

Best Practices in Reseach&Transfer



HR EXCELLENCE IN RESEARCH



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INTRODUCTION AND ETHICS CODE

Introduction

Universitat de Lleida

Best practice in research and transfer is essential to produce high-quality scientific results and to generate evidence that supports advances in the different knowledge areas.

Moreover it is **essential in top-level education and research**, as it gives security to researchers whose research is built on the results of other researchers' former activity.

Best practice in research helps **build up public confidence** in the scientific process and in its results.





Attaining the highest ethics and quality levels in research depends on the integrity and professionalism of everybody engaged in the process. This is the reason why research institutions like the UdL enhance tools like the Ethics Code for Research or this Handbook of Best Practice.

Some tools are described in this document that are available to research staff and that can help them develop their profession, thus knowing how to act in accordance with the ethical standards and values upheld by the UdL.





The central values and the specific commitments present in the UdL Ethics Code can and must inspire the actions of every member of the university community. These values are:

- **Commitment**: Members of the university community should carry out their activity in line with the UdL mission and aims.
- ✓ **Dialogue**: Members have the right to express their opinion, to participate and to be informed of the decisions that may affect them.
- ✓ Efficiency: Members of the university community should strive to use resources appropriately.

Universitat

de Lleida

- ✓ Integrity: Members of the university community should act truthfully and in keeping with the values and principles of the UdL.
- Respect: Each member of the university community should acknowledge the dignity of every person, regardless of their sex, race, ideology, religion, culture and functional diversity, and should encourage equal opportunities.
- Responsibility: Members of the university community should fulfil their professional responsibilities and should be diligently and transparently held accountable for their actions.
- Transparency: Members must provide precise and unbiased information about their actions and decisions to those affected by them.
- Dedication to service: Each member of the university community should be committed to pursue the highest levels of excellence and professionalism in each of the activities carried out, in order to be able to meet the needs of the social environment.



ALLEA CODE AND Udl BEST PRACTICES



It describes best practice in different fields of research, and provides the guidelines for collaborative work.



ENVIRONMENT

Institutions and organisations foster awareness and a culture of integrity in research.

They exercise leadership in policymaking regarding best practice in research.

They support an infrastructure suitable for all kinds of data and research material management and protection. They reward transparent and replicable practices regarding hiring and promotion of research staff.



TRAINING, SUPERVISION AND MENTORING

Research staff are guaranteed a rigorous training in research design, methodology and analysis.

A relevant and suitable training is developed regarding research ethics

and integrity in order to guarantee that everybody interested can be aware of the codes and regulations concerning them.

Training activities in the field of research ethics and integrity are carried out.

Expert research staff advise their teams and foster a culture of integrity in research.



PROCEDURES

The latest state of the question is taken into account in the development of research ideas.

Research is carefully and thoughtfully designed, carried out, analysed and documented.

Research funding is used appropriately and consciously.

Research results and interpretations are published in an open, transparent, honourable and precise manner. Results are published so that they can

be verified and reproduced.



SAFEGUARDS

Codes and regulations applicable in every discipline are complied with. The subject of research is dealt with respect and attention, complying with all legal and ethical regulations. Health, security and community, collaborators and other actors' wellbeing are paid due attention.

Research protocols take into account and are sensible to age, gender, culture, religion, ethnical origin and social class differences.

Research staff must identify and manage any possible damages or risk of their research.



DATA MANAGEMENT

suitable Α management and conservation of all data and materials is guaranteed during a reasonable period. It is guaranteed that access to data is as open as possible and that it is compatible with the FAIR principles*. It is recognised that data are the

product of legitimate and quotable research.

It is guaranteed that all contracts or agreements regarding research results incorporate a fair and equitable management of their use, property and/or protection in accordance with intellectual property rights.

de Lleida



The goals of the research and the process to communicate it in the most transparent and open way possible are agreed upon at the beginning. Research integrity rules, legal and

statutory provisions applicable, collaborators' intellectual property protection and conflict and possible misconduct cases management procedures are agreed upon.



All authors are fully responsible for the content of a publication and have agreed on the order of authorship. It is guaranteed that the work will be made available in a timely, transparent, easily accessible and precise manner. Important intellectual contributions made by other people or sponsors who have had an influence on the research will be quoted.

Eventual conflicts of interest and funding or other kinds of support received will be communicated. The work is withdrawn or corrections are submitted if necessary, considering that negative results are valid for their publication.



REVIEW AND ASSESSMENT

Publication, funding, recruitment, promotion and gratification proposals are reviewed and assessed in a transparent and justified manner. Reviewers or editors with conflicts of interests desist from participating. Reviewers respect confidentiality. Reviewers and editors respect authors and candidates' rights and will ask for authorization to use the ideas, data or interpretations presented by them.



European Code of Conduct for Integrity in Research



Data management at the UdL

The University of Lleida provides the university community with a series of **documents that contain the tools and best practice regarding Research Data Management** (RDM).

✓ To publish data in Open Access at CORA: Repositori de dades en obert CORA.RDR

https://biblioguies.udl.cat/dadesrecerca/dipositar

✓ Best practices to draw a Data Management Plan (DMP)

https://biblioguies.udl.cat/dadesrecerca/pgd

- Best practices in research management and data licence https://biblioguies.udl.cat/dadesrecerca/drets
- ✓ Best practices in research data management: format guidelines https://biblioguies.udl.cat/dadesrecerca/formats

- ✓ Best practice in research data management: quoting your research data. https://biblioguies.udl.cat/dadesrecerca/citar
- ✓ Best practice in research data management: organize, name files and make file versions. <u>https://biblioguies.udl.cat/dadesrecerca/fitxers</u>
- ✓ Data management: support in management and dissemination. FAIR data. Check if your data are FAIR.
 <u>https://biblioguies.udl.cat/dadesrecerca/fair</u>
- ✓ Research data: support to management and dissemination. How to create a readme.txt file.

https://biblioguies.udl.cat/dadesrecerca/readme

✓ Guide to implement a data management plan for doctoral students.

https://biblioguies.udl.cat/dadesrecercadoctorands/dmp

✓ Guide to implement Data Management Plans (DMP).

https://biblioguies.udl.cat/dadesrecerca/pgd



Data management at the University of Lleida 11



UdL publishing guides

Publication and dissemination

 ✓ Berlin Declaration (Signed by UdL on 10.02.06) https://openaccess.mpg.de/319790/Signatories
 ✓ UdL Open Access institutional policy

http://hdl.handle.net/10459.1/45590

Guides to publish in open access

✓ Deposit the UdL scientific production in open access at <u>Repositori Obert UdL</u> <u>https://biblioguies.udl.cat/accesobert/diposita</u>

✓ Publish in scientific journals. Recommendations before and after publishing https://biblioguies.udl.cat/publicarrevistes

✓ Guide of transformative agreements to publish in open access https://biblioguies.udl.cat/acords_accesobert

✓ Doctoral thesis: publication in TDR and at the UdL Open Repository https://biblioguies.udl.cat/tesisdoctorals

Other best practice guides

✓ Guide of systematic reviews

https://biblioguies.udl.cat/revisions-sistematiques

 ✓ Guide to create a scientific poster <u>https://biblioguies.udl.cat/poster/inici</u>







INSTITUTIONAL AFFILIATION



Universitat

A correct and consistent use of the UdL institutional affiliation in research results facilitates the monitoring of the UdL scientific production and the authors' visibility on publication, repositories and search engines databases, etc.

Correct identification of the UdL publications, apart from ensuring academic prestige for the University, guarantees to obtain publications and their quotations with a higher level of precision, as well as a suitable development of indicators, an aspect of great importance in university funding.

These recommendations **are applicable to all research staff**, **permanent or temporary**. They are also applicable to emeritus professors and all UdL staff linked to other institutions (hospital sector and/or R+D+i centres).

All UdL authors have the individual responsibility of ensuring that they put into practice in their publications everything agreed on in this document.

Institutional affiliation

1. All UdL authors must **quote the University of Lleida** as their **institutional research base** whenever they have to introduce affiliation data in their research articles, papers and other publications.

2. **Universitat de Lleida** must be written in its full form **in Catalan, with no acronyms or abbreviations**. In the event that it were necessary to include any additional reference of the institution in English, the form used should be "University of Lleida".

3. When, in addition to Universitat de Lleida, the authors would like to acknowledge the **structural unit** (institute, centre, department, etc.), they should mention the unit and right afterwards mention the university, and the postal address that is considered appropriate.

The standard name accepted by the institution must be used in Catalan or in English when it is necessary.



Multiple institutional affiliation of the same author:

In the case of authors who belong to more than one institution, or who belong to different units within the UdL that have different facilities, it is recommended to do different signatures and register each one of them separately, ensuring that the UdL is included. This practice also improves the researchers' visibility and assessment indexes.

Staff associated with two or more institutions:

- Regarding research staff from joint centres dependent on different institutions, the terms set out in the agreements must be fulfilled, but the University of Lleida must be mentioned in the first place (with no acronyms or abbreviations).
- Research staff linked to various institutions (hospital sector or any other R+D+i institution) who also are research and teaching staff at the UdL, must include their affiliation to the University of Lleida in the first place (with no acronyms or abbreviations) together with their affiliation to the other institution.

Visiting staff who carry out research stays in other universities or research centres:

It is recommended to indicate the double affiliation to the sending institution and to the host institution. In any case:

- The UdL research staff who carry out temporary stays must keep the University of Lleida as their first affiliation.
- Staff from other institutions who carry out stays at the UdL will affiliate their publications which are totally or partially related to their stay.



Address, postal code, town and country.

These are relevant data and at least the postal code, the town and the country must appear. The complete address in Catalan and the name of the country in English are recommended..

Example of signature of a publication or scientific contribution:

Author's data: Name* (compulsory)

Institutional affiliation: ORCID ** (recommended) Name of the research group, department, institute or centre (optional) Name of the institution: Universitat de Lleida (compulsory) Address, postal code, town and country: (compulsory)

The e-mail address must be the institutional one provided by the UdL, with the structure: user@udl.cat





Useful links

Institutional Affiliation

- ✓ Guidelines for authors' name and affiliation <u>https://biblioguies.udl.cat/filiacio</u>
- Best practice to create author's identifiers and profiles (ORCID, Web of Science ResearcherID, etc.) <u>https://biblioguies.udl.cat/perfilsautor/orcid</u>



JOINT AUTHORSHIP



The **Editors International Committee** has drawn up a **<u>Guide for Best Practice</u>** for the application of joint authorship and states that an author is:

Anyone who **contributes** to data conception and design or to the gathering, the analysis or interpretation of data.

Anyone who **writes** the content or carries out a critical review from an intelectual point of view of that content.

Anyone who **approves** the final versión.

Joint authorship requires to have taken part in the three steps mentioned above and to accept their responsibility if the work receives criticism.

The order followed by COPE rules, the FLAE Approach, recognised by assessment agencies is:

- **First authorship** most important contribution (for the assessment it is as important as the last one).
- Last authorship the work's director (for the assessment it is as important as the first one).
- Intermediate authorships between the first and last authorships decreasing level of contribution.

Other approaches take into account these two other options:

- **SDC (Sequence Determines Credit) Approach:** the first signature is the most important one and the rest have a decreasing level of contribution according to their order.
- <u>Alphabetical order:</u> all the signatures have the same importance, but if the order is established from the second one, it indicates the preeminence of the first one and the same importance of all the rest.





Advice before starting a collaboration

Key aspects

It is convenient to reach agreements and to clarify the order before the publication of the article in order to avoid personal or assessment conflicts. It is advised to have a clear idea of the criteria established by the **National Committee for the Assessment of Research Activity** (CNEAI) for the field in which the assessment will take place, adopting the assessment criteria of the articles in joint authorship in their field. Take into account that some academic publications ask for the detailed participation in the publication and for this they are based on

<u>Contributor Roles Taxonomy</u> (CRediT)

Which describes 14 different roles of participation of each authorship in the work.



INDUSTRIAL AND INTELLECTUAL PROPERTY

Key aspects

The UdL has a **specific regulation** that aims at establishing a legal framework to regulate the following aspects:

The **ownership of results derived from research, transfer and innovation activity** carried out by the UdL research staff, as a consequence of their academic, teaching and research function, whether it may be within the framework of the activity developed at the UdL or in collaboration with third persons or institutions.

The **procedures that must be followed in order to protect the results** of research and transfer activity at the UdL.

The economic rights derived from the exploitation of the results.



UdL regulations Industrial and Intellectual Property 25

Definitions

Research Staff: University staff who, having the required qualification in each case, carry out any research activity, conceived as creative work done systematically in order to increase the amount of knowledge regarding human beings, culture and society, and the use of this knowledge to create new applications, its transfer and its dissemination.

Research results: Any technology, knowledge, processes or results that have been developed or obtained as a consequence of academic, teaching or research activities at the UdL carried out by UdL research staff.

Works: Research results subject to protection by Intellectual Property rights, including but not limited to, database and computer programs (software).

Inventions: Research results subject to protection by Industrial Property rights, including but not limited to, patents, utility models, topographies of semiconductor products and industrial designs.



Normativa de la UdL Propiedad Industrial e Intelectual 26



Content

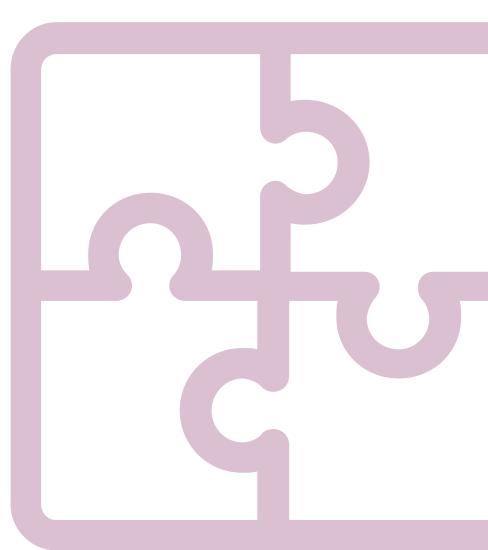
The current regulations comprise different aspects that need to be taken into account regarding industrial and intelectual property and that affect those who generate knowledge as much as the institution that supports that work, in this case, the UdL. Thus this document includes some guidelines regarding the following aspects:

The ownership of research results, of industrial and intellectual property rights derived from such results, and of exploitation rights, distinguishing between the UdL's own research and knowledge generated in projects involving other institutions.

The section about **management and protection of research results** includes aspects linked to result communication and processing, the application for protection or for the extension of protection, the confidentiality of results or the waiver to the rights.

The **exploitation of results** is dealt with in depth by describing the different formulae of exploitation and the distribution of the possible benefits obtained.

Finally, the document contains the existing **complaint regime** in case of conflict.









SPIN-OFF COMPANY CREATION



The norm aims at establishing the <u>legal framework applicable to spin-off projects</u> originating at the UdL, as well as the establishment of participation formulae of the UdL itself and of the University community members in these entrepreneurial projects, and the framework for relationship with them.

¿What is a Spin-off and how to make the first steps?

- It is a company created or participated by UdL research staff, whose goal is to exploit UdL research results, whether they be technological – Technologically Based Company (EBT) or knowledge based.
- For the setting up of a Spin-off Company, a previous authorization from the UdL will be required.
- The UdL authorization for the participation of the University in the spin-off companies' share capital will establish the terms and conditions in which the acquisition of the participation will be made. The contribution of the UdL to the share capital will preferably be of 5% and it will consist of direct cash contributions.



- Procedure for the application and resolution of creation of a Spin-off Company.
- Participation of the UdL, contract between the partners, follow-up, and results transfer.
- **Staff participation:** leaves of absence, licences, permits, etc.
- Spin-off register, corporate image, preference in recruiting UdL students.



What aspects are regulated by the internal regulations for the creation of Spin-offs? 30





Responsible Research and Innovation (RRI)



RRI policies (Responsible Research and Innovation) are based on principles that aim at **aligning research processes with their social results**, in order to try to **improve the accomplishment of people's expectations and needs**

The **Human Resources in Research European Stamp** (HRS4R) includes the recommendation of incorporating organisations' common management principles.

In keeping with this approach, the UdL, includes in this Handbook of Best Practice some of the policies that it has been developing and that are aligned with RRI approaches.

✓ Scientific education
 ✓ Gender equality
 ✓ Open access
 ✓ Governance
 ✓ Ethics
 ✓ Citizen participation



- Equality Plan. It comprises strategic measures regarding equality, their performance indicators and recommendations for the implementation of gender reports.
- Inclusion Plan for People with Functional Diversity. It refers to physical, psychic or sensorial diversity and it comprises measures to guarantee equal opportunities to students with limitations to carry out curricular adaptations, teaching and assessment proposals, for all the cases in which it may be necessary.



Responsible Research and Innovation (RRI) 33

Dissemination to society in open acces, research output (articles, data, journals, thesis, etc.)





Responsible Research and Innovation (RRI) 34

Open Education

European Researchs' Night https://researchersnight.udl.cat/

Thesis in 4 minutes

http://www.doctorat.udl.cat/es/activitatsformatives/concursos/presenta-la-tevatesi-en-4-minuts/

Pint of science festival https://pintofscience.es/equipo/Equipo%20Ll eida

The Conversation https://theconversation.com/institutions/uni versitat-de-lleida-3488







THE CONVERSATION



Investigación e Innovación Responsable (RRI)35





NON-COMPLIANCE



The European Code of Conduct for Integrity states that non-compliance of best practice in research damages research processes, deteriorates relationships among research staff, undermines trust in research, and its credibility as well, bringing about a loss of resources. Some of the unacceptable practices described are:

INVENTION	COUNTERFEITING	PLAGIARISM
Inventing results and register them as if they were real.	Manipulate research materials, equipment or processes, or change, omit, or supress data or results with no justification.	Use other people's work or ideas without quoting the original source properly, thus violating the author or authors' rights regarding their intelectual production.

Regarding **misconduct allegations**, the Allea Code establishes that **two principles** must be incorporated to research so that it is **guaranteed that they can be dealt with in an appropriate way**.

INTEGRITY

Inquiries are impartial, complete and are carried out promptly.

It is mandatory to notify any conflict of interest that may come up during the inquiry.

It is guaranteed that inquiries will be carried out until a conclusion is reached.

Confidentiality is guaranteed.

Institutions protect the complainants' rights, thus guaranteeing that their career is not at risk.

General procedures are public.

IMPARTIALITY

Inquiries are carried out according to the procedures and in an impartial manner.

All the information is provided to the defendants and they are guaranteed a fair process with deadlines for evidence production.

Any actions taken against the persons who are proved to be rightly accused of misconduct are proportional to the severity of the offence.

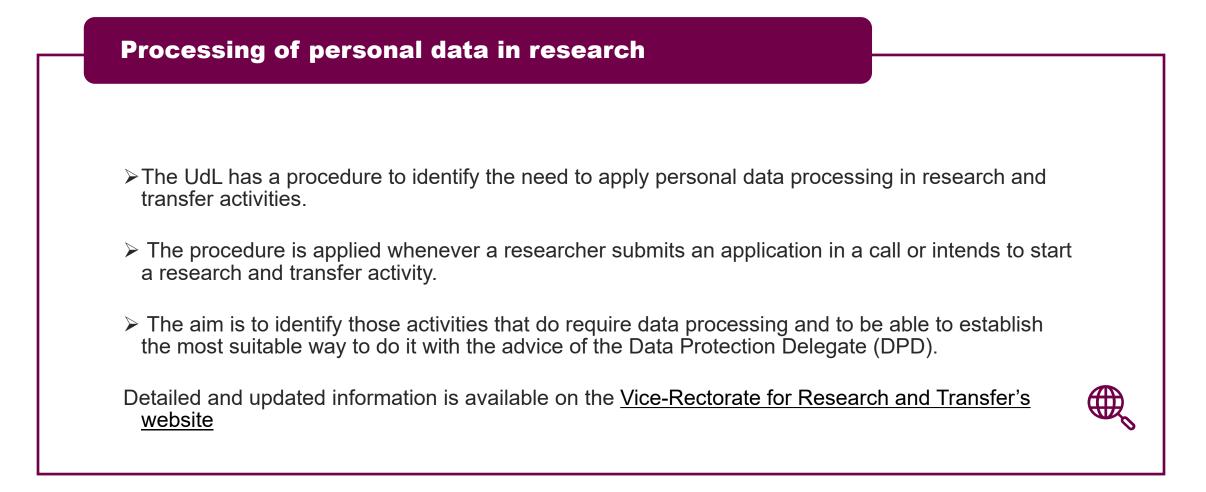
If the result of the inquiry acquit the defendants, suitable reparation actions will be carried out.







PROCESSING OF PERSONAL DATA









RESEARCH COMMITTEES

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UdL Internal Committees

The UdL is advised by 3 committees that are in charge of reviewing and assessing all the R+D+i activities carried out by research staff.

- Ethics Committee for Research and Transfer (CERT)
- Ethics Committee on Animal Experimenting (CEEA)
- Biosecurity Committee

Detailed and updated information is available on the <u>Vice-Rectorate for Research and Transfer's</u> <u>website</u>



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External Committees

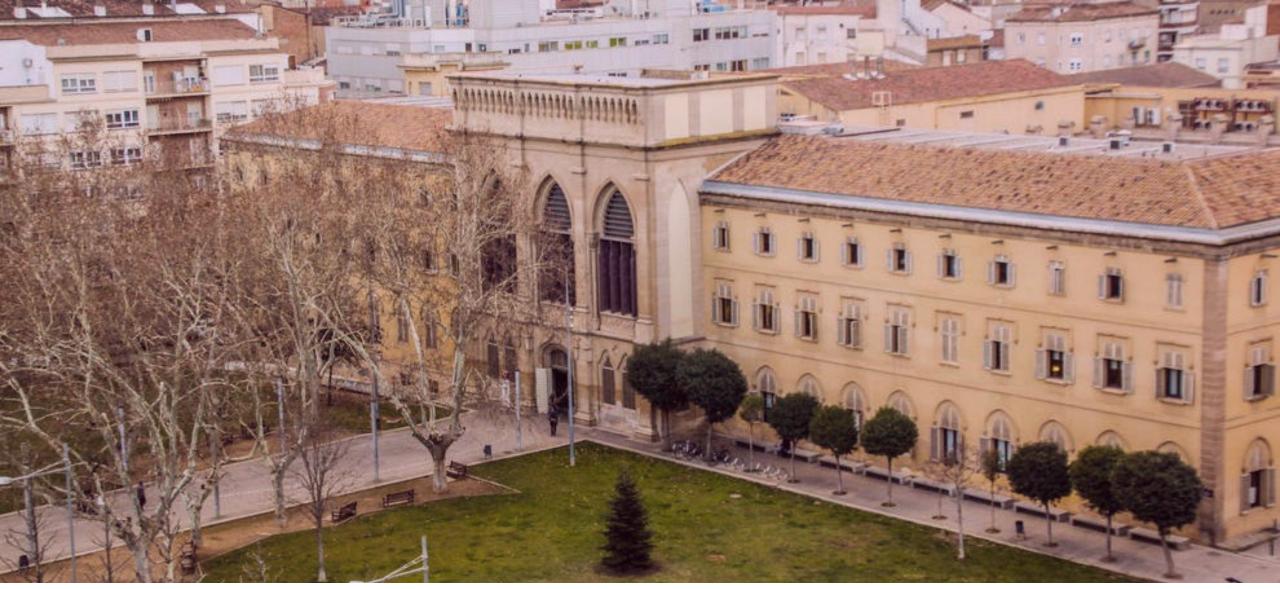
Regarding research involving people and medicines/drugs, the UdL relies on the advice of an external committee that belongs to University Hospital Arnau de Vilanova – Territorial Management of Lleida – GSS.

• Ethics Committee for Research with Medicines (CEIm)

Detailed and updated information on the Vice-Rectorate for Research and Transfer's website













HR EXCELLENCE IN RESEARCH