DECISION

DEcompensated CIrrhoSIs: identification of new cOmbiNatorial therapies based on systems approaches

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D6.4 Codes of conduct applicable and research integrity policy including publications in journals

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Abbreviations

ACLF	Acute-on-chronic liver failure
CIOMS	Council for International Organizations of Medical Sciences
ALLEA	All European Academies
LERU	League of European Research Universities
DORA	Declaration on Research Assessment
GDPR	General Data Protection Regulation (EU) 2016/679
OA	Open Access
ICMJE	International Committee of Medical Journal Editors
EFClif	European Foundation for the study of Chronic Liver Failure
FCRB	Clinic Foundation for Biomedical Research
IDIBAPS	August Pi i Sunyer Biomedical Research Institute
Erasmus MC	Erasmus University Medical Center
EUR	Erasmus University Rotterdam
INSERM	French National Institute of Health and Medical Research
APC	Article Processing Charge
ANR	French National Research Agency
GUF	Goethe University Frankfurt
UKA	Uniklinikum Aachen
CEA	French Alternative Energies and Atomic Energy Commission
NBM-FMS	The Miguel Servet Foundation
GLP	Good Laboratory Practice
UCL	University College London
UKRI	UK Research Councils
ICS	L'Institut Català de la Salut
UB	University of Barcelona
COSCE	Confederation of Scientific Societies of Spain
CBUB	University of Barcelona's Bioethics Commission

COPE	Committee on Publication Ethics
OBD	UB Bioethics and Law Observatory
AP-HP	Assistance Publique-Hôpitaux de Paris
EASL	European Association for the Study of the Liver
CoI	Conflict of Interest
ELPA	European Liver Patients' Association

Executive Summary

This document is an analysis of the current codes of good conduct published by each member of the DECISION project: Here, we discuss what is included in the DECISION partners' code of conduct, any references to national or international guidelines, how easily accessible the relevant information is from the home page and the general usefulness of the document for the members of the institutions themselves and the public. Institutional policies on open access publishing are also included in the discussion. Finally, we conclude with a list of recommendations for the code of conduct to be used in DECISION based on the best examples extracted from the DECISION partners.

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1 Introduction

A code of conduct is an essential document for any public or private institution, which serves to provide clear guidance to its staff (and students) on the standards of conduct expected. This therefore can transmit to the public, in a transparent manner, what these standards are and how they are being met by public and private institutions.

Medical research carried out within the scientific and healthcare sector is often for the direct benefit of society as a whole, in the form of new treatment options for some of our most prevalent diseases, and new diagnostics and prevention interventions. While great advancement is being made in this sector, society can often feel left in the dark about exactly what goes on at the institutions and hospitals that they themselves fund with their tax contributions. We are beginning to see a disconnect between science and society, which we want to rebuild through responsible research initiatives. We are now facing a rise in "the empowered citizen", one who is autonomous in his/her healthcare decisions and has a desire to know their options and what is the best healthcare plan for them and why. This, coupled with the rise of social media and open science has enabled citizens to delve into new scientific and healthcare discoveries and has increased their curiosity to know more about exactly what goes on behind what many consider to be "closed doors". The scientific and healthcare community must now respond to this increased demand for transparency. Codes of good scientific practice are not a new concept. The community has long been in possession of best practice 'guidelines', from the famous Nuremburg Code[1] of 1947 to the Council for International Organizations of Medical Sciences (CIOMS) international ethical guidelines for health-related research involving humans[2], first published in 1983. Considering the great cultural, social and economic differences that affect the way each country carries out its research activity, it can be difficult to draw up one set of guidelines that will apply to every country. Further to this, while the professional associations of many countries have now drawn up good practice guidelines, they differ in which institutions adopt them or opt to draft their own.

With this in mind, it is suggested that these international codes of conduct act as templates to be followed by each country or institution to draft their own code of conduct, with rules and policies specific to their national structure and systems, that will identify with both their workforce and citizens. In the European context, the All European Academies (ALLEA), a consortium of 50 academies from almost all EU member states, has completed this endeavour with their European Code of Conduct for Research Integrity[3], first published in 2017. This important document is intended to serve as a framework of self-regulation for the European research community. The ALLEA Code states four core principles of good research practice: reliability, honesty, respect, and accountability, and gives recommendations on how to respond adequately to violations of these principles. This particular code has been cited by many of the institutions involved in DECISION as a reference code.

The Singapore Statement on Research Integrity[4], published in 2010, states that it is "*intended to challenge governments, organizations and researchers to develop more comprehensive standards,*

[1] The Nuremberg Code (1947). (1996). BMJ, 313(7070), 1448-1448. doi: 10.1136/bmj.313.7070.1448

[2] Revised CIOMS International Ethical Guidelines for Health-Related Research Involving Humans. (2017). JAMA, 317(2), 135. doi: 10.1001/jama.2016.18977

[3] The European Code of Conduct for Research Integrity. (2017). Retrieved 20 December 2019, from https://www.allea.org/wp-content/uploads/2017/05/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017.pdf

[4] Singapore Statement on Research Integrity. (2010). Retrieved 20 December 2019, from https://wcrif.org/guidance/singapore-statement

codes and policies to promote research integrity both locally and on a global basis". Like the ALLEA code, the Singapore Statement also lays out four basic principles for research integrity: Honesty, accountability, professional courtesy and fairness, and good stewardship. While the two documents differ slightly in their chosen principles, the overall idea is the same: responsible research, with a solid foundation of integrity and ethical principles, is vital to all disciplines, worldwide, and will increase the validity of results and the trust in scientific research by the public. Both the ALLEA Code and the Singapore Statement are frequently cited as the inspiration for many national and institutional codes of conduct. Indeed, within the DECISION project, and as stated in Article 34 of the DECISION Grant Agreement "*beneficiaries must respect the fundamental principle of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity*".

Regardless of the chosen 'guide code', (there are many very good, comprehensive options aside from those mentioned above), it is imperative that research institutions, as well as other public and private bodies associated with or involved in research projects, have a code of conduct for research integrity or good practice. With no clear guidelines, procedures or principles, it is left to the responsibility of individuals to decide what good research practice is. In reality, many issues that may arise in this environment, whether they could be ethical dilemmas or issues with conduct, can often be "grey areas", and many researchers can be left feeling out of their depth in deciding what "the right thing to do" is. Any person working in research, irrespective of the discipline, may at some point face one of these dilemmas. Having a clear and available code of conduct and a contact person to anonymously discuss it with is fundamental to ensuring that staff feel supported and able to make good choices and speak up when they see others doing less. By attempting to regulate and eradicate research misconduct, institutions can take one step further towards valid, reproducible results, that will benefit all of society.

In addition to the researchers themselves, the public also benefits from seeing an institutional code of conduct. When made easily available on the website, members of society can access a code of conduct and be assured that this is something that is a top priority for public institutions and handled in a correct and transparent manner. In an ever more connected society, where the public are increasingly aware of high-profile misconduct cases, it is vital that instructions are clear on their policies, take research misconduct seriously and protect their reputation as public institutions of good practice. Transparency is the key word when it comes to an institutes code of ethical conduct and its position and accessibility on their website. This sends a very clear message to its employees and the public, that not only are its actions consistent with its ethical values, but that by being transparent with these, it is more than ready to be held accountable. Research is a multidirectional process with many actors, trust between them is therefore paramount for the validity of the final result. Publicizing an ethical code of conduct is a great way for an organization to demonstrate its commitment to its values.

However, research nowadays is not only performed by public institutions. The rise of large cross-border collaboration projects such as the DECISION programme, often include private companies, hospitals, and non-profit organizations. In addition to this, the meteoric rise in next generation technologies and big data projects has also seen the inclusion of software development and data management and protection companies. With this comes a whole host of additional privacy protection and financial issues that must be taken into account, addressed and dealt with in a transparent manner.

While not all of the actors in these large projects carry out basic scientific research themselves, they are implicated in the data processing, have access to the results, and are therefore just as responsible for the outputs as the researchers themselves. Therefore, it is recommendable that these private entities also take the time to develop a code of good conduct, relevant to the work

they carry out. This may include for example, a code of conduct for non-profit organizations on ethical conduct in accepting donations and working with other private entities, transparency in their financial and governance reporting, and a clear statement on their accountability.

Advice on what to include in a code of conduct can be found in any of the documents listed above, taken as international and national frameworks, but one very useful document in this sense is that published by the league of European research universities (LERU): *Towards a Research Integrity Culture at Universities*[5]. This report is focused on ways in which research institutions can promote a culture of research integrity and trustworthy research. One very useful feature of the report is the examples given by the universities that form the LERU (DECISION partners include the University of Barcelona and University College London) on how they are implementing good research practices at their institutions. In addition to this, LERU have also published an advice paper "Open Science and its role in universities: a roadmap for cultural change"[6]. The main idea highlighted here is the importance of the cultural change needed at research institutions to move to an open science model. The current system of evaluation of scientific research and publications, and the researchers themselves, based on impact factors and subscription-based publishing models is something that many research institutions are trying to move past. This, however, is a notion engrained in academia, and it will be a great effort on behalf of all of those involved to change this mentality. The document highlights eight areas of open science (the future of scholarly publishing, FAIR data, the European Open Science Cloud, education and skills, rewards and incentives, next-generation metrics, research integrity, and citizen science) and the advantages and challenges that each will pose. What is needed to bring about this change? Adequate resources and leadership; targeted measures; transparency, accountability and monitoring; and trust and confidence in the shared vision. The declaration on research assessment (DORA)[7] is a worldwide initiative developed in 2012, covering all scholarly disciplines and stakeholders, which aims to change the way scholarly output is assessed. The recommendations include a decreased reliance on journal impact factors, assessment of research on its own merits, and capitalizing on the increase in online resources and publications. Research institutions can sign the DORA declaration if they are in accordance with its principles.

For data management and software companies, the introduction of the General Data Protection Regulation (EU) 2016/679 (GDPR)[8] in the EU must also be addressed. These companies should now be compliant with these regulations and include exactly how they achieve this in a code of good practice. It is important that members of the private sector involved in large projects such as DECISION, are held to the same integrity standards as their public counterparts, to ensure that all members know which standards each one holds and how they deal with privacy issues and misconduct.

[5] Towards a Research Integrity Culture at Universities (2020). LERU. https://www.leru.org/publications/towards-a-research-integrity-culture-at-universities-from-recommendations-to-implementation

[6] Open Science and its role in universities: a roadmap for cultural change (2018). LERU. https://www.leru.org/publications/open-science-and-its-role-in-universities-a-roadmap-for-cultural-change

[7] The San Francisco Declaration on Research Assessment (DORA). https://sfdora.org/ (Accessed 16 March 2020)

[8] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance)

https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576845353123&uri=CELEX%3A32016R0679

In addition to research integrity, there is also a general push in the direction of the Open Access (OA) publishing model. Currently, beneficiaries of Horizon 2020 funding "*must ensure open access to all peer-reviewed scientific publications relating to its results*", therefore all partners of DECISION are obliged to implement this regarding the results produced from their research under the project. The International Committee of Medical Journal Editors (ICMJE) have published their recommendations for the conduct, reporting, editing and publication of biomedical and clinical research, which have been updated in 2019[9]. Updates to this document include widening the concept of conflict of interest to the broader term "disclosure of relationships and activities", which includes not only those directly related to the work, but those topically related, too. This will be important for the project partners to take into consideration when disclosing their own conflict of interests in future publications, and also something to consider when defining conflicts of interest in their code of good practice. By taking a clear stance on disclosure of conflicts of interest institutions can demonstrate their commitment to transparency and building public trust in scientific research.

A quality code of conduct should be clearly written, easy to read and readily accessible for members of an institution and the public alike. In the following, we present the status quo of code of conduct documents and relevant open access policies of the DECISION partners.

2 European Foundation for the study of chronic liver failure

The European Foundation for the study of Chronic Liver Failure (EFClif) is a private non-profit organization that promotes research and education in Chronic Liver Failure. This organisation is the coordinating institution of the DECISION research project. As EFClif is not a research centre it does not have a Code of Ethical Research Conduct, however, the website[10] provides information on how personal data is handled according to the GDPR guidelines, and also provides a very useful table of Data Protection Rights and definitions of important terms such as "Erasure" and "Withdrawal of Consent" for trial participants.

3 Fundació Clínic per a la Recerca Biomèdica

The Clinic Foundation for Biomedical Research (FCRB) is a non-profit organization founded by members of the Hospital Clínic and the University of Barcelona. FCRB is "*dedicated to promoting, managing and conducting biomedical research and innovation and teaching activities related to healthcare sciences*". The August Pi i Sunyer Biomedical Research Institute (IDIBAPS) is part of FCRB and constitutes the research centre. From the website homepage, all of the important documents can be found in the 'Transparency Portal'[11], which is located at the bottom of the homepage. Once in the transparency portal, users will find three links to the transparency portals of Hospital Clínic, IDIBAPS and the FCRB. All three portals are in Catalan. Efforts will be made to provide English translations on the website and on the associated documents. These three portals will be analyzed separately below:

[9] Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals (2019) *International Committee of Medical Journal Editors* http://www.icmje.org/news-and-editorials/icmje-recommendations_annotated_dec19.pdf

[10] EFClif Privacy Policy https://www.efclif.com/privacy-policy

[11] Fundació Clínic Transparency Portal https://www.clinicbarcelona.org/portal-de-transparencia

3.1 Transparency Portal IDIBAPS and Clinic Foundation for Biomedical Research at Hospital Clínic de Barcelona

IDIBAPS has written their own code of good governance[12] for their board members, published in 2016. This centres around the following 13 points: diligence, loyalty, fidelity, independence, confidentiality, information, transparency, abstention due to conflict of interest, selection of investments, dedication, compliance with legislation and law, and self-evaluation. The code then goes on to describe the rights of the board members, including the guidelines for decision-making processes (voting and veto rights), and the right to all the information, among others. In addition, IDIBAPS describes how all governance documents and information shall be made available to the public through the website and in a way that is intelligible to any citizen. Although this code is very complete for the board of governors, it is recommendable that IDIBAPS, as a research institute, have a code of good scientific practice to complement this.

The code of good governance of IDIBAPS[13] is shared with FCRB[14]. In the IDIBAPS and Fundació Clínic annual report[15], there are mentions of ethical review in the transversal research groups section. One of the main lines of research for the clinical pharmacology group, which provides support activities in pharmacovigilance and pharmacoepidemiology, is ethics in clinical research. The Research Ethics Committee at Hospital Clínic is entitled to review research protocols.

Regarding Open Access publications, this is not mentioned in the code of good governance, however, IDIBAPS do encourage their research groups to publish in open access by participating in events such as Open Access Week.

4 Erasmus University Medical Center

Information regarding scientific integrity is easy to find from the homepage of the Erasmus MC, under the "Research>Scientific integrity" tab. Firstly, it is clear that this institute has prioritized education on scientific integrity for its staff members with a mandatory course on the subject for all first year PhD students[16]. This is highly recommended as it ensures that all incoming researchers have the same knowledge basis regarding the standards expected by their institution, in addition to the standards for research integrity of the industry in general.

4.1 Erasmus MC Research Codes

Erasmus MC has published their own in-house research code document[17], which is split into three sections and is available in Dutch and English:

1. Academic Integrity
2. Intellectual Property

[12] IDIBAPS Code of Good Governance (2016) https://transparencia.idibaps.org/sites/transparencia.idibaps.org/files/general/codi_bon_govern_0.pdf

[13] IDIBAPS Transparency Portal https://transparencia.idibaps.org/

[14] Hospital Clínic Barcelona Transparency Portal https://transparencia.clinic.cat/

[15] IDIBAPS and Fundació Clínic annual report https://www.clinicbarcelona.org/en/idibaps/about-us/scientific-memories

[16] Erasmus MC PhD-course on Scientific Integrity https://www.erasmusmc.nl/en/education/education-opportunities/wetenschappelijke-integriteit-cursus

[17] Erasmus MC Research Codes > "Our Research Codes" https://www.erasmusmc.nl/en/research/scientific-integrity

3. Patient Data and Biomaterial

The preface specifies the responsible person for each section and provides their contact information for further information. The first section concerns the Erasmus MC policy for publication, and begins by stating that "*all research results should, regardless of funding issues, be available for publication in scientific or specialized literature*". This section lays out the rules for authorship, including how "gift authorship" should not be permitted, as it diminishes the value of authorship. One very useful part of this section is that it lists the type of valid author contributions, which could be useful for researchers in deciding who can be listed as an author on a paper. This section for authorship is an important addition to the code of conduct as this is often one of the most contentious issues in research, and any document which sets out the principles clearly is surely a great help to staff in avoiding misconduct.

The next section deals with guidelines on academic misconduct. This section begins by stating that it fully endorses The Dutch Code of Conduct for Scientific Practitioners. They state that the key concepts are professionalism, teamwork, and fair play, and that those associated with Erasmus MC in any way are responsible for abiding by and disseminating these guidelines. The code lists nine actions which may be considered scientific misconduct, which include falsification of data, theft of intellectual property, plagiarism, and deliberately falsely interpreting data. Details on how one can anonymously report scientific misconduct are also depicted.

Chapter three focuses on guidelines regarding gifts and favours from companies. The introduction states that is it the responsibility of the individual to decide how to behave in this situation, and that "*the primary consideration must be scientific and general independence, reliability, diligence and impartiality*". Regarding interaction with pharmaceutical companies, Erasmus MC follows The Netherlands Medicines Act. The section defines what is considered a "gift" and what monetary limits apply. Gifts over 50 euro are not to be accepted and those that can be shared with colleagues are preferred. The guidelines are clear that any paid invitations can never be exchanged for anything whatsoever, and that staff are to be reminded that gifts are sometimes given with ulterior motives.

Intellectual Property is the subject of chapter four, and sets out the guidelines for staff on patents, copyright, trademarks etc. It is preferable for research institutes to put this information in the code of conduct to prevent any further disputes on this in the future. Lastly, research involving patient data and biomaterial is discussed. This section specifies that "*patient material may be used only within the limits imposed by the informed consent procedure or the declaration of "no objection""*. This section also contains a helpful Q&A of frequently asked questions at the end of each sub-section, which may help clarify any doubts for the reader.

Overall, this code of conduct is very well written, easy to understand, and contains clear information on what Erasmus MC expects from its employees. Besides its own Research Code, Erasmus MC also abides by the Code of Conduct for research of the Association of universities in the Netherlands of 2018[18] and the revised European Code of Conduct for Research Integrity[19].

4.2 Erasmus MC Open Access Policy

The Erasmus MC medical library is partnered with the Erasmus University Rotterdam (EUR), and states clearly on the website that it supports open access publishing. On the EUR website, it states

[18] Netherlands Code of Conduct for Research Integrity (2018) https://www.nwo.nl/en/policies/scientific+integrity+policy/netherlands+code+of+conduct+for+research+integrity

[19] The European Code of Conduct for Research Integrity (2017) https://allea.org/code-of-conduct/

that "*The policy of the Erasmus University is that all scholarly publications have to be made available in Open Access*". For those who wish to publish in Gold Open Access, they can apply to the Erasmus Open Access Fund[20], which will cover the costs of the article processing charges (APC) for those who have no other funding source or sponsor.

5 French National Institute of Health and Medical Research (Inserm)

5.1 Inserm Scientific Integrity

Inserm defines scientific integrity as "*all of the rules and values that must govern research in order to ensure its honesty and scientific rigor*". This section is well placed on the website under the Research tab, and begins by listing four pints to which scientific integrity concerns:

- the conduct of research projects
- the dissemination of knowledge and scientific communication
- the supervision of students
- the conduct of evaluations and expert appraisals

On the dedicated webpage for scientific integrity[21], Inserm states that it was a pioneer in France when it created the office for Scientific integrity, therefore it is clear that this has been a priority for the institution for a long time. The office aims to promote debate and thinking on scientific integrity and what it involves, promote the standardization of practices, and increase dissemination of good research practices.

Regarding published codes of conduct, Inserm follows The European Code of Conduct for Research Integrity and the Ethics and Scientific Integrity Charter of the French National Research Agency (ANR)[22]. The French Charter for Research Integrity was signed in 2015 by a number of large French research institutes and is based on the ALLEA Code, the Singapore Statement and the European Charter for Researchers, and in line with the HORIZON 2020 framework. All researchers at the involved institutes are advised to comply by the principles mentioned in the Charter, which include compliance with legislation, communication, impartiality, collaboration and training.

Inserm is also part of the TRUST consortium, and links their document Global Code of Conduct for Research in Resource-Poor Settings[23]. This document provides guidelines for researchers working in this field based on the following ethical principles: fairness, respect, care and honesty, and states that:

"*Those applying the Code oppose double standards in research and support long-term equitable research relationships between partners in lower-income and high-income settings based on fairness, respect, care and honesty*".

[20] Erasmus University Rotterdam - Erasmus Open Access Fund https://www.eur.nl/en/library/research-support/open-access/erasmus-open-access-fund

[21] Inserm Scientific Integrity Office https://www.inserm.fr/en/gouvernance-organisation/delegation-integrite-scientifique

[22] French National Research Agency (ANR) French Charter for Research integrity (2015) https://www.hceres.fr/sites/default/files/media/downloads/2015_French_RI_Charter_0.pdf

[23] Global Code of Conduct for Research in Resource-Poor Settings (2018) https://www.globalcodeofconduct.org/

5.2 Inserm Ethics

In addition to the section on scientific integrity, Inserm has also dedicated a webspace to ethics[24]. This webpage is split into three sections: The Inserm Ethics Committee, Research on Human Subjects and the Use of Animals for Research Purposes. The Inserm ethics committee describes itself as a "*fully fledged stakeholder in the dialogue between the scientific and medical research community and wider society*" and intends to support staff in the ethical design of their work, consider how innovation should be carried out and to promote debate on the ethical issues arising from medical research[25]. The ethics committee also carries out Theme-Based Think Tanks[26], which publish documents and memos on their discussions and work. Themes include: Gender issues, research with embryos and stem cells, organoids, incidental findings, and the ethics of innovations. Some of these topics are very current and relevant and the resources linked by the committee are very useful for those working at Inserm and non-staff alike. Additionally, the ethics committee also holds workshops for French and international experts working in interdisciplinary fields to discuss the ethical implications of their work. Recent workshops include "*Fostering global responsible research with CRISPR-Cas9*" and "*Towards a sustainable sharing of data & samples collected during trials effectuated in resource-limited countries*".

One additional part of the Inserm website that is worth mentioning is the "Health Information" section. Here, the institute publishes dossiers on significant health-research related issues, with all the current documents and up to date knowledge. These are all ranked per reading time and difficulty, allowing for an easy-to-access content for all types of audiences, doing an excellent job in disseminating not only the work done by Inserm researchers, but also current knowledge on these important themes. Relevant documents include "Big data in health[27]" and "Artificial intelligence and health[28]"

5.3 Inserm Open Access

Inserm has its own institutional repository, HAL-Inserm, in which all research output must be deposited, thereby ensuring that all content is provided entirely open access. Additionally, the institution is a signatory of the 2013 Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities[29].

[24] Inserm Ethics https://www.inserm.fr/en/research-inserm/ethics

[25] Inserm Ethics Committee Missions https://www.inserm.fr/en/research-inserm/ethics/inserm-ethics-committee-cei/ethics-committee-missions

[26] Inserm Ethics Committee's Theme-Based Think Tanks https://www.inserm.fr/en/research-inserm/ethics/inserm-ethics-committee-cei/ethics-committee-theme-based-think-tanks

[27] Inserm Big Data in Health https://www.inserm.fr/en/health-information/health-and-research-from-z/big-data-in-health

[28] Inserm Artificial intelligence and health https://www.inserm.fr/en/health-information/health-and-research-from-z/artificial-intelligence-and-health

[29] HAL-Inserm https://www.inserm.fr/en/professional-area/scientific-and-technical-information/hal-inserm

6 Goethe University Frankfurt (GUF)

6.1 GUF Code of Conduct

Goethe University Frankfurt (GUF) has published a course related to the training of its doctoral students entitled "good academic practice"[30]. This tool is advised for junior researchers and is intended to familiarize them with the principles of good academic practice and with "possible situations and constellations where these standards will come under pressure".

In addition to this, GUF also has a policy on good scientific practice, published in PDF form[31]. The senate approved this document in 2005. In the preamble, it is stated that scientific misconduct "*undermines the public's trust in science, as well as among scientists themselves*" and that the document aims to raise awareness of good practice and limit the potential for misconduct. Included in the first part of the document are numerous subsections dealing with general principles, collaborations, supervision of junior scientists, the criteria for measuring achievement and performance, data storage and scientific publications. The second part of the document deals with avoiding scientific misconduct and outlines the universities procedure in dealing with misconduct. Importantly, the document states that university departments are "*expressly encouraged*" to teach the university's code of conduct in their curriculums.

While the code is written in clear language and is well laid out, it was not found via any of the links on the homepage, but rather by a search of "good practice" in the webpage search bar, which brings up the PDF only. It is not clear where on the website this document can be found, or if there is anymore information regarding the GUF policy on good research practice. It would be recommended that this document is made more visible from the homepage, for example, under the "Research" or "About the University" tabs.

6.2 GUF Open Access policy

The GUF OA policy itself is in German, however, there is plenty of other information on the website where one can find information on the different modes of OA publishing and the requirement of the EU funded projects to be available OA[32]. GUF offers the possibility to deposit articles in their online publication system.

7 Uniklinikum Aachen (University Hospital Aachen, UKA)

7.1 RWTH Aachen University Principles for Safeguarding Good Scientific Practice

RWTH Aachen University published the Principles for Safeguarding Good Scientific Practice document in the year 2000[33] and revised in 2019. The document consists of two sections, the first on Principles of Good Scientific Practice and the second on Procedure in the Event of Suspected Scientific Misconduct. The guiding principles for members of RWTH Aachen University are described as:

- *to work "lege artis,"*
- *to document their results and consistently to doubt their own findings,*

[30] Johann Wolfgang Goethe University eLearning "Good Academic Practice during Doctoral Studies" http://www.goethe-university-frankfurt.de/54293778/Good_Academic_Practice_during_Doctoral_Studies?)

[31] Johann Wolfgang Goethe University policy regarding good scientific practice (Approved 2003, updated 2005) http://www.uni-frankfurt.de/39848797/good_scientific_practice.pdf?

[32] GUF Open Access for Publications http://www.goethe-university-frankfurt.de/60764153/Open_Access

[33] RWTH Aachen University published the Principles for Safeguarding Good Scientific Practice (2000) https://www.rwth-aachen.de/global/show_document.asp?id=aaaaaaaaaazyckt

- *to be strictly honest with regard to the contributions of partners, competitors and predecessors,*
- *to avoid and prevent scientific misconduct*
- *adhere to the principles laid out* [in the document]

According to this section, young academic talent is particularly important and the responsibility to demonstrate proper scientific conduct rests with the head of the working group. Data retention and scientific publication is also stated to be the responsibility of researchers jointly. Regarding scientific misconduct, this is defined as "*the intentional or grossly negligent statement of falsehoods in a scientific or scientifically relevant context, the violation of intellectual property rights, or impeding another individual's research work*". This document extends this definition by stating that behaviours that lead to the misconduct of others is also classified as scientific misconduct. This document is very clear and conveys the serious tone of the theme very well. It is recommended that this document be placed on the website in a more accessible position. Under the Research tab, there is a document titled: Guidelines and Principles for Ensuring Good Academic Practice at RWTH Aachen from 28.04.2020, which appears to be the German version of the 2020 good practice guidelines[34].

All doctoral students are required to take and pass the course on "Academic Misconduct and Good Academic Practice"[35]. UKA has also published a code of conduct for dealing with third parties[36], which begins by stating the ethical principles of RWTH Aachen University, which are a responsibility towards society, honesty, and transparency among others. The next sections details how members should interact with third parties, such as maintaining scientific autonomy, guarding the reputation of the institution and the use of intellectual property. Other sections include conflicts of interest, bribery, sponsors and health and safety. The document is written clearly and offers well-structured advice to UKA members. The document was found via a google search, therefore, it is advisable to make this more accessible from the homepage to highlight its importance.

The Ethics committee is easily found from the homepage and states that it will evaluate research undertaken at the RWTH Aachen Faculty of Medicine or any of its affiliated institutions, for ethical issues and potential solutions.

7.2 RWTH Aachen University Open Access

The section on scholarly publishing and open access is very easy to find from the institutional homepage, and begins by stating that "*RWTH Aachen University Library supports you with the Open Access publication of your work*"[37]. A person to contact in case of any queries is listed, stating that the faculties can help with any APC payments and that the institute has deals with many publishers which may entitle a discount through the Library's institutional memberships. In addition to this,

[34] RWTH Aachen Guidelines for Good Academic Practice (2020) https://www.ub.rwth-aachen.de/cms/UB/Forschung/Wissenschaftliches-Publizieren/Wissenswertes-fuer-Autoren/~iign/Gute-wissenschaftliche-Praxis/lidx/1/

[35] Uniklinikum Aachen Courses on Academic Misconduct and Good Academic Practice https://www.medizin.rwth-aachen.de/cms/Medizin/Die-Fakultaet/Karriere/Weiterbildungsangebote/Erste-Schritte-zur-Promotion/~qhda/Kurse-GWP/?lidx=1

[36] Uniklinikum Aachen Code of conduct for dealing with third parties (2017) https://www.rwth-aachen.de/global/show_document.asp?id=aaaaaaaaabdcbko

[37] Open Access at RWTH Aachen University https://www.ub.rwth-aachen.de/cms/UB/Forschung/Wissenschaftliches-Publizieren/Wissenswertes-fuer-Autoren/~iigq/Open-Access-Die-neue-Art-zu-publizieren/lidx/1/

RWTH Aachen also encourages its members to use their internal repository to publish their work in their Publication Server.

8 The French Alternative Energies and Atomic Energy Commission (CEA)

The French Alternative Energies and Atomic Energy Commission (CEA) is a centre of excellence for research in renewable energy and technology for the physical and life sciences. They have published documents on sustainable radioactive waste management and their annual and financial reports. Regarding Scientific Integrity, the CEA has an internal document dedicated to this, published in the French language. This is an extensive document which begins with the CEA definition of scientific integrity:

"Scientific integrity includes all the rules and values that must govern the activity of research, to ensure that it is honest and scientifically rigorous.

Its purpose is to guarantee the reliability of research, which includes both the methods of conducting research activities and producing scientific results, according to the best standards of the scientific approach.

It differs from ethics, which addresses the major questions raised by the progress of science and its societal and environmental repercussions and invites us to question the human rights behaviours and the values on which they are based".

The CEA states that the European Codes of Conduct are the basis of its content and follows four ethical principles: Reliability, honesty, respect, and responsibility. What each of these principles implicates for researchers at the CEA is elaborated on in the following paragraphs, which give additional detail. Next, the CEA outlines what it considers to be breaches of scientific integrity: fabrication of results, falsification, and plagiarism. One very useful part of this section is that the CEA attempt to clarify what is considered to be the "Grey Zone" of research misconduct. This is a great addition to the code, as the majority of researchers are well aware that plagiarism etc. is not acceptable, but may also find themselves in this grey zone at some point in their career, and it is admirable that the CEA have acknowledged this in their code of conduct, and may give confidence to researchers to speak up in these situations. Included here is the "embellishment" of data, questionable publication practices, conflicts of interest, inappropriate supervision, unfair authorship, and wrong data retention and management practices. The code then ends by explaining how reports of scientific misconduct are handled. Regarding their publications, the CEA publish all of their technical and scientific documents online, and are available for the public to download in PDF form[38].

9 La Fundación Miguel Servet (NBM-FMS)

The Miguel Servet Foundation describes itself as "*a scientific and technical support platform for the development of research, innovation and training activities targeted at professionals in the public administration*". As a public entity that does not directly conduct scientific investigation or publish results, there is no code of good scientific practice or open access policy. However, there is a transparency section[39] where they publish all annual reports detailing their activity.

[38] French Alternative Energies and Atomic Energy Commission - Scientific and economic publications http://www.cea.fr/english/Pages/resources/scientific-and-economic-publications.aspx

[39] The Miguel Servet Foundation – Transparency https://www.navarrabiomed.es/en/navarrabiomed/transparencia

10 YH YouHealth AB

As the partner responsible for the implementation of systems-based results and predictive models, YouHealth AB is committed to implementing and ensuring the highest levels of patient data protection. To this end, the ethical guidelines for conducting experimental research of the Karolinska Institute[40] are referred to. Here, the institute has published nine guidelines to follow when conducting experimental research which include important points such as: correct experimental planning, design and logging, ethical review board approval and retention and management of the raw data. In addition to this, the Karolinska Institute Code of Conduct can also be referred to. There are Codes of Conduct[41] for all staff, new employees, and students, which must be read and signed, to ensure all have the same understanding and ethical standards to promote ethical research conduct.

11 Nordic Bioscience

Nordic bioscience is a biomarker development company. An in-house code of conduct has not been found, however the company do state that they comply with both Good Clinical Practice (GCP) and Good Laboratory Practice (GLP). In addition to this, in their privacy statement they include details of how and why they process personal data according to the GDPR. Regarding their laboratory analyses, Nordic Bioscience also state that:

"*Laboratory activities supporting clinical trials, including logistics, receipt of biological samples, analysis, data analysis quality control, sample storage, shipment and reporting. All aspects of laboratory services are conducted in compliance with international standards for Good Clinical Practice (GCP), and Good Clinical Laboratory Practice (GCLP)".*

12 University College London (UCL)

12.1 UCL Code of Conduct

Once inside the research section of the website, it is very easy to find the section dedicated to research integrity[42]. University College London (UCL) states here that it is "*fundamental that research should be conducted, and the results of research disseminated, honestly, accurately and in accordance with professional standards*". There are several sections following this, each with its own dedicated web space, including The UCL Statement on Research Integrity[43], The Nagoya Protocol, Policies and Guidelines and Training, among others. The link to the UCL code of conduct[44] is clear and once clicked, is accessible along with the institutional policy for handling misconduct[45]. The code itself was published in 2013 and starts with a statement saying that it should be understood in

[40] Guidelines for planning, conducting and documenting experimental research – Karolinska Institute https://staff.ki.se/sites/default/files/migrate/guidelines_experiment.pdf

[41] Karolinska Institute Code of Conduct https://staff.ki.se/code-of-conduct#:~:text=The%20code%20of%20conduct%20is,a%20psychosocial%20work%20environment%20perspective.

[42] UCL Research Integrity https://www.ucl.ac.uk/research/integrity/

[43] UCL Statement on Research Integrity (2015) https://www.ucl.ac.uk/research/integrity/sites/research_integrity/files/UCL-Statement-on-Research-Integrity.pdf

[44] UCL Code of Conduct for Research (2013) https://www.ucl.ac.uk/srs/sites/srs/files/code-of-conduct-research.pdf

[45] UCL Research Governance https://www.ucl.ac.uk/srs/governance-and-committees/research-governance

conjunction with the Research Councils UK Policy and Guidelines on Governance of Good Research Conduct[46]. Five main areas are covered in the code:

1. Professional and personal integrity of researchers
2. Process of research design
3. Publication process
4. Leadership responsibilities
5. Institutional responsibilities

Personal integrity is highlighted as very important for UCL researchers in the second section, with the ability to perceive conflicts of interest and being honest and transparent in all stages of the research process. Principles relating to the storage of data, external collaborations, risk assessments and responsibility of principle investigators are covered in section three. Section four involves publication ethics, copyright and authorship. Next, research group leaders are said to be responsible for compliance with safety, ethics and any other legal standards, risk assessments, checking the work of the group and regular reviews. The code states that these tasks can be delegated to members of the team, as long as this is clear. Finally, institution responsibilities in the code seek to foster a culture of good practice among staff and include continually strengthening the ethics code and committee, providing training and a clear procedure for dealing with allegations of research conduct. The code finishes by providing a list of links to other UCL documents on issues such as misconduct allegations, copyright and health and safety, to be read together with the code of conduct. Overall, the code is clear, well written and accessible to staff and the public.

12.2 UCL Code of Ethical Principles

UCL have also written a general Code of Ethical Principles[47], with an annex of useful information, and some example questions a researcher may want to ask themselves when dealing with a situation, for example:

- Have you considered all those who might be affected by your decision and those who might criticize your decision…?
- Have you considered what could go wrong as a result of your decision…?
- How would you defend your actions if publicized in the media?

12.3 UCL Code of Conduct for Students

The Code of Conduct for Students[48] is part of the UCL Academic Manual 2019-20, and comprises its own chapter detailing how a UCL student should behave (honest, respectful of themselves, others and the environment, no drunken behaviour etc.), the duty of care that UCL will show for its students and the disciplinary code.

Overall, while the information is abundant, accurate, and very informative and clear, the 'Research' section of UCL is difficult to find from the general homepage, so much so, that only a google search for "UCL ethics" brought the user to the correct location.

[46] UK Research and Innovation Policy and Guidelines on Governance of Good Research Conduct. (2013, updated 2017). Retrieved 25 March 2020, from https://www.ukri.org/files/legacy/reviews/grc/rcuk-grp-policy-and-guidelines-updated-apr-17-2-pdf/

[47] UCL General code of ethical principles https://www.ucl.ac.uk/students/policies/conduct/ethical-principles

[48] UCL Code of Conduct for Students 2019-2020 https://www.ucl.ac.uk/academic-manual/chapters/chapter-6-student-casework-framework

12.4 UCL Research Funding Ethics Policy

UCL have also written an ethics code regarding their research funding (UCL Research Funding Ethics Policy[49]). The policy, written in 2014, lays out the terms for research funding and states a commitment to "focus the impact of UCL education and research on improving the lot of people around the world and respect for human rights, and countering ignorance, poverty, ill-health and political tyranny". UCL will not accept any funding from the tobacco Industry. It is clear in the guidelines that cases will be evaluated by the ethics committee.

12.5 UCL Sensitive Research

There is also a specific section dedicated to Sensitive Research[50], which UCL says "*carries with it particular risks that need to be managed*". UCL gives 10 points that make research sensitive, including research into 'risky' topics, research into terrorism or national security, culturally sensitive research, research in countries with strict law and dual use research. The university then goes on to give information and links to important internal and EU documents on how to evaluate and manage sensitive research. Misuse of research, data storage, ethical approval and UCL safety services are all included in this section. This is a very useful and informative resource for UCL personnel and those from other universities, who may be undertaking this type of research, or who just want to know more about it.

12.6 UCL Research Integrity Training

Regarding training in research integrity, UCL has a very comprehensive training plan[51] comprising four levels, the first two being mandatory for new staff and students, and the last two being dependent on the type of researcher and their needs. The university states that while it will not be mandatory for experienced researchers to do the basic courses (what is ethical research etc.), they will be required to train on UCL specific codes of conduct and ethical standards. According to UCL, the Research Integrity Training Framework will generate "*a culture of research integrity at UCL*", which will equip all staff with the means to ensure their research is ethical *"(e.g. appropriate research methods, thorough research data management, consideration of ethical issues, etc.)".*

12.7 UCL Open Access Policy

UCL declare on their OA homepage that they 'strongly support' this model of publishing[52]. They have an internal repository and their own OA publishing server UCL Press. Regarding OA funds, UCL has deals with various funding bodies, such as the Wellcome Trust and UK Research Councils (UKRI) to help pay APCs, but does state that the university itself has limited institutional funds for OA publishing, and allocates this on a first come first serve basis. Regarding Plan S[53] (an initiative to make all publicly funded research OA by 2021), UCL have announced their support for the movement, but were critical of its viability in their 2019 town hall discussion.

[49] UCL Research Funding Ethics Policy (2014) https://www.ucl.ac.uk/research/integrity/ucl-research-funding-ethics-policy

[50] UCL Sensitive Research https://www.ucl.ac.uk/research/integrity/sensitive-research

[51] UCL Research Integrity Training Framework https://www.ucl.ac.uk/research/integrity/research-integrity-training-framework

[52] UCL Open Access https://www.ucl.ac.uk/library/open-access/open-access-ucl

[53] Plan S https://www.coalition-s.org/

13 University of Padua

13.1 University of Padua Code of Conduct

The University of Padua has published its own code of conduct[54], which can be found online. This code covers a vast number of areas, from bribery and corruption to relations with the public. The general ethical principles are written in and state that an employee must observe "*integrity, fairness, good faith, balance, objectiveness, transparency, equity, and reasonableness, and acts with independence and impartiality, avoiding conflict of interest*". These principles are in accordance with other DECISION members codes of conduct and those of the EU. The code additionally covers conduct in private relationships and states that no university position should be used to gain benefits. This is a very through and exhaustive code and conduct, which goes beyond just ethical principles, however, it is not necessarily the most accessible. Firstly, the code itself was found through a google search, and was not accessible from the website or the homepage. Secondly, the layout of the code could be improved to make it more readable, with different colours and fonts.

The university of Padua also states on its website that it also follows The European Charter for Researchers[55], which is described as "*a framework for researchers, employers and funders which invites them to act responsibly and as professionals within their working environment, and to recognise each other as such*". This charter endorses transparency, public engagement, professional responsibility, and ethical principles.

13.2 University of Padua Open Access

Information on open access is very easy to find from the university's library website[56]. This university was one of the first signatories of the Messina declaration, which was the consortium of Italian research institutes supporting the Berlin declaration. Open access to the universities research output forms the bases of the universities Open Access policy, available in Italian. The university also states that it regularly holds conferences and open days explaining and promoting open access. This is a great example of public outreach and engagement and could serve as an example to other institutes hoping to increase public knowledge of open access. On their dedicated open access webpage, the institute explains the differences between the green and gold routes of open access publishing and provides information on self-archiving and the benefits of publishing in this model. The Padua Research Archive (PRA)[57] is the institution's repository for scientific research output, where all that is deposited is published in Open Access. Overall, this section of the webpage is very positive and contains all the necessary information for staff who wish to know more about the institutional policy on open access.

[54] University of Padua Code of Conduct (2010) https://www.unipd.it/sites/unipd.it/files/2017/Code%20of%20conduct%20of%20the%20University%20of%20Padua.pdf

[55] The European Charter for Researchers https://euraxess.ec.europa.eu/jobs/charter/european-charter

[56] The University of Padova and Open Access http://bibliotecadigitale.cab.unipd.it/en/publishing_EN/OA

[57] The Padua Research Archive (PRA) http://bibliotecadigitale.cab.unipd.it/en/publishing_EN/research-archives

14 University of Bologna (UNIBO)

14.1 UNIBO Code of Conduct

The University of Bologna (UNIBO) code of conduct[58] is easily found from the homepage (University > Who we are > Ethical Code of Behaviour) and has been in force since 2014 in the university statute. The code is split into three sections as follows:

- ***Section 1:*** *Ethical Principles of the University*
- ***Section 2:*** *Rules of Conduct in Teaching and Research Activities*
- ***Section 3:*** *Rules of Conduct in Service Activities*

Within each section are several chapters which further specify the topic. This is a great way to lay out a code of conduct and it makes it easy to navigate and clear to understand. Section one starts by explaining the purpose and scope of the code:

"*The Code identifies the fundamental values of the university community, promotes the recognition of and compliance with personal rights and freedoms, as well as the acceptance of ethical and social duties and responsibilities towards their institution. It defines the rules of conduct within the community and towards all persons who directly or indirectly enjoy relations with the University*"

The document then defines exactly what is meant by the terms used in the rest of the document, for example, the term "teaching staff" refers to not just current professors, but any visiting scholars and emeritus professors. It is generally a good idea to specify this at the beginning to avoid further confusion among staff about whether certain sections are applicable to them. Regarding ethical principles in academic integrity in research, "*Freedom, autonomy and excellence in research and teaching*", are those mentioned as fundamental to the institution. Quality and transparency of scientific work, and protection of intellectual property are also detailed further in this section. Other sections of particular interest are correct merit and fairness in hiring, selection and publication, which vastly help in the creations of equal opportunities. Independence from conflicts of interest, confidentiality and person data are covered next, with the university providing further detail of how employees should respond to these issues, while at all times avoiding conflicts of interest. Article 26 "Responsibilities in Research" states that one of the main responsibilities of a research group supervisor is "*Promote the conditions which allow each member to work professionally and with integrity*". Overall, this code is reminiscent of that of the University of Padua, in that it is very detailed and exhaustive, and is a great resource for members of the institute.

In addition to the overall code of conduct, UNIBO also has a Code of Ethics and Conduct[59] in Italian. This code is shorter and provides information on the following topics:

- *behaviours related to the conflict of interest*
- *the solicitation of gifts, compensation and other utilities*
- *behaviours in private relationships*
- *behaviour in service*
- *relations with the public*
- *supervision and monitoring of compliance with the obligations themselves*

[58] University of Bologna Ethical Code of Behaviour (2014) https://www.unibo.it/en/university/who-we-are/ethical-code-of-behaviour

[59] University of Bologna Code of Ethics and Conduct (2014) https://www.unibo.it/it/ateneo/bandi-di-gara/obblighi-di-comportamento

This document appears to act as a shorter and more accessible version of the overall code of conduct.

14.2 UNIBO Open Access policy

Like the code of conduct and ethics, the information on the institutional open access plan is also very easy to find from the website, under the same page as the code[60]. The full university policy on Open Access is published in a 5-page PDF in Italian, but will be summarized briefly here. The university states that, since 2017 "*Open Access policy implements the University's Ethical Code of Behaviour and promotes the open access principle as defined in the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities and in the Messina Declaration, both signed by the University of Bologna*", therefore it is clear that open science and open access to scientific output is a priority for the institute. Like the other members, Bologna reiterates that it firstly requires members to deposit all publication in the institutional platform, and if possible, publish with an open access journal, as supported by the University's memberships with publishers. The University's digital library, AlmaDL, also gives a wealth of information on open access, what it is and how members can participate on its webpage[61]

15 University of Turin (UNITO)

15.1 UNITO's Code of Conduct

The University of Turin (UNITO) has published its Code of the Defence of Dignity in Italian[62], which outlines the standards of behaviour and collaboration expected from staff members and details the complaints procedure. In addition to this, the university also has a code of ethics, first published in 2014[63]. The code contains several chapters, focussing on the following topics: responsibility, independence, personal interest, dignity and respect, transparency, value of merit, and non-discrimination. Overall, the code appears to cover the most important principles as stated by the university, however, it was very difficult to find online. It is recommended that the institution place this code of ethics in a more accessible place on the website.

15.2 UNITO's Open Access policy

Regarding open access, UNITO has a dedicated website for this[64], which contains a whole host of relevant information. On the homepage, there is a video explaining open access with cartoon, which is a great resource for anyone wanting a quick and accessible explanation. In addition to this, there are sections on open access in the context of Horizon 2020 and copyright, which is great for researchers of the university, many of whom may be funded by Horizon 2020 or navigating complicated guidelines on copyright issues. In the section "The University Regulations", the institute states that its 2013 document "University Regulation on open access" was "*the first university in Italy to adopt a regulation that subordinates the internal evaluation of a product to the deposit of the*

[60] University of Bologna Open Access https://www.unibo.it/en/university/who-we-are/open-access-and-open-science

[61] University of Bologna AlmaDL Digital Library https://sba.unibo.it/en/almadl/almadl-for-open-access/almadl-for-open-access

[62] The University of Turin Code of Conduct for the defence of dignity (2001) https://en.unito.it/about-unito/governance-and-organization/guarantee-committee

[63] The University of Turin Code of Ethics (2014) https://www.unito.it/sites/default/files/allegati/01-08-2014/cod_etico_comunita_universitaria.pdf

[64] The University of Turin Open Access https://www.oa.unito.it/new/

version allowed for Open Access". There are also detailed instructions and a FAQ on how to deposit one's research in the institutional repository. The addition of the FAQ for the most common problems is highly recommended on the website. Another great resource for members of the university and public alike, is the webpage on Open Science. Here, the following paragraph is used to introduce the universities position on open science:

"Open Science means making every step of research open, so that data and results are freely reusable and usable by everyone. The opposite of Open Science is not Closed Science but Bad Science, according to Jon Tennant, since the canons of Open Science are transparency, reproducibility, sharing. In other words, in addition to being reusable, the results are always verifiable; open science is nothing but science, done well."

There are links to many practical guidelines and useful website to help researchers make their output more open. This section of the website highlights how important this is to the university of Turin, and could act as a good example for other institutions wanting to improve their own information on open science.

16 The Catalan Institute of Health (L'Institut Català de la Salut, ICS-HUVH)

The Catalan Institute of Health is a public entity which aims to encourage economic, social and environmental sustainability, and contains seven research institutes. The three codes of good practice are easily found under the "Social and Corporative Responsibility" tab, and are titled as follows:

- Code of good governance of the Board of Directors (2020)[65]
- Code of good governance of the Steering Committee (2016)[66]
- Ethical code (2017)[67]

The first code mentioned is directed towards the ICS-HUVH board of directors, and contains a list of obligations of the board: diligence and integrity, loyalty, abstention from conflicts of interest, independence, confidentiality and discretion, transparency, discretion, selection of investments, compliance with the preparation of the corporate governance report, self-evaluation and compliance with regulation. These principles are common to see in a guideline of this type for the board of directors of a public entity and are shared in the second code of conduct for the steering committee. The ethics code is presented very nicely, the format is easy to read and accessible for staff members. The aim of the code is "*to promote ethical behaviour and encourage good practices, as well as highlighting to society at large, institutions and patients, the ethical commitment of all workers of the ICS with quality*". The values of the ICS-HUVH stated in the ethical code are competition, participation, commitment, equity, innovation and transparency. Furthermore, the code states that with scientific developments come changes in society which therefore require institutions to make their values and position clear. Overall, this ethical code is very well put together and conveys a real sense of social commitment and responsibility, appropriate for this level of organisation.

[65] L'Institut Català de la Salut Code of good governance of the Board of Directors (2020) http://ics.gencat.cat/web/.content/documents/info_corporativa/050320_Codi_bon_govern_CA.pdf

[66] L'Institut Català de la Salut Code of good governance of the Steering Committee (2016) http://ics.gencat.cat/web/.content/documents/info_corporativa/codi_comite_direccio.pdf

[67] L'Institut Català de la Salut Code of Ethics (2017) http://ics.gencat.cat/web/.content/documents/rsc/Codi_etic_ICS.pdf

Regarding open access, The ICS policy on this follows that of the Catalan Department of Health of 2015[68]. Specifically, this document recommends "*to professionals, research staff and teachers who provide services in the entities and centres of the public health system to publish the results of their professional and research activity in open access scientific journals*", and this practice is fully promoted. Additionally, all research funded by the Catalan Public Health Administration should be deposited in their repository Scientia[69].

17 University of Barcelona (UB)

17.1 Ethics and Research at the UB

Ethics and research at the University of Barcelona (UB) is very easily accessible from the homepage under the "Research at the UB" tab. The section begins with the following statement "*The University of Barcelona considers that it is extremely important for all members of the university community to be aware of the ethical implications of research in all areas of knowledge*"[70]. The first link on the page is to the UB's policy on openness in animal research, which has been signed in an agreement with the Confederation of Scientific Societies of Spain (COSCE). The agreement comprises four parts:

- *Speak clearly of when, how and why animals are used in research.*
- *Make information on the conditions of animal use in research available publicly, and in proportionate language.*
- *Promote initiatives that generate a better understanding in society about the use of animals in scientific research.*
- *Make yearly reports on the progress of this and share the information and experiences.*

Next, one can access the homepage of the University of Barcelona's Bioethics Commission (CBUB)[71]. Here, you can find information of the committee, which evaluates research projects from the University of Barcelona community and "*elaborates protocols and check-lists useful for preparing research projects and to improve understanding of the methodological and ethical-legal issues related to different types of research*". The CBUB has published a PDF document online detailing its regulations in three sections: Functions, composition and general working rules. In the first section, in addition to evaluating research projects, the committee is also responsible for disseminating information on bioethical issues and promoting public debate, promoting research integrity and good practice and examining UB members' complaints regarding research integrity, good scientific practices and research ethics.

In addition to the regulations, the CBUB has published numerous other documents of interest[72]. One of these is a document regarding the possible ethical problems that may arise in scientific

[68] Resolution of 23 March 2015, promoting the institutional policy for promoting open access to scientific literature generated by the different entities and centers of the public health system in Catalonia (2015) https://salutweb.gencat.cat/web/.content/_serveis/Biblioteca/Scientia-diposit-dinformacio-digital-del-departament-de-salut/Resolucio_Conseller_Salut_impuls_politica_acces_obert.pdf

[69] Scientia institutional repository - Catalan Public Health Administration https://scientiasalut.gencat.cat/

[70] UB Ethics and Research https://www.ub.edu/web/ub/en/recerca_innovacio/recerca_a_la_UB/etica_recerca/etica_recerca.html

[71] The University of Barcelona's Bioethics Commission (CBUB) http://www.ub.edu/comissiobioetica/en

[72] CBUB Communiques http://www.ub.edu/comissiobioetica/en/comunicats

publications, which cites the ICMJE and the Committee on Publication Ethics (COPE). Here, the issues of authorship in publications and what is ethically considered acceptable or unacceptable is discussed.

Under the section Documents and Rules are numerous other documents regarding ethics and good practice procedures followed by the UB. Included is the EU's Ethics and Data protection document form 2018, which outlines best practices following the introduction of the GDPR, emphasizing that although "*your research is legally permissible does not necessarily mean that it will be deemed ethical*". The CIOMS Guidelines for Health-Related Research Involving Humans, the Declaration of Helsinki and the EU Additional protocol to the convention on human rights and biomedicine concerning biomedical research are other prominent ethics documents included in this section.

17.2 UB Code of Good Research Practices

The UB has written its own code of good practices in-house, which was published in 2010 in three languages (Catalan, Spanish and English). To start with, the code states its objectives as: "to improve the quality of research in all fields; set up mechanisms for ensuring honesty, responsibility and rigor in research; ensure that researchers-in-training acquire good scientific practice". It states that the code is directed at all members of the UB group who carry out research. The UB code includes the principles: honesty, responsibility, rigor and conflicts of interest as its first four points of discussion. The emphasis here is on being honest in the review of one's own work, reviewing all data and results, and transparency with any conflicts of interest. Next, the code discusses research team leadership and organization, focusing on good leadership and the establishment of a clear organizational structure. In addition to this, the code also recommends the minimum requirements for a good project proposal, such as stating the human/animal materials needed, the schedule of work, a risk assessment and the implementation of monitoring for these activities. Safe working conditions, adequate staff training and supervision, research procedures and methods are also discussed in relation to research projects. The following sections focus on equipment facilities, recording and storage of data and materials, publication of research results and research on human and animal subjects. The unique feature of this code compared with other good practice codes is the practical element. This document will be a very useful tool for any research group, as it gives solid practical advice on how to carry out research projects in a sound ethical manner, without just listing ethical principles that need to be abided by in theory. Recommendations of updates to the code of good research practice were recently published, which include suggestions such as: the creation of a research integrity office to deal with cases of alleged fraud, integrated integrity training based on real practical cases, and educating researchers on the importance of research integrity as a vital part of their day to day activity and not merely a box to tick. In addition to this, the article also recommends the inclusion of a data management plan in accordance with the EU FAIR data management principles.

17.3 UB Code of Ethics on Integrity and Best Practices

In addition to the Code of Good Research Practice, the UB Ethics committee also published the Code of ethics on integrity and best practices in 2018. The purpose of the ethics code is "to provide guidelines for action that guide and support the rights and obligations of the members of the University of Barcelona community in the exercise of their freedom and responsibility". This ethical code consists of the following nine sections: Academic freedom, professional responsibility, scientific and academic integrity, honesty, equal rights, respect, privacy and confidentiality, sustainability and solidarity and risk behaviors. This code is aligned with the principles and practices laid out in other codes of conduct of DECISION partners.

Regarding ethics training, the UB doctoral school has also implemented training programmes related to good practice with courses[73] of four hours in ethical aspects of research, publication in scientific journals and research disclosure among other diverse topics. All these courses are offered in three languages (Catalan, Spanish and English) by the doctoral school. Again, this is a great way to ensure that all students have the same level of knowledge surrounding good research practice and research ethics.

Lastly, there is a link to the UB Bioethics and Law Observatory (OBD)[74], a research center that specifically focuses on the ethical, legal and social implications of biotechnology and biomedicine. The OBD has published a report where it detailed all of its activities, which include bioethical research on big data and health, two master degrees (Bioethics and Law and Food Ethics and Law), and an OA scientific journal, *The Bioethics and Law Journal*. In addition to all of this, the OBD also publishes techno-scientific documents on issues of public debate, written by internal members and external experts. One such document, published in 2016 is the "*Declaration on research integrity in responsible research and innovation*"[75]. Here, research integrity is defined as encompassing the following three points:

- honesty, in the commitment to truth
- independence, in the preservation of freedom of action in relation to pressures outside the profession
- impartiality, neutrality of professional practice in relation to private interests outside of the research

The document also includes an analysis of what constitutes an infringement of scientific integrity, organised by each stage of the scientific process: the research objectives, research methodology and impact of the research. The cause of ethically abjectable behaviour are also discussed, such as individual beliefs and organizational factors, and finally, some of the consequences of research malpractice on researchers, participants and institutions.

17.4 UB Open Access Policy

The UB library states in its institutional policy on OA[76], that it encourages all UB staff to publish in OA journals, and requires that all articles produced form the UB be deposited in the institute's internal repository.

In 2019, the UB updated its institutional policy on OA publishing[77], in which it reiterated its commitment to OA, aiming to eventually achieve complete free open access to all of its scientific production in the coming years. Additionally, the university is dedicated to achieving all levels of OA requested by major funding bodies, such as H2020, by setting annual reviews of its policies and achievements in this regard. The approval of the Research Data Management Policy also states that data accompanying open scientific publication must also made available in order to validate

[73] UB Doctoral School Training Activities http://www.ub.edu/escola_doctorat/en/capsules-formatives

[74] UB Bioethics and Law Observatory (OBD) http://www.bioeticayderecho.ub.edu/ca

[75] Declaration on research integrity in responsible research and innovation (2016) http://hdl.handle.net/2445/103268 (Accessed 13 March 2020)

[76] UB CRAI Open Access policies and guidelines https://crai.ub.edu/en/crai-services/open-access-ub/policies

[77] UB policies on open access and management of research data https://crai.ub.edu/ca/Noticies-butlleti/politiques-de-la-ub-sobre-acces-obert-i-dades-de-recerca (Accessed 16 March 2020)

publications and improve reproducibility. This will involve correct data management systems to ensure the integrity of data in the long term.

The UB library (CRAI) has published a valuable presentation explaining the research data cycle, the different types of data and how to manage them correctly. The CRAI has also published a webpage with support on research data management, which includes sections on data and projects funded by Horizon 2020, disseminating the data and resulting and citing the data[78].

Overall, the UB resources are abundant, clear and of high quality and detail. One recommendation would be to have clear links to the resources mentioned here in the initial homepage of the university. Currently, these documents need to be sourced through the UB repository and there is no mention of the English versions of them on the Bioethics Commission webpage.

18 Assistance Publique-Hôpitaux de Paris (AP-HP)

The Assistance Publique-Hôpitaux de Paris (AP-HP) is a consortium of 39 hospitals, and also contains a research centre. Regarding ethics, this is easily accessible from the homepage, under the section "Your rights", where one can find the clinical ethics homepage[79]. The clinical ethics centre aims to provide ethical support for patients and staff who would like assistance with different clinical topics and decision-making processes. Regarding a code of conduct, the AP-HP Manifesto of Values was published in 2019 in French[80] and begins by stating:

"We value the dignity of the human person. We do everything to promote equal access to quality health care."

Importantly, this document contains a section devoted to legislative and regulatory framework for information security. Here, the AP-HP describes its policy on the protection and processing of personal health data.

19 European Association for the Study of the Liver (EASL)

19.1 EASL Code of Conduct

The European Association for the Study of the Liver (EASL) have published an in-house code of conduct (found at the 'Compliance and Policies' tab[81]), which has been approved by the EASL ethics committee and the governing board in 2017. The document aims to provide guidance on "*the standards of conduct required by the organization*". The document starts by listing the EASL mission, which is to promote research of liver disease, and then goes on to explain the mission of the governing board, including managing the business of the association and their finances. The mission of the ethics committee is defined as supporting the governing body to promote the highest ethical standards in the hepatology field and educate members on ethical issues. EASL states that "*public trust in EASL's integrity, ethical standards and credibility, are of paramount importance*" and to accomplish that all members will abide by five ethical standards, paraphrased below:

[78] CRAI Support on research data management https://crai.ub.edu/en/crai-services/support-researchers/research-data (Accessed 17 March 2020)

[79] The Assistance Publique-Hôpitaux de Paris Clinical Ethics Centre https://www.aphp.fr/patient-public/vos-droits/le-centre-ethique-clinique-cec

[80] AP-HP Interior Regulations (2019) http://affairesjuridiques.aphp.fr/thematiques/nos-guides-ap-hp/

[81] EASL Compliance & Policies (Here one can find the 2017 EASL Code of Conduct, Use of Images and EASL Equality and Diversity policy statement) https://easl.eu/easl/compliance-policies/

1. The EASL committee will abide by the EASL code of conduct and all other European and national law and regulations
2. The EASL leadership will conduct the business affairs of the association in good faith and with honesty, integrity, due diligence, and judicious competence
3. No EASL leadership member shall share, copy, reproduce, transmit, divulge or otherwise disclose any confidential information related to the affairs of the association, its meetings and communications
4. The EASL leadership will exercise proper authority and good judgement in their dealings with association staff, suppliers, members and the general public
5. No member of the EASL leadership will use any information provided by the association or acquired as a consequence of their service to the association in any manner other than in furtherance of his or her position duties

The next section covers conflicts of interest, which are defined in the code as "*any circumstances that create a risk that professional judgements or actions regarding a primary interest, as stated in the mission of EASL, will be unduly influenced by a secondary financial or non-financial interest*". The code states that they have based their criteria for assessing conflict of interest (CoI) on that of the American Association for the Study of Liver Diseases, which uses five questions; the first three pertaining to the impairment of impartial decision-making and the last two to the possible harm to EASL:

1. What is the financial value of the secondary interest involved?
2. What is the scope of the relationship(s) of the individual being assessed, with the party or parties associated with the secondary interest?
3. Does the circumstance involve the sole discretion of the individual being assessed?
4. What is the value (and risk) (either direct financial or "in-kind") to EASL of the interest that could be affected by a conflict?
5. What are the consequences to EASL that could ensue from broad public disclosure of the conflict?

The result of the CoI evaluation will be made by the EASL ethics committee, which consists of five members independent from the governing board. The code then goes on to give a table which describes where CoI are permitted, not permitted, permissible but need to be disclosed etc. for members of the EASL governing board, editors of the Journal of Hepatology, and Clinical Practice Guidelines Panel members. This is a very useful resource, which can be quickly utilized by members without having to read pages of documents and could serve as a good example to other similar organizations when they are unsure of their own position regarding CoI.

19.2 EASL Equality and Diversity Policy Statement

The EASL has also published the EASL Equality and Diversity policy statement. Within this document, the EASL have laid out their goals regarding diversity in the organization, stating, "*EASL is therefore dedicated to equal opportunities and has zero tolerance for discrimination or harassment*". Regarding gender equality, the document asserts that there should be minimum of two females and two males on the scientific committee (currently two females and four males). Additionally, a minimum of three

females and three males within eight named senior EASL positions (of which women fill the following four positions: Editor in chief of JHEP Reports, European Policy Councillor, Chair of the Scientific Committee and the European Policy Councillor). EASL also states that it "*strives for equal opportunities and diversity across membership, grants, prizes, honorary titles, publications from EASL journals, and access and participation in conferences and events*".

19.3 EASL Open Access

EASL do not have specific codes for OA and publish Clinical Practice Guidelines, the Journal of Hepatology and JHEP Reports. The Journal of Hepatology is subscription-based, however, authors can choose to pay the APC if they would like their article to be published in OA. The companion journal JHEP Reports is fully OA, with EASL members receiving a 50% APC discount.

20 European Liver Patients' Association

Like the EASL, the European Liver Patients' Association (ELPA) also has a code of conduct[82] for their board members and staff and a separate code of conduct for the ELPA and its relations with the pharmaceutical industry. Both are easily accessible form the ELPA homepage under the 'Discover' section. Although neither are available in PDF format, they are both clearly sectioned, short and concise.

20.1 Code of Conduct of ELPA Board Members

The code of conduct for the board members is divided into four sections: purpose, principles, professional and ethical conduct, communications and proper practice and finally, guidelines for conflicts of interest. The first section states that the code of conduct is intended to define the "*standard of professional and ethical conduct, communications and proper practice of the ELPA Board Members and staff*". The next section outlines four principles of good practice such as: the commitment of ELPA members the professional code of conduct, honesty and openness, conflicts of interest and misconduct procedure. The third section, Process and Guidelines for Professional and Ethical Conduct, Communications & Proper Practice, issues 12 points and a final discussion, and convers the following topics: professional, ethical conduct, attendance to board meetings, disclosure of confidential information and protecting the reputation of ELPA. The section on CoI defines what this could be for an ELPA board or staff member and when and how they should declare any potential conflict of interest.

20.2 Code of conduct between the pharmaceutical industry and ELPA

The second code of conduct is that of the relation between ELPA and the pharmaceutical industry, which is laid out in five principles: Area of application, respect, independence, transparency and promotion. Importantly, the code states "*the independence of ELPA, its health policy objectives, its communication and public relation activities must always be preserved during all interactions and relationships between patient associations and the pharmaceutical industry*", and that any employee or director of a pharmaceutical company cannot become a member of a patient organization, and can only participate when specifically invited to consult. Lastly, the promotion of any prescription medicines is also prohibited. This second code of conduct is a very welcome addition to the codes of good practice for patient associations and is recommendable for other patient associations who would like to make their stance on this issue public and clear.

[82] ELPA Code of Conduct (link includes: Code of Conduct of ELPA Board Members and Code of conduct between the Pharmaceutical Industry and ELPA) https://elpa.eu/codes-of-conduct/

21 Concentris Research Management GmbH

Concentris carries out non-scientific tasks of funded research projects and provides support and consultancy services for scientists and researchers at universities, in businesses and research institutes from the first project idea to the successful completion. Since concentris is focused on project management, financial management and in the organisation of meetings of the DECISION Consortium, there is no need to have a code of conduct or Open Access policy as in the case of research institutions. Regarding personal data treatments and protection, concentris has an updated policy according to the GDPR[83].

22 Recommendations

After the analysis of the 21 DECISION partners codes of conduct, good practices and related references in the field of ethics, we recommend:

22.1 Have a named person

Firstly, it is useful to show the named person for ethical issues and to display how they can be contacted. For students, researchers or even members of the public, this may inspire confidence and a sense of transparency, that they can contact an institutional expert directly with any queries they may have.

22.2 Mandatory training for staff and students

Next, it was noted in several institutions (i.e. GUF, EMC) that they published an ethics and good research practice training course online or in person and stated that this was mandatory for staff and post-graduate students. Again, this is a great way to show that an institute takes these matters seriously and has implemented them as part of the core staff training. Mandatory training on good clinical and/or laboratory and/or animal practice, ethics and university regulations is also the best way to ensure that all staff have the same base level of knowledge. Leaving this training down to the PI of the group or the department, or even the staff and students themselves, will result in a very varied level of knowledge and understanding across staff, as some will consider these issues of prior importance and will seek out the information and training themselves, and others may not if it is not obligatory.

22.3 Easy to access code of conduct

One of the best and most obvious ways to advertise an institute's code of good practice is to make it easily accessible from the homepage. Many of the institutes in this report have chosen to put this information in either the "About us" or "Research" tabs on the homepage. The further away this information is from the homepage, and the more difficult it is to access, the less people will have the indication to find it, and many may give up before they reach what they were looking for. Furthermore, an institution with a difficult to access, hidden, or even no code of conduct or mention of good research practice, may give the impression that this is not important to them, although in many cases this will be unintended. The best way to avoid this is to place a quick link directly on the homepage, or a popular tab, to the good practice site.

22.4 List the key principles

A helpful inclusion seen in a handful of the documents above is the addition of core principles, ethical or otherwise, in the code of good practice. An ethics code should explicitly state the ethical principles

[83] Concentris Data Protection and Privacy Statement https://concentris.de/en/imprint/

followed by the institution, such as honesty, transparency, responsibility/accountability, respect and integrity. Laying out these principles clearly to define the institutional position of what good practice is, makes it clear for the reader to relate and understand, and also gives a clear link to the ethical principles mentioned in important international guidelines such as the Declaration of Helsinki and the European Code of Conduct for Research Integrity. This will help to build trust between the institute and the public.

While it is important to be clear about which ethical/ good practice principles one's code is trying to emit, it is important to be vigilant that the code is useful on a practical level for those that are going to use it, and does not err into the philosophical realm. One recommendation would be to first list the principles and give recommendations on how they should be implemented through good practices within a research context. One very good example of how to do this is seen in the Code of Good Research Practice by the University of Barcelona.

22.5 Cite other important reference documents

As seen with many of the DECISION partners, it can be a good idea to cite other codes of conduct aside from the institutional one. The most popular documents mentioned were the ALLEA Code and the Singapore statement. Other institutes went beyond this and published their in-house institutional code of conduct alongside the code of good practice for their country (if applicable), and other European and international reference documents. Readers of these codes of conduct will get a good idea of the national context, principles and basis of the codes when reading alongside these international ones, and it may help them to level the document in place with the national, EU and international standards for good practice. Additionally, it is good practice for staff to be familiar with not only their institute's regulations, but those of the wider community. With the introduction of the GDPR, institutions and the public are more aware of issues surrounding data protection and are increasingly asking for more transparency and protection. A good source of reference for institutions wanting to incorporate data protection into their research projects and good practice policies, is the EU's FAIR Data Management document[84]. Here, the EU have provided guidelines for researchers on how to make their data findable, accessible, interoperable and reusable.

22.6 Checklist

One very useful resource recommended to the partners of DECISION is a good practice or ethical checklist. While all staff should read the entire code of conduct, a checklist is a very useful resource for all researchers to have and to go through when doing their work or while preparing a project proposal. Additionally, this could be printed and placed on the laboratory noticeboard, or in the front of lab notebooks, as a reminder to staff to keep good practice and ethics in mind. Overall, the checklist of a quick and easy summary of the main point needed for an ethical, and well-planned project which abides by an institutional code of conduct and can be used in a multitude of ways to keep these principles at the forefront of research. The UKRIO recommended checklist for researchers[85] provides "*key points of good practice in research for a research project and is applicable to all subject areas*" and is a great example of a resource from an independent charity that could be used by institutes that do not have the resource to provide their own. For institutes that would like to develop their own in-house checklist, it may be a good idea to include links on each point to the

[84] H2020 Guidelines on FAIR Data Management in Horizon 2020 (2016) https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf (Accessed 16 March 2020)

[85] UKRIO Recommended Checklist for Researchers https://ukrio.org/wp-content/uploads/UKRIO-Recommended-Checklist-for-Researchers.pdf

appropriate institutional regulation. Regarding data management, one very important checklist is that included at the end of the EU FAIR data management document. The data management plan includes an accessible list of checkpoints to make sure that data comply with the FAIR principles (findable, accessible, interoperable and reusable). As good data management is an integral part of good scientific practice, it is recommended that institutions include a data management plan like this or refer to this one in the code of good research practice.

22.7 Revisions and updates

It is recommendable for institutions to revise their code of conduct regularly in order to keep them up-to-date and in line with current societal demands and academic research. As the field of research ethics and good practice becomes ever more at the forefront of the demands of large consortiums by the EU (as seen with the requirements of Horizon 2020 funding) and other national funding bodies, it is important that those responsible for the codes of conduct of the institutes mentioned regularly revise them in light of new developments. This will ensure they are up to date and in-line with each other, and with international expectations. It is highly recommended that when revising the institutional code of conduct, all members of the institute are invited to contribute. This will foster a sense of contribution and responsibility, that should translate to greater adherence with the principles themselves. Recently, we have seen the importance of data security and research misconduct become increasingly more evident for society as a whole and have also seen the implementation of the GDPR in 2018. All codes of conduct should address these topics of concern and demonstrate how they are being implemented and protected at an institutional level.

22.8 Implementation of the Code

Having an institutional code of conduct is only of finite use if it is not being read and implemented. It is important for members of the public, funding bodies and members of the institutes themselves, to show how they are ensuring that their code of conduct is being used. A good example of this is seen with the University of Barcelona and their Code of Good Research Practice, which names those exact university statutes which correspond to specific points in the code. This demonstrates that the university has written good practice into its statute. Institutions such as the Goethe University in Frankfurt and Erasmus MC have also included mandatory training on the codes for PhD students. It is important that institutions have a clear and visible approach to what they consider research misconduct, how it can be reported (anonymously if necessary), whistleblower protection, and finally, the channels the institute has put in place to deal with these cases. One approach to achieve this is to clearly state who is the officer for research integrity (or other relevant institutional office), where they are based, and how to contact them. This will provide confidence to employees, particularly younger members and graduate students, that they can speak up if necessary, and to promote a culture of transparency. A crucial point to communicate here is that when dealing with instances of misconduct, the goal is to educate those involved and the wider community, and not to punish them. Protection for those reporting and those accused must be ensured.

22.9 Institutional open access guidelines or policy

Open access publication of research results is becoming ever more prominent, with funding bodies such as the EU's Horizon 2020 now insisting that all research coming from these projects be published in OA format. Initiatives such as Plan S and those by institutions like the Norwegian Government are also now drawing up plans to make all applicable research outputs OA by specific dates in the future. Therefore, it is important that universities and research institutes provide clear information on what is OA publishing, the benefits it can provide for the researcher, their institute and the public, the associated fees (APCs) (if applicable), and how members of these institutes can get support when publishing OA. Some institutions have opted to include a FAQs section where they

answer the most common questions on the OA model, and others provide guides online with all relevant information. The two greatest issues that appear to arise from researchers when discussing changing to an OA model are “How are we going to pay for it?” and “how do we avoid ‘Predatory Publishers’?”. In this regard, it is recommended that institutes provide clear information on any funds they have for OA publishing, links to funding websites etc.; and that they provide guidance on how to identify credible OA publishers (e.g., membership to the Committee on Publication Ethics (COPE), the Directory of Online Journals (DOAJ)) and avoid the less credible ones. The FAQ by the University of Turin could serve as good examples for institutions to prepare their own OA section for staff.

22.10 Clear policy on publications and internal authorship rules promoting open access

In addition to having a clear OA policy, it is also recommended that institutions participating in EU-funded projects make clear what policy is in place regarding any research publications, output or dissemination coming from the project. This should be communicated to all involved parties from the beginning. Further to this, all partners should be in agreement about the standards of publication and dissemination activities, both from their own institutions and within the grant agreement. National and international laws and recommendations on publication may vary, especially in cross border collaborations, which further reinforces the need to agree on a unanimous standard from the start of the project, with all partners involved and informed. In the case of DECISION, the ICJME guidelines are followed as the standard for publication activities (see D7.2), and an internal document for partners is available, which details extra requirements in addition to the ICJME guidelines such as the pre- and post-appro. Establishing a document like this will ensure that all partners in large consortium projects have a strong, transparent, and ethical stance on publishing, and will save time and discussion in the long run regarding results output and dissemination.

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