



Deliverable D7.1.2

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Project Acronym:	COSMOS	
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Deliverable title:	Updated Outreach activity plan (including publications)	
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Lead Beneficiary:	13:UBHam	
WP Title	Outreach and Training	
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Actual delivery date:	30 September 2013	
WP leader:	Ulrich Günther	UBHam
Contributing partner(s):	UBHAM, EMBL-EBI, UB	

Authors: Reza Salek, Marta Cascante, Ulrich Günther, Karen Atkins



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1 Executive summary

The aim of this deliverable is to summarize outreach activity by the partners:

1. Report on COSMOS related publications
2. Report on news article related to COSMOS activate and media relate
3. Link to websites and article references to COSMOS

2 Project objectives

With this deliverable, the project has reached or the deliverable has contributed to the following objectives:

No.	Objective	Yes	No
1	Report on the COSMOS related publications	X	
2	Report of COSMOCS meetings, workshops, conference and presentations	X	
3	Report on news articles and media activity related to COSMOS	X	
4	Link to websites and articles where there is a reference to COSMOS	X	
5	Future Outreach plans	X	

3 Detailed report on the deliverable

3.1 Background

We will initially employ the usual channels for the disseminations of COSMOS standards, including scientific publications, workshops and presentations at



metabolomics conferences to reach the wider metabolomics community. The project will plan activities adequately resourced devoted to dissemination for specialised constituencies and the general public, in particular for awareness and educational purposes. The dissemination plan deliverable will consider adequate messages about the objectives of the project and its societal and economic impact. The tools we will use will include web-based communication, press releases, brochures, booklets, multimedia material, etc. The 'dissemination material' will be regularly updated to provide the latest version of the project status and objectives. In all material produced in all dissemination activities we will properly acknowledge the source of funding by prominently placing the FP7 and the European Commission logos.

3.2 Description of Work

3.2.1 COSMOS related publications

To date, 13 publications related to COSMOS have been published, with further papers in press or in preparation.

3.2.2 Workshops, Meetings, Conferences and Presentations

Metabolomics Society 2013 Conference SECC, Glasgow 30 June to 4 July
<http://www.metabolomics2013.org/page/workshops>

- 10.00 - 12.00 Workshop 1B: Workshop on Metabolomics Data Dissemination, Standardization and Exchange (COSMOS/MetaboLights/NIH common funds Session)
- Background General Metabolomics Standards and Data Storage and Data Exchange in Different Standard Formats; **Reza Salek, EMBL-EBI, UK**
- Hands on MetaboLights Tools and Data Submission using clSACreator; Kenneth Haug, **EMBL-EBI, UK**, **Philippe Rocca-Serra, Oxford e-Research CentreCentre, UK** & **Reza Salek, EMBL-EBI, UK**
- Overview COSMOS (COordination Of Standards In MetabOlomicS) Initiative on Metabolomics Standards **Christoph Steinbeck, EMBL-EBI, UK**
- Introduction to the NIH Common Funds Metabolomics Consortium, Regional Comprehensive Metabolomics Research Cores" (RCMRC), Data Repository and



Coordination Center (DRCC) Philip F. Smith, National Institute of Diabetes and Digestive and Kidney Diseases, USA

- Discussion with Users and Participants Moderator: **Marta Cascante, Universitat de Barcelona, Spain & Christoph Steinbeck, EMBL-EBI, UK**
- Workshop on Mass Spectrometry and NMR in Metabolomics, Metabolomics Society 2013 Conference SECC, Glasgow 30 Jun 4 July (**Dr Tim Ebbels**)

Dr. Vitaly Selivanov and Ms. Miriam Tarrado, University of Barcelona. Marta Cascante and Miriam Tarrado presented two posters (detailed in Poster presentation section). Vitaly Selivanov gave an oral presentation: *Kinetic modeling applied to the analysis of ¹³C tracer distribution in metabolites: new life for the old tool.* Vitaly Selivanov. (Parallel session 1B: fluxomics; 2nd July 2013, 11:45-12:00h).

EMBL-EBI Metagenomics course 9-11 September 2013: Managing, Analysing and Visualising Data Course <http://www.ebi.ac.uk/training/course/metagenomics-course>, **Reza Salek, EMBL-EBI, UK**

MetaboLights and the French Metabolomic and Fluxomic Network 10 - 12 june 2013 Amiens, MetaboLights and COSMOS talk and workshop - Kenneth Haug, **EMBL-EBI, UK & Reza Salek, EMBL-EBI, UK**

- https://colloque.inra.fr/7_js_reseau_francais_metabolomique_fluxomique
- Bordeaux RFMF members invited COSMOS for a talk and workshop during **RFMF** annual scientific days in 2013: MetaboLights and the **French Metabolomic and Fluxomic Network** 10- 12 june 2013 Amiens, MetaboLights and COSMOS talk and workshop; **Reza Salek, EMBL-EBI, UK**
- https://colloque.inra.fr/7_js_reseau_francais_metabolomique_fluxomique

Conference on 12 June: 11h00 - 11h45: *MetaboLights: towards a new COSMOS of metabolomics data management.* **Reza Salek**, Cambridge, Royaume-Uni.

ISMAR 19 -24 May 2013 Brazil WW-NMR/COSMOS Workshop, Metabolomics Methods and New Standards an introduction to WW-NMR and COSMOS

- 8:30 - 9:00 COSMOS, **R Salek, & C. Steinbeck, EBI** - Progress in Metabolomics Standardization
- 9:00 - 9:25 **Ulrich Guenther, Birmingham** – Deciphering metabolic changes in cancer using metabolic fluxes
- 9:25 - 9:50 **Claudio Luchinat, Florence**. Intra- and inter-individual variability in metabolomic NMR profiles: challenges and opportunities

Birmingham - MetaboLights and COSMOS, May 1-2 2013 Workshop, **R Salek, & C. Steinbeck, EBI**

The HUPO Proteomics Standards Initiative, Liverpool 15 -17 April 2013 **R Salek, EBI** <http://www.psidev.info/presentations-hupo-psi-2013>

COSMOS and MetaboLights Hackathon at EMBL-EBI 8-12 April 2013 **R Salek, & C. Steinbeck, EBI**

Biocuration [6th International Biocuration Conference](http://www.ebi.ac.uk/biocuration2013/) Cambridge, UK, April 7-10, 2013 **R Salek, & C. Steinbeck, EBI** <http://www.ebi.ac.uk/biocuration2013/>

10th e-Infrastructure Concertation Meeting 6-7 March 2013 The Hotel, Brussels **R Salek, EBI** and **Claudio Luchinat, Florence** <http://indico.ebi.ac.uk/indico/conferenceDisplay.py?confId=1217>



EMBO Practical Course on Metabolomics Bioinformatics for Life Scientists February 25- March 1, 2013

<http://www.ebi.ac.uk/training/course/embo-practical-course-metabolomics-bioinformatics-life-scientists> **R Salek, & C. Steinbeck, EB, Jules Griffin MRC**

Cambridge University, genetic Department Bioinformatics: Introduction to Metabolomics, metabolomics standard and databases. **R Salek, EBI**

- Graduate School of Life Sciences, Fri 01 Feb 2013
- Graduate School of Life Sciences, Mon 25 Mar 2013
- Graduate School of Life Sciences, Wed 31 Jul 2013

COSMOS nmrML workshop Florence, Italy 13-14 December 2012, **M. Wilson (U. Alberta), R. Salek (EBI), C. Steinbeck (EBI), D. Schober (U. Freiburg), J. Hao (Imperial College), U. Guenther (U. Birmingham), C. Ludwig (U. Birmingham), C. Deborde (U. Bordeaux), A. Moing (U. Bordeaux), L. Mannina (U. Roma La Sapienza), F. Capozzi (U. Bologna), H. Schaefer (Bruker Biospin), A. Rosato (CIRMMP), C. Luchinat (CIRMMP), P. Turano (CIRMMP), L. Tenori (CIRMMP)**

IPB nmrML Hackathon 30 Sep to 4 Oct 2013, Leibniz Institute of Plant Biochemistry, Halle, Germany (**Dr Jie Hao, Imperial College**), Attended & presented at nmrML hackathon, 30 Sep to 4 Oct 2013, Leibniz Institute of Plant Biochemistry, Halle, Germany (**D. Jacob, UNIVERSITE VICTOR SEGALEN BORDEAUX II UB2 France**)

Two meetings were planned to synchronize the work of COSMOS with the EURODISH activities:

- Teleconf on the 30th of July 2013 (strategic)
- Meeting with the technical people on the 12th of August 2013

Metabolic Pathway Analysis 2013 Meeting. Oxford, England, UK. 16-20 September 2013; Meeting attended by **Dr. Vitaly Selivanov, University of Barcelona**. Vitaly Selivanov gave an oral presentation: *An analysis of compartmental structure of central metabolic pathways based on ¹³C tracer distribution in metabolites*. Vitaly Selivanov. (Session I: Analysis Techniques for Metabolic Networks; 17th September 2013, 09:40-10:10h).

38th FEBS Congress. Saint Petersburg, Russia. 6-11 July 2013; Congress attended by **Dr. Marta Cascante and Dr. Vitaly Selivanov, University of Barcelona**. Vitaly Selivanov gave an oral presentation: *Multistationary and oscillatory modes of free radicals generation by the mitochondrial respiratory chain*. Vitaly Selivanov. (Session III-S14: "Mitochondriology": new approaches in bioenergetics; 8th July 2013, 19:25-19:40h).

NMR in Biology – Special Activity Symposium. Satellite Symposium in 38th FEBS Congress. Saint Petersburg, Russia. 9th July 2013 Symposium attended by **Dr. Marta Cascante, University of Barcelona**. Marta Cascante gave an oral presentation: *Combined study of microarray expression and NMR metabolic profile as a powerful approach to identify potential chemopreventive activity of natural products*. Marta Cascante. (9th July 2013, 18:55-19:20h).

COSMOS Stakeholders meeting 2013. Glasgow, Scotland, UK. 1st of July 2013, 14:00-16:15h

Presentation with paper in proceedings (**LEIBNIZ-INSTITUT FUR PFLANZENBIOCHEMIE IPB Germany**): **Schober D., Mayer G., Moing A., Eisenacher M., Neumann S.**, Ontological analysis of controlled vocabularies used in PSI/MSI supported XML standards, Workshop: ODLS 2013, GI-Edition Lecture Notes in Informatics, *Proceedings of the Jahrestagung der Gesellschaft für Informatik 2013*, Matthias Horbach (Hrsg.), Koblenz, Germany, 16.-20. September 2013, p. 1875-1888,



- **Presentations at IPB:**
 - **[Metabolomics Interest Group]** Talks and COSMOS Workshop on NMR data Standards at the IPB:
 - Dr. Ian A. Lewis, Princeton University, Institute for Integrative Genomics: rNMR: open source software for NMR data analysis, 01.10.2013 @16:15 Kurt-Mothes-Saal, IPB
 - **Dr. Philippe Rocca-Serra**, Technical Coordinator ISA-TOOLS.org, University of Oxford "Disseminating and Publishing Experimental Data while Complying with Community Requirements: The ISA experience", 02.10.2013 @10:00 Saal in Phytotechnikum <https://wiki.imise.uni-leipzig.de/Gruppen/OBML/Workshops/2013-ODLS-en>
 - Round table discussions with *local NMR groups (A Porzel Lab)*, 01.10.2013 @16:15 Kurt-Mothes-Saal, IPB

The objectives and collaborators of COSMOS were presented within a special session at the first 2 days of the **French MetaboHUB project** on 25th and 26th of October 2012, INRA Villenave d'Ornon, France, and the standardization efforts were mentioned in following Meetings of MetaboHUB contortium in Toulouse, France (9 September 2013) and Clermont-Ferrand, France (8 October 2013).

- MetaboHUB is a French project "Infrastructure d'avenir" which aims at building a national Facility for metabolomics and fluxomics. Start: 1st January 2013. Coordinator: Dominique Rolin (Dominique.Rolin@bordeaux.inra.fr, University of Bordeaux, France).
- Attended & presented at "COSMOS and MetaboLights" hackathon, EMBL-EBI Cambrige, UK 8-12 April 2013 (**D. Jacob, UNIVERSITE VICTOR SEGALEN BORDEAUX II UB2 France**)
- EU COSMOS meeting 2013. Leiden, Netherlands. 11-12 March 2013 (A. Moing & D.Jacob & B. Dartigues; **D. Jacob, UNIVERSITE VICTOR SEGALEN BORDEAUX II UB2 France**)
- Cross-Exchange with the Max Planck institute molecular plant physiology at Golm 22 April - 3 May 2013 (**B. Dartigues**)
- EUROMAR July 2nd 2013, Crete, lecture by **Ulrich Guenther**, University of Birmingham.
- METAFLUX Workshop Budapest, Oct 22nd with presentations by **Ulrich Guenther, Christian Ludwig (University of Birmingham) and Marta Cascante (University of Barcelona)**. Presentation of COSMOS software concepts.
- NETTAB 2012 workshop focused on, Integrated Bio-Search November 14-16, 2012, Como, Italy.

Poster presentation:

- Metabolomics Society 2013Glasgow
 - Future of metabolomics standards; role of COSMOS. R. Salek
- Biocuration conference Cambridge
 - MetaboLights: submission pipeline and curation challenges for metabolomics experiments
- 9th Annual International conference of the Metabolomics Society, Metabolomics 2013. Glasgow, Scotland, UK.1-4 July 2013. **Oxford Team members.**
 - Targeting cell cycle regulation in cancer therapy. M. Tarrado-Castellarnau, S. Diaz-Moralli, A. Miranda, M. Cascante
 - Metabolic characterization of a metastatic prostate cancer stem cell subpopulation.
 - E. Aguilar, S. Marin, T. Celià-Terrassa, O. Meca-Cortés, J.J. Centelles, T.M. Thomson, M. Cascante



3.2.3 COSMOS related news articles, and media activity

MetaboNews: MetaboLights - The new EBI Metabolomics database: Kenneth Haug, Dr. Reza M. Salek, Pablo Conesa, Tejasvi Mahendraker, Dr. Mark Williams, Dr. Julian L. Griffin, Dr. Christoph Steinbeck

MetaboNews 03/2013;

(http://www.metabonews.ca/Mar2013/MetaboNews_Mar2013.htm#spotlight):

ABSTRACT MetaboLights - The new EBI Metabolomics database. Over the past ten years a significant number of databases for Metabolomics have been created, differing in the types of data, species and applications they cover. Recently, efforts are underway to establish large-scale repositories for metabolomics data as they exist for the other omics areas, both in Europe as well as in the United States.

MetaboNews, September 2013:

Metabointerview with Dr Tim Ebbels, highlights work of COSMOS.

http://www.metabonews.ca/Sep2013/MetaboNews_Sep2013.htm#MetabolInterviews

The UB: partner of the European project COSMOS to generate and promote new models to exchange metabolomics data: News of Universitat de Barcelona, 04/2013

(http://www.ub.edu/web/ub/en/menu_eines/noticies/2013/04/091.html)

The UB: partner of the European project COSMOS to generate and promote new models to exchange metabolomics data: News of Fundació Bosch i Gimpera, 04/2013

(<http://www.fbg.ub.edu/index.php/en/home-7/18-noticies/699-13-projecte-cosmos-eng>)

BioSilMeC jointly organizing the project COSMOS-FP7: News of the XRQTC (Xarxa de Referència de Química Teòrica i Computacional), 02/2013

(<http://www.xrqtc.com/index.php/en/News/biosiimec-jointly-organizing-the-project-cosmos-fp7.html>)

Brochure, BioTOP Annual Report 2013, BioTOP is an organization that coordinates health- and bioscience-related research and commercial activities in the Berlin/Brandenburg region
<http://www.healthcapital.de/fileadmin/biotop/Dokumente/BioTOPics/BioTOPics46.pdf>

NewsLetter COSMOS 2013 : [NewsLetter-COSMOS\(CGFB/CBIB\)](http://www.CGFB/CBIB)

3.2.4 Websites and articles referring COSMOS

Website related to COSMOS:

- <http://sourceforge.net/projects/cosmos-fp7/>
- <http://cosmos-fp7.eu/nmrML/>
- <https://github.com/nmrML/nmrML/wiki>
- <http://www1.imperial.ac.uk/medicine/people/t.ebbels/>
- <http://www.bq.ub.es/bioqint/Proyectoseng.html>



- A web link towards COSMOS website added in News on Bordeaux Metabolome Facility website : <http://www.cgfb.u-bordeaux2.fr/en/metabolome>
- A github repository for Xeml Lab Designer-version 1.0 (for Linux, Windows and Mac). <https://github.com/cbib/XEML-Lab>

3.3 Next steps

1. Preparation of a COSMOS related publication ready for submission
2. Prepare a specific New Article, distribute as a pdf newsletter.
3. Further links to WEB sites.
4. Update press release after establishment of online tools.

4 Publications

1. The MetaboLights repository: curation challenges in metabolomics.; DOI: 10.1093/database/bat029, PMID: 23630246, PMC: PMC3638156 URL:<http://europepmc.org/abstract/med/23630246>; Salek RM, Haug K, Conesa P, Hastings J, Williams M, Mahendraker T, Maguire E, González-Beltrán AN, Rocca-Serra P, Sansone SA, Steinbeck C, *Database: the journal of biological databases and curation*, 2013, vol. 2013, pp. bat029
2. Dissemination of metabolomics results: role of metabolights and COSMOS.; GigaScience 05/2013; 2(1):8. DOI:10.1186/2047-217X-2-8, Source: [PubMed](#); Reza M Salek, Kenneth Haug, Christoph Steinbeck https://www.researchgate.net/publication/257888072_The_role_of_reporting_standards_for_metabolite_annotation_and_identification_in_metabolomic_studies?fulltextDialog=true
3. The role of reporting standards for metabolite annotation and identification in metabolomic studies.; GigaScience 10/2013; 2(1):13. DOI:10.1186/2047-217X-2-13, Source: [PubMed](#); Reza M Salek, Christoph Steinbeck, Mark R Viant, Royston Goodacre, Warwick B Dunn
4. MetaboLights: towards a new COSMOS of metabolomics data management.; October 2012, Volume 8, Issue 5, pp 757-760. doi:10.1007/s11306-012-0462-0; Steinbeck C, Conesa P, Haug K, Mahendraker T, Williams M, Maguire E, Rocca-Serra P, Sansone SA, Salek RM, Griffin JL
5. MetaboLights--an open-access general-purpose repository for metabolomics studies and Nucl. Acids Res. (2012). doi:10.1093/nar/gks1004
6. Haug K, Salek RM, Conesa P, Hastings J, de Matos P, Rijnbeek M, Mahendraker T, Williams M, Neumann S, Rocca-Serra P, Maguire E, González-Beltrán A, Sansone SA, Griffin JL, Steinbeck C



7. Green tea phenolics inhibit butyrate-induced differentiation of colon cancer cells by interacting with monocarboxylate transporter 1.: *Biochim Biophys Acta.* (2013) **1832**(12): 2264-2270. doi: 10.1016/j.bbadi.2013.08.009. Sánchez-Tena S, Vizán P, Dudeja PK, Centelles JJ, Cascante M.
8. Grape antioxidant dietary fiber inhibits intestinal polyposis in ApcMin/+ mice: relation to cell cycle and immune response.: *Carcinogenesis.* (2013) **34**(8): 1881-1888. doi: 10.1093/carcin/bgt140.; Sánchez-Tena S, Lizárraga D, Miranda A, Vinardell MP, García-García F, Dopazo J, Torres JL, Saura-Calixto F, Capellà G, Cascante M.
9. Gracie K., Correa E., Mabbott S., Dougan J.A., Graham D., Goodacre R., Faulds K. "Simultaneous Detection and Quantification of Three Bacterial Meningitis Pathogens by SERS". submitted to *Chemical Science*.
10. An efficient spectra processing method for metabolite identification from 1H-NMR metabolomics data, Daniel Jacob, Catherine Deborde & Annick Moing, *Anal Bioanal Chem* (march 2013) doi:10.1007/s00216-013-6852-y (<https://www.ncbi.nlm.nih.gov/pubmed/23525538>)
 - a. MetaboLights, COSMOS and the open standard nmrML are mentioned in this paper.
11. The MetaboLights repository: curation challenges in metabolomics. Salek RM, Haug K, Conesa P, Hastings J, Williams M, Mahendraker T, Maguire E, González-Beltrán AN, Rocca-Serra P, Sansone SA, Steinbeck C. *Database : the journal of biological databases and curation*, 2013, vol. 2013, pp. bat029
12. MetaboLights--an open-access general-purpose repository for metabolomics studies. Haug K, Salek RM, Conesa P, Hastings J, de Matos P, Rijnbeek M, Mahendraker T, Williams M, Neumann S, Rocca-Serra P, Maguire E, González-Beltrán A, Sansone SA, Griffin JL, Steinbeck C. *Nucl. Acids Res.* (2012). doi:10.1093/nar/gks1004
13. The Risa R/Bioconductor package: integrative data analysis from experimental metadata and back again. Alejandra Gonzalez-Beltran, Steffen Neumann, Eamonn Maguire, Susanna-Assunta Sansone and Philippe Rocca-Serra. *BMC bioinformatics*, in press

5 Delivery and schedule

The delivery is delayed: Yes No

6 Adjustments made

N/A

7 Efforts for this deliverable

Institute	Person-months (PM)	Period



	actual	estimated	12
1:EMBL-EBI	1		
7:UB	1		
13:UBHAM	0		
Total	2	1	

Appendices

1. N/A

Background information

This deliverable relates to WP7; background information on this WP as originally indicated in the description of work (DoW) is included below.

WP7 Title: Outreach and Training
Lead: Ulrich Günther, UBHam
Participants: Ulrich Günther

This work package will provide a close link between the COSMOS consortium and the wider metabolomics and the biomedical community. We will raise community awareness for the services provided by the COSMOS consortium, from data submission support to different views on metabolomics data, but also for the increasingly stringent requirements for data availability as part of the metabolomics publication process. Through the existing framework of the Metabolomics Society, we will ensure broad community input into the services developed by the COSMOS consortium and the standards for Metabolomics data representation developed in this proposal. This deliverable relates to WP7; background information on this WP as originally indicated in the description of work (DoW) is included below.

Work package number	WP7	Start date or starting event:	Month 1
Work package title	Outreach and Training		
Activity Type	COORD		



Participant number	1: EMBL-EBI	2: LU/NC	7: UB	13UBHam			
Person-months per participant	8	2	4	8			
Objectives							
<ol style="list-style-type: none">1. Provide link between the COSMOS consortium and the wider metabolomics and the biomedical community2. Raise community awareness for the services provided by the COSMOS consortium3. Collect broad community input into services developed by the COSMOS consortium							
Description of work and role of participants							
<p>We will initially employ the usual channels for the disseminations of COSMOS standards, including scientific publications, and workshops and presentations at metabolomics conferences to reach the wider metabolomics community.</p> <p>The project will plan activities adequately resourced devoted to dissemination for specialised constituencies and general public, in particular for awareness and educational purposes. The dissemination plan deliverable will consider adequate messages about the objectives of the project and its societal and economic impact.</p> <p>The tools we will use will include web-based communication, press releases, brochures, booklets, multimedia material, etc. The 'dissemination material' will be regularly updated to provide the latest version of the project status and objectives. Electronic and/or paper versions of this 'dissemination material' will be made available to the Project Officer beforehand for consultation and upon its final release.</p> <p>In all material produced in all dissemination activities we will properly acknowledge the source of funding by prominently placing the FP7 logo and the European Commission logo.</p> <p>We will create and maintain the consortium website in an open source content management system. The website will have an EU domain such as www.cosmos-fp7.eu. This website will have a specific COSMOS branding with a professionally designed COSMOS logo to reflect the collaborative and international nature of the consortium. The COSMOS website will allow for content management by the partners, additional component (intranet, calendar, web site search), advanced analytics, functional testing, and communication via mailing lists. COSMOS will also build close links between the COSMOS consortium and the European and International metabolomics community, and the wider biomedical community. For this COSMOS will build on existing links with other EU and International initiatives (e.g. EU projects including the ESFRI infrastructures ELIXIR, BioMedBridges, EU Openscreen, and the IRSES Word Wide NMR to build links international</p>							



stakeholders in China, specifically the Wuhan metabolomics center, India, and South America). Moreover, COSMOS will build links metabolomics groups in Canada (HMDB, Wishart) and the US (BMRB; see letters of support), both running major metabolomics WEB portals. COSMOS will also build an intensive dialog between mass spectrometry and NMR instrument vendors, search engine providers, experimentalists, data resources, and journal offices. This will require travel funds for all COSMOS stakeholders. Stakeholders are key members and opinion makers of the wider metabolomics community worldwide, in particular the USA, Canada and Japan. These will be invited to workshops and the annual stakeholder meetings where COSMOS standards are disseminated. COSMOS will react dynamically to requests from participants and outside advisors. The stakeholder meetings will preferably be held attached to the annual Metabolomics society meeting or the MetaboMeeting, where the majority of the metabolomics community is present.

Two ELearning WEB tutorials on "Metabolomics Data Deposition" through COSMOS will be made available through partner websites, links from conferences, and announcements on the project web site. The tutorials will be step-by-step 20-30 minutes guides to "Metabolomics Data Deposition and Dissemination through COSMOS". These tutorials need to be carefully scripted, rehearsed and produced in the Media Production room of the Wellcome Trust Genome Campus. We expect that COSMOS standards will be adapted quickly considering this wide-spread array of dissemination channels involved.

Task 1: Development of outreach material (Website, flyer, brochures, etc)

Task 2: Publication of results in scientific journals

Task 3: Presentation of work of the consortium at conferences, in particular the MetaboMeeting and the annual meeting of Metabolomics Society.

Task 4: Development and dissemination of a web tutorial about the workflows and standards developed in this consortium.

Task 5: Provide training workshops on Metabolomics data deposition, dissemination and access through the general EBI outreach department. (EMBL-EBI)

Deliverables

No.	Name	Due month
D7.1.1	Outreach activity plan (including publications)	2
D7.1.2	Updated Outreach activity plan (including publications)	12
D7.1.3	Updated Outreach activity plan (including publications)	24
D7.2	Report on the COSMOS consortium website	2
D7.3.1	Report on annual stakeholder meetings	12
D7.3.2	Report on annual stakeholder meetings	24
D7.4.1	Web-based tutorial	18



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24

D7.4.2 Updated web-based tutorial	24
D7.5.1 Report about training workshops	24
D7.5.2 Report about training workshops	36