-how, policy development, and expected decisions to be taken.		
Location	Rotterdam (Netherlands)	ITC	No
Start Date	2015-10-23 09:00:00	End Date	2015-10-24 19:00:00
Duration	2 days		
Number of expected total participants	200	Number of participants to be reimbursed from COST funds	11
Average reimbursement(per participant)(EUR)	750.00	Total Reimbursement costs (EUR)	8,250.00
Local Organiser Support (EUR)	400.00		
Total cost of the meeting (EUR)	8,650.00		

Meeting Type	Dissemination Meeting
Title of the Meeting	Dissemination Meeting CIAC2015
Grant Period Goal(s) it will address	Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare,Monitoring the application of "Guidelines for the Care

	<p>and Welfare of Cephalopods in Research", the improvement of experimental practices, and the impact of the transposition of Directive 2010/63/EU and MSFD in Member States. Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintenance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments. Increase knowledge on nutritional requirements of different cephalopods species at various developmental stages including those required to improve health and welfare in aquaculture. Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches. Increase of knowledge and identification of pathogens, mechanical damages, signs of stress and diseases in cephalopods. Study of the trophic relationship for cephalopods, with special attention to the transmission of parasites, thus allowing evaluation of animals well-being and ecosystem health. Development of protocols for assessment of health status of cephalopods, thus providing guidance for researchers, veterinarians and regulators. Evaluation of the impact of underwater human noise on cephalopods (in compliance with Directive 2010/63/EU and MSFD). Development and application of consensus Severity Assessment of procedures (compliant with Directive 2010/63/EU) utilized with cephalopods. Analysis of biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods. Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane end-point. Evaluation of the current effort/interest for physiology and neurophysiological studies on cephalopods. Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods. Development of online databases as guidance and inventory of alternatives. Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare. Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.</p>		
Description	<p>Dissemination Meeting The Cephalopod International Advisory Council (CIAC) is the most 'antique' scientific society embracing biologists working on cephalopods. The participation of COST Action FA1301 members to the CIAC2015 Conference (Japan) will facilitate dissemination of our activities and objectives, and the increase our network capabilities. In addition, it is noteworthy to mention that we have been solicited by the current President of CIAC (Professor Louise Allcock) to organize a symposium at CIAC2015 Conference. This will be a key deliverable of the activities of the first two years of CephInAction, and represents a grant of the international consideration our community is acquiring.</p>		
Output(s)	<p>Tangible outputs: report on website as input for WGs; increase of the international visibility of FA1301. Less/non-tangible outputs: knowledge exchanges including strategic information</p>		
Location	Hakodate (Japan)	ITC	No
Start Date	2015-11-09 09:00:00	End Date	2015-11-14 19:00:00
Duration	6 days		

Number of expected total participants	120	Number of participants to be reimbursed from COST funds	1
Average reimbursement(per participant)(EUR)	2,000.00	Total Reimbursement costs (EUR)	2,000.00
Local Organiser Support (EUR)	0.00		
Total cost of the meeting (EUR)	2,000.00		
Derogations	<p>DEROGATION REQUESTED : CITY-COUNTRY NON-COMPLIANT ;  Justification : The participation of members of FA1301 to the Cephalopod International Advisory Council (CIAC) 2015 International Conference in Japan is strategic considering: - the visibility of CephInAction for other members of scientific community - the required increase of networking capability and to facilitate future collaborations. CIAC is the most 'antique' scientific society embracing biologists working on cephalopods. FA1301 Action Chair have been solicited by the current President of CIAC (Professor Louise Allcock) to organize a symposium at CIAC2015 Conference. This will be a key deliverable of the activities of the first two years of CephInAction, and represents a grant of the international consideration our community is acquiring.</p>		

Meeting Type	Management Committee Meeting, Working Group Meeting, Workshops/Conferences
Title of the Meeting	CephInAction@Lisbon
Grant Period Goal(s) it will address	<p>Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare, Monitoring the application of "Guidelines for the Care and Welfare of Cephalopods in Research", the improvement of experimental practices, and the impact of the transposition of Directive 2010/63/EU and MSFD in Member States., Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintenance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments., Increase knowledge on nutritional requirements of different cephalopods species at various developmental stages including those required to improve health and welfare in aquaculture., Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches., Increase of knowledge and identification of pathogens, mechanical damages, signs of stress and diseases in cephalopods. Study of the trophic relationship for cephalopods, with special attention to the transmission of parasites, thus allowing evaluation of animals well-being and ecosystem health. Development of protocols for assessment of health status of cephalopods, thus providing guidance for researchers, veterinarians and regulators., Evaluation of the impact of underwater human noise on cephalopods (in compliance with Directive 2010/63/EU and MSFD), Development and application of consensus Severity Assessment of procedures (compliant with Directive 2010/63/EU) utilized with cephalopods., Analysis of biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods.</p>

	<p>Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane end-point., Evaluation of the current effort/interest for physiology and neurophysiological studies on cephalopods., Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods., Development of online databases as guidance and inventory of alternatives., Further development of the CephsInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare., Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.</p>		
Description	<p>Annual Scientific Conference of COST Action FA1301; includes WGs meeting, workshop on 'Physiology of Cephalopod Digestive System', and FA1301 MC Meeting. Aims are: 1. to collect the results and achievements of the two first years 2. to facilitate collaborative work and networking among all participants 3. the identification of missing expertise and research priorities 4. the definition of the new GP goals, the plan of the networking activities for the achievement of the GP goals 5. definition of the budget plan 6. delivery of reports from the WG leaders on the achievements of the WG for the year (including what was not achieved and the reasons behind).</p>		
Output(s)	<p>Tangible outputs: publication of abstracts and proceedings; white paper on the identification of gaps in the newly established guidelines. Less / non- tangible outputs: knowledge exchanges including strategic information, planning, technical know-how, policy development, and expected decisions to be taken.</p>		
Location	Lisbon (Portugal)	ITC	Yes
Start Date	2015-11-25 09:00:00	End Date	2015-11-27 13:00:00
Duration	3 days		
Number of expected total participants	60	Number of participants to be reimbursed from COST funds	45
Average reimbursement(per participant)(EUR)	750.00	Total Reimbursement costs (EUR)	33,750.00
Local Organiser Support (EUR)	3,000.00		
Total cost of the meeting (EUR)	36,750.00		



## Training School

### Overview

Title of the Training School	Dates	Location	ITC	Total Cost(EUR)
Training School CBC 2015	20/09/2015 - 29/09/2015	Naples (Italy)	No	7,000.00
Training School 'CBC: Anesthesia and Scientific Procedures'	01/10/2015 - 03/10/2015	Faro (Portugal)	Yes	9,000.00
			Total	16,000.00

### Details

Title of the Training School	Training School CBC 2015		
Grant Period Goal(s) it will address	<p>Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare, Monitoring the application of "Guidelines for the Care and Welfare of Cephalopods in Research", the improvement of experimental practices, and the impact of the transposition of Directive 2010/63/EU and MFSD in Member States., Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintainance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments., Increase knowledge on nutritional requirements of different cephalopods species at various developmental stages including those required to improve health and welfare in aquaculture., Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches., Development and application of consensus Severity Assessment of procedures (compliant with Directive 2010/63/EU) utilized with cephalopods., Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods., Development of online databases as guidance and inventory of alternatives., Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.</p>		
Description	<p>Training School on the best practice in husbandry, maintenance and care of cephalopods. This Training School is part of the Cephalopod Biology and Care Training Program, initiated in 2014; the School is acquiring official accreditation towards FELASA that acts as official accreditation board among Member States and is the most-renowed accreditation agency for training and education programs designed in compliance with Directive 2010/63/EU.</p>		
Output(s)	<p>tangible output: European Accreditation (FELASA); less tangible output: knowledge exchanges including strategic information, technical know-how</p>		
Location	Naples (Italy)	ITC	No
Start Date	2015-09-20 00:00:00	End Date	2015-09-29 00:00:00
Number of trainers	6	Number of trainees	18
Number of trainers to be reimbursed	3	Number of trainees to be reimbursed	10

Average trainer Reimbursement(EUR)	700.00	Average reimbursement per trainee(EUR)	400.00
Total trainer Reimbursement(EUR)	2,100.00	Total trainee Grant(EUR)	4,000.00
Local Organiser Support (EUR)	900.00		
Total cost of the Training School(EUR)	7,000.00		

Title of the Training School	Training School 'CBC: Anesthesia and Scientific Procedures'		
Grant Period Goal(s) it will address	Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches.,Analysis of biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods. Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane end-point.,Evaluation of the current effort/interest for physiology and neurophysiological studies on cephalopods.,Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods.,Development of online databases as guidance and inventory of alternatives.,Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.		
Description	Training School on the best practices in experimental procedures with and without anaesthesia for cephalopods		
Output(s)	Less tangible output: knowledge exchanges including strategic information		
Location	Faro (Portugal)	ITC	Yes
Start Date	2015-10-01 09:00:00	End Date	2015-10-03 18:00:00
Number of trainers	6	Number of trainees	18
Number of trainers to be reimbursed	3	Number of trainees to be reimbursed	10
Average trainer Reimbursement(EUR)	700.00	Average reimbursement per trainee(EUR)	600.00
Total trainer Reimbursement(EUR)	2,100.00	Total trainee Grant(EUR)	6,000.00
Local Organiser Support (EUR)	900.00		
Total cost of the Training School(EUR)	9,000.00		

## STSM

Number	8
Average cost per STSM(EUR)	2,375.00
Total cost(EUR)	19,000.00

### How will the STSMs contribute to the achievement of the Grant Period Goals?

Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintenance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments., Increase knowledge on nutritional requirements of different cephalopods species at various developmental stages including those required to improve health and welfare in aquaculture., Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches., Increase of knowledge and identification of pathogens, mechanical damages, signs of stress and diseases in cephalopods. Study of the trophic relationship for cephalopods, with special attention to the transmission of parasites, thus allowing evaluation of animals well-being and ecosystem health. Development of protocols for assessment of health status of cephalopods, thus providing guidance for researchers, veterinarians and regulators., Evaluation of the impact of underwater human noise on cephalopods (in compliance with Directive 2010/63/EU and MSFD),., Analysis of biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods. Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane end-point., Evaluation of the current effort/interest for physiology and neurophysiological studies on cephalopods., Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods., Development of online databases as guidance and inventory of alternatives., Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare., Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.

Short Term Scientific Missions are aimed at supporting individual mobility and at strengthening the existing networks and fostering collaborations by allowing scientists to visit an institution or laboratory in another Participating COST Country

Tangible outputs: publication of scientific reports on CephInAction website; publication of scientific publications on peer-reviewed journals  
Less/non-tangible outputs: knowledge exchanges

## Disseminations

Title	Type	Publisher/provider	Expected date of Release	Cost(EUR)
Special Issue CephInAction	Electronic publication	Elsevier or Springer	23/12/2015	3,000.00

### How will this Dissemination contribute to the achievement of the Grant Period Goals?

Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare, Evaluate the environmental, biological and behavioral needs of different cephalopod species to increase success of caring, maintenance, growth and rearing aimed to reduce stress and increase welfare in research and aquaculture establishments., Increase knowledge on nutritional requirements of different cephalopods

species at various developmental stages including those required to improve health and welfare in aquaculture.,Increase the knowledge of biological and physiological indicators (e.g. biomarkers) of welfare for cephalopods, also by increasing the use of alternatives to live animals in research, and the use of non-invasive approaches.,Increase of knowledge and identification of pathogens, mechanical damages, signs of stress and diseases in cephalopods. Study of the trophic relationship for cephalopods, with special attention to the transmission of parasites, thus allowing evaluation of animals well-being and ecosystem health. Development of protocols for assessment of health status of cephalopods, thus providing guidance for researchers, veterinarians and regulators.,Development and application of consensus Severity Assessment of procedures (compliant with Directive 2010/63/EU) utilized with cephalopods.,Analysis of biological and physiological findings relevant to stress, nociception, pain assessment and management relevant to cephalopods. Evaluation of alternative methods to be utilized in experimental procedures. Evaluation of physiological and stress response during anesthesia. Development of humane end-point.,Evaluation of the current effort/interest for physiology and neurophysiological studies on cephalopods.,Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods.,Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare.,Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.

Title	Type	Publisher/provider	Expected date of Release	Cost(EUR)
Guidelines for the Care and Welfare of Cephalopods in Research	Printed publication	SAGE Publishers	23/11/2015	2,000.00

How will this Dissemination contribute to the achievement of the Grant Period Goals?

Synthesize and analyze the available knowledge on cephalopod biology, physiology and welfare,Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.

Title	Type	Publisher/provider	Expected date of Release	Cost(EUR)
To be defined	Multi-media	To be defined	23/12/2015	5,000.00

How will this Dissemination contribute to the achievement of the Grant Period Goals?

Contribution to the development of noninvasive/automated techniques for assessing physiological status of cephalopods.,Development of online databases as guidance and inventory of alternatives.,Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare.,Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.

Title	Type	Publisher/provider	Expected date of Release	Cost(EUR)
To be defined	Leaflet / Brochure	to be defined	23/12/2015	600.00

How will this Dissemination contribute to the achievement of the Grant Period Goals?

Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.

Title	Type	Publisher/provider	Expected date of Release	Cost(EUR)
Action Website maintenance	Action Website	to be defined	23/12/2015	1,400.00

How will this Dissemination contribute to the achievement of the Grant Period Goals?

Development of online databases as guidance and inventory of alternatives.,Further development of the CephInAction CWI (Cephalopod Welfare Index) database-project by collection of statements (from scientific literature and best-practice), identification of animals' needs, thus facilitate the linking of 'statements' to biological 'needs' in order to determine indicators of cephalopods welfare.,Dissemination and Educational activities. Development of an EU accredited Training School Programme for Cephalopod Biology and Care in compliance with Directive 2010/63/EU.

Total Disseminations	12,000.00
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#### OERSA

Item	Cost(EUR)
Bank charges	143.50