

## D7.2 Structure and first incentives for electronic community enabling social learning, hosted on a web-based platform

**EQIPD – GA 777364  
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### European Quality In Preclinical Data

#### WP7 - E-learning course on scientific quality

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<sup>1</sup> Use one of the following codes:

R: Document, report (excluding the periodic and final reports)  
 DEM: Demonstrator, pilot, prototype, plan designs  
 DEC: Websites, patents filing, press & media actions, videos, etc.  
 OTHER: Software, technical diagram, etc.

<sup>2</sup> Please choose the appropriate reference and delete the rest:

PU = Public, fully open, e.g. web;  
 CO = Confidential, restricted under conditions set out in Model Grant Agreement;  
 CI = Classified, information as referred to in Commission Decision 2001/844/EC.

Description of Work	Version	Date
	V2.0	28 January 2019

## Document History

Version	Date	Description
V1.0	10 April 2019	First Draft
V2.0	03 May 2019	Final Version after comments from WP members

## Publishable Summary

The current deliverable concerns the structure and first incentives for the electronic community enabling social learning, hosted on a web-based platform. Social learning is where individuals learn and develop their knowledge with and through others, for instance through coaching, exploiting workplace networks and other collaborative and co-operative actions, such as e-communities. Additionally, social learning is a process in which individuals may observe the behaviour of others and its consequences, and modify their own behaviour accordingly. For the EQIPD Learning Environment, social learning (e.g. through social media and the EQIPD summer school) and educational learning (i.e. the e-learning program) will be combined in one learning environment, to maximize the effect of both learning strategies.

The first structure for social learning has been provided through the initiation of dedicated LinkedIn, Facebook and Twitter accounts. Social learning is also enabled in the yearly EQIPD summer school. Furthermore, we have developed a pilot version of the EQIPD Learning Environment on the EQIPD website. This pilot Learning Environment consists of three components: E-learning, social media and summer school. The latter two components serve to increase visibility of relevant social media channels and further promote social learning.

## Methods

### 1. Social media initiation

The first structure for social learning has been provided through the initiation of dedicated LinkedIn, Facebook and Twitter accounts. Links to these accounts are listed below:

- LinkedIn: <https://www.linkedin.com/groups/12074241/>
- Facebook: <https://www.facebook.com/EQIPD/>
- Twitter: <https://twitter.com/EQIPD>

Social media accounts are predominantly managed by consortium member ECNP. Consortium members who have a LinkedIn account were added to the EQIPD LinkedIn group and invited to post messages. A Facebook page was created, and consortium members were invited to suggest posts and comment on posts. Consortium members who are active on Twitter were invited to post messages related to EQIPD directly from the EQIPD account, or by using the #EQIPD.

### 2. EQIPD summer school

The first EQIPD summer school was held at the Radboudumc from September 10<sup>th</sup> – September 14<sup>th</sup>, 2018 (see appendix 1 for the program). The general theme was preclinical data quality, with special emphasis on internal validity, experimental design and statistics, systematic reviews, and quality management and implementation. Learnings from this summer school went into the design of a subsequent spring school organized by the EQIPD consortium member ECNP and held in February/March 2019 in Athens (Greece). Preparations for subsequent EQIPD summer schools are ongoing.

### 3. Development of the Social Learning section on the pilot EQIPD Learning Environment

We have developed a pilot version of the EQIPD Learning Environment on the EQIPD website (see: <https://quality-preclinical-data.eu/learning-environment/>). We have structured this pilot Learning Environment around three components:

- Social media (social learning)
- Summer school (social learning and experiential learning)
- E-learning (educational learning)

In the social media section, links to the EQIPD social media accounts have been collated on one webpage: <https://quality-preclinical-data.eu/learning-environment/social-media/>. To this page we have also added links to other relevant resources where users can find information and discussions on preclinical evidence synthesis, good research practice, etc. We invite users to suggest additional resources in order to create a list which is as complete as possible.

The Summer School webpage (<https://quality-preclinical-data.eu/learning-environment/summer-school/>), offers information on the previous and upcoming EQIPD summer schools. The contact form provides users with the opportunity to contact EQIPD if they are interested in participating or learning more about the summer school.

In the E-learning section, a webpage has been set up on which a draft version of the E-learning program is being developed (<https://quality-preclinical-data.eu/learning-environment/eqipd-e-learning-modules/>)

## Results

### 1. Social media usage

The EQIPD Twitter account, which has been set up in February 2019, has 7 tweets, 39 likes, 34 followers and follows 48 (status date: 3/5/2019). EQIPD is referred to by various accounts (consortium members and non-consortium members) on Twitter using #EQIPD. The EQIPD Facebook page has ~20 posts, is followed by 43 users and has 38 likes (status date: 30/4/2019). The EQIPD LinkedIn Group has 77 members and 12 posts and 27 likes (status date: 3/5/2019). All three EQIPD social media channels are promoted on the ECNP website, and in the EQIPD newsletter.

### 2. EQIPD summer school

The 2018 summer school was a success and received a very positive evaluation from the participants (see appendix 2 for the evaluation statistics). There were 13 participants, 5 of which were EQIPD consortium members, and the other 8 were from several institutions in the Netherlands. Over the course of 5 days, participants engaged in lectures, practical assignments and discussion groups, supervised by 11 lecturers (8 of which were from the EQIPD consortium). The summer school provided many opportunities for networking and exchange of ideas among participants and lecturers.

The second edition of the EQIPD summer school is planned for the summer of 2019.

### 3. Development of the Social Learning section on the pilot EQIPD Learning Environment

The pilot Learning Environment pages on the EQIPD website have been developed as described above.

## Conclusion

It is concluded that this deliverable has been achieved, since (1) a number of social learning initiatives have been established (including social media and the EQIPD summer school), and (2) a pilot of the web-based Learning Environment has been instigated on which these resources are collated. We will continue to promote the use of these social learning resources among EQIPD members and others, through our dissemination channels.

## Repository for primary data<sup>3</sup>

Not applicable

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<sup>3</sup> Suggested headings

## Appendix 1 – EQIPD summer school 2018 program

**Dates:** September 10<sup>th</sup> -14<sup>th</sup> 2018

**Venue:** Radboud university medical center, Nijmegen, The Netherlands. Street address: Geert Grootteplein 21 or 27, route 127, Nijmegen

### Day-to-day program

#### Day 1 (Monday September 10<sup>th</sup>)

EQIPD: Why are we here? (i.e. why do we need to address preclinical data quality?)				
#	Time	Mins	Topic	Lecturer
1	9:00	15	Welcome, summer school objectives, program preview	Kim Wever
2	9:15	45	Introduction of participants and lecturers: Who are you? Why did you join this summer school? What have been your successes and challenges so far? What do you hope to learn?	Everyone
3	10:00	60	Lecture: Origins of poor data robustness	Thomas Steckler
	11:00	30	<i>Break</i>	-
4	11:30	60	Lecture: Rigor in preclinical research	Malcolm Macleod
5	12:30	30	Discussion: Stakeholders in research rigor: who is in the greatest need of higher research quality standards? E.g. industry, academia or CROs? Young scientists or mature researchers?	Thomas Steckler, Malcolm Macleod and Lee Monk
	13:00	60	<i>Lunch</i>	-
6	14:00	45	Lecture: Preregistration to deal with researcher degrees of freedom [N.B. room Huygen A/B]	Marcel van Assen
7	14:45	60	Journal Club preparation: Study examples of papers illustrating the need for higher standards in research rigor [N.B. room Huygen A/B]	Martien Kas
	15:45	15	<i>Break (flexible, during JC preparation)</i>	-
8	16:00	45	Journal club: discuss our findings and possible solutions [N.B. room Huygen A/B]	Martien Kas
9	16:45	15	Closing remarks [N.B. room Huygen A/B]	Martien Kas
	17:00		<i>End</i>	-
	18:00		<i>Joined dinner</i>	-

#### Day 2 (Tuesday September 11<sup>th</sup>)

Improving robustness of animal studies: design and execution				
#	Time	Mins	Topic	Lecturer
1	9:00	45	Lecture: Bias in primary research, what is it and how do we prevent it? Bias versus heterogeneity versus confounding Major types of bias part 1 - Selection bias, performance bias, and detection bias	Judith van Luijk
2	9:45	25	Practical: Formulating bias domains and measures to reduce the risk of selection bias, performance bias, and detection bias	Kim Wever and Judith van Luijk
3	10:10	20	Interactive discussion of practical session	Kim Wever and Judith van Luijk
	10:30	15	<i>Break</i>	-
4	10:45	20	Lecture: Major types of bias part 2 - attrition bias and reporting bias	Kim Wever
5	11:05	15	Practical: Formulating bias domains and measures to reduce the	Kim Wever and

Improving robustness of animal studies: design and execution				
#	Time	Mins	Topic	Lecturer
			risk of attrition bias and reporting bias	Judith van Luijk
6	11:20	15	Interactive discussion of practical session	Kim Wever and Judith van Luijk
7	11:35	55	Practical: hands-on randomisation and blinding	Cathalijn Leenaars
	12:30	60	Lunch	-
8	13:30	60	Lecture: Study design (exploratory vs confirmatory research, randomization, blinding, the importance of preregistration and implementation challenges	Anton Bernalov
9	14:30	20	Preclinicaltrials.eu: it's development, use and implementation	Mira v/d Naald
	14:50	15	Break	
10	15:05	30	Open discussion: Use of lab journals – what they are and why are they important?	Anton Bernalov and Lee Monk
11	15:35	45	Lecture: Beyond study design: Broad assessment of Risks of Bias (with reference to the first Open Discussion on Day 1)	Anton Bernalov
12	16:20	10	Closing remarks	Anton Bernalov
	16:30	0	End	-

### Day 3 (Wednesday September 12<sup>th</sup>)

Improving robustness of animal studies: analysis and reporting				
#	Time	Mins	Topic	Lecturer
1	9:00	60	Lecture: Best Practice in the use of animals for scientific purposes - An Australian perspective [N.B. room Mertens F]	Kieron Rooney
2	10:00	30	Lecture: Types of data and how to describe them [N.B. room Mertens F]	Kim Wever
	10:30	15	Break	-
3	10:45	30	Lecture: Power and p-values [N.B. room Mertens F]	Kim Wever
4	11:15	30	Lecture: Choosing a statistical test [N.B. room Mertens F]	Kim Wever
5	11:45	45	Lecture: Presenting data in publications [N.B. room Mertens F]	Kim Wever
	12:30	60	Lunch	-
6	13:30	60	Lecture and practical: researcher degrees of freedom in statistical testing	Kim Wever
7	14:30	30	Lecture: an introduction to reporting guidelines	Judith van Luijk
8	15:00	60	Practical: assessing reporting quality according to the ARRIVE guidelines, using the IICARUS training	Judith van Luijk
	16:00		End	-

**Day 4 (Thursday September 13<sup>th</sup>)**

Hands-on training in systematic reviews of animal studies				
#	Time	Mins	Topic	Lecturer
1	09:00	30	Quiz and lecture: Introduction to systematic reviews of animal studies	Rob de Vries
2	09:30	15	Lecture: Comprehensive searching: identifying 'all' relevant studies	Judith van Luijk
3	09:45	60	Practical: Developing comprehensive search strategies	Rob de Vries and Judith van Luijk
4	10:45	15	Practical: Screening and selecting studies (inclusion/exclusion)	Judith van Luijk
	11:00	15	Break	-
5	11:15	25	Practical: External validity and extracting study characteristics	Rob de Vries
6	11:40	20	Lecture: Assessing internal validity (risk of bias) in the context of SR, tools	Judith van Luijk
	12:00	60	Lunch	-
7	13:00	30	Practical: Performing a risk of bias assessment	Judith van Luijk
8	13:30	60	Lecture: Data extraction and meta-analysis	Rob de Vries
	14:30	15	Break	-
9	14:45	65	Practical: Meta-analysis	Rob de Vries and Judith van Luijk
10	15:50	10	Recap Quiz and closure	Judith van Luijk
	16:00		End	-

**Day 5 (Friday September 14<sup>th</sup>)**

Quality management systems and implementation of measures to improve research rigour				
#	Time	Mins	Topic	Lecturer
1	9:00	45	Lecture: Quality management systems <ul style="list-style-type: none"> <li>• The relevance and benefits of having QMS for research</li> <li>• How much of what and when? (culture, systems and processes)</li> <li>• The impacts of the absence of a fit-for-purpose QMS</li> </ul>	Lee Monk
2	09:45	75	Interactive Workshop: QMS	Lee Monk
	11:00	15	Break	-
3	11:15	30	Open discussion: Exceptions when the standards discussed during this course cannot be implemented	Lee Monk and Thomas Steckler
4	11:45	30	Culture of tolerating negative results: from identifying key stakeholders to real-life examples and implications	Thomas Steckler
5	12:15	15	Guided Brainstorming: How to cope with the "negative" consequences of higher research quality standards (e.g. less positive data, lower chances to get published in a high IF journal, etc.)?	Lee Monk and Thomas Steckler
6	12:30	15	Closing remarks (what are take home messages that stuck with the participants?) & adjourn	Everyone
	12:45	60	(optional: lunch for those who do not have immediate travel arrangements)	Everyone

Appendix 2 – EQIPD summer school 2018 evaluation

