

Equality Plan for the Institute of
Cosmos Sciences at the University of
Barcelona

Institute of Cosmos Sciences (2025-
2028)

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Glossary of Abbreviations

Abbreviation	Full Form or Description
ICCUB	Institute of Cosmos Sciences of the University of Barcelona
UB	University of Barcelona
SOMMa	'Severo Ochoa' Centres and 'María de Maeztu' Units of Excellence Alliance
DEIC	Diversity Equality and Inclusion Commission
IEEC	Institut d'Estudis Espacials de Catalunya Institute of Space Studies of Catalonia
PDI	“Personal docent i investigador” Teaching and research staff

PTGAS	“Personal tècnic, de gestió i d'administració i serveis” Technical, management, and administrative and service staff
STEM	Science, Technology, Engineering and Mathematics

1. Introduction

The following equality plan stems from the need and commitment to design and implement specific objectives and measures to achieve genuine gender equality at the Institute of Cosmos Sciences of the University of Barcelona (ICCUB). This interdisciplinary institute is dedicated to fundamental research in cosmology, astrophysics, particle physics, theoretical physics, nuclear physics, and quantum physics. Additionally, the institute has a robust technological program, actively participating in international collaborations in observational astronomy and experimental particle physics.

The Institute was established in 2006 as the University of Barcelona's instrument to actively support research in theoretical astrophysics and particle physics, with a special focus on its synergy with cosmology. It aims to promote experimental physics and instrument development, enabling significant participation of the University of Barcelona in international collaborations and attracting highly qualified scientific personnel.

Furthermore, the institute has been recognized with the "María de Maeztu Unit of Excellence" accreditation twice, in 2014 and 2019, identifying it as one of the top research units in Spain and providing a substantial part of its funding. As a result of this recognition, the institute is also part of the 'Severo Ochoa' Centres and 'María de Maeztu' Units of Excellence Alliance (SOMMa), which aims to boost Spanish research through collaboration between centers and units. Within this alliance, the gender equality action line stands out, serving as a platform to share current and future experiences and actions, a relevant aspect of this equality plan.

With this equality plan, the Institute of Cosmos Sciences of the University of Barcelona is committed to fostering an environment where men and women have equal access to employment, academic, and personal opportunities without discrimination based on gender, race, origin, sexual orientation, or gender identity. The goal is to create an internal document that serves as a guide for best practices and establishes the lines of action concerning equality.

The development of the equality plan will be carried out in phases, starting with a diagnosis to obtain the quantitative and qualitative information needed to set objectives. Based on these objectives, different actions will be designed and implemented along with appropriate monitoring indicators. This equality plan has been developed by the Gender Officer, the scientific secretariat, the consultant Daleph, and the Diversity Equality and Inclusion Commission (DEIC). Finally, once the equality plan is presented and approved, a monitoring commission will be created to implement the objectives and actions.

As established, this document serves as a guide for the implementation of gender and diversity policies within the institute, so it must be adaptable to the social and cultural situation of the moment. For this reason, this equality plan will have a validity of four years, being reviewed if necessary. The review will be carried out by the person holding the position of Gender Officer and/or together with the DEIC and the institute's management.

2. Legal Framework on Gender Equality

This section aims to establish a legal framework for developing relevant equality policies. Primarily, we consider two different contexts: state and regional regulations, and the University of Barcelona, as the Institute of Cosmos Sciences is part of this university. Additionally, some members of the institute are also part of the Institute of Space Studies of Catalonia (IEEC) and the Bosch i Gimpera Foundation. Therefore, these entities will also be considered when drafting actions and understanding the implications of these documents for some of the institute's staff.

2.1. Current and Applicable State and Regional Regulations

The following diagnosis and equality plan are framed within state and regional laws, with current Spanish legislation on gender, equality plans, and universities serving as the main legal framework that justifies the need to create this document and the proposed measures.

First, regarding Organic Law 3/2007, of March 22, for the effective equality of women and men, it aims to make equality between men and women a reality. This law is relevant here as it differentiates between direct and indirect discrimination:

Article 6. Direct and Indirect Discrimination.

1. *Direct discrimination based on sex is considered to be the situation in which a person is, has been, or could be treated less favorably than another in a comparable situation due to their sex.*

2. *Indirect discrimination based on sex is considered to be the situation in which an apparently neutral provision, criterion, or practice places persons of one sex at a particular disadvantage compared to persons of the other sex, unless this provision, criterion, or practice can be objectively justified by a legitimate aim and the means to achieve that aim are necessary and appropriate.*

3. *In any case, any order to discriminate, directly or indirectly, based on sex is considered discriminatory.*

In this case, the equality plan aims to achieve an institutional culture as close to gender equality as possible. Therefore, since direct discrimination is easier to identify than indirect discrimination, the equality plan must include mechanisms to identify and eradicate both, paying special attention to how the latter occurs and is reproduced. Another relevant point of this law is to establish the possibility of implementing positive action measures in contexts of female underrepresentation and maintaining them until the situation to be corrected is reversed. This is important in the underrepresentation of women in science at the Institute (see the diagnosis).

Second, Royal Decree 901/2020, of October 13, which regulates equality plans, aims to provide a guide for equality plans and their implementation. This regulation understands equality plans as an effective tool to eliminate discrimination and promote cultural changes aimed at real equality between women and men, a point of particular relevance for promoting change.

For this plan, Royal Decree 901/2020 is beneficial as it outlines the necessary components of an equality plan. Therefore, the following points have been adapted and included in this document:

- a) Identification of the parties involved.

- b) Scope: Personal, territorial, and temporal.
- c) Report on the company's diagnostic situation.
- d) Definition of qualitative and quantitative objectives for the equality plan.
- e) Description of specific measures, execution timeline, and prioritization, as well as the design of indicators to determine the evolution of each measure. The measures will be established in relation to the objectives set to eliminate any inequality and discrimination.
- f) Identification of the means and resources, both material and human, necessary for the implementation, monitoring, and evaluation of each measure and objective.
- g) Action schedule for the implementation, monitoring, and evaluation of the equality plan measures.
- h) System of periodic monitoring, evaluation, and review.
- i) Composition and functioning of the commission or joint body responsible for the periodic monitoring, evaluation, and review of equality plans.
- j) Modification procedure, including the procedure to resolve possible discrepancies that may arise in the application, monitoring, evaluation, or review, provided the legal or conventional regulations do not require their adaptation.

(Royal Decree 901/2020)

These are the minimum requirements for a legal equality plan, but they can be adapted and expanded to meet the institution's needs and objectives.

Organic Law 4/2007, of April 12, which amends Organic Law 6/2001, of December 21, on Universities, includes gender equality as a fundamental principle of Spanish universities due to their impact on society and the values and critical thinking of those who are part of this community. Consequently, gender must be considered in internal policies, funding distribution, and job positions, among others.

Additionally, this law specifies the need to eliminate obstacles that limit the presence of women in governing bodies and the highest levels of teaching and research within the university. Finally, ICCUB complies with the twelfth additional provision that mandates the implementation of equality units to promote the principle of equality, therefore the Institute meet an important regulatory requirement by having the Diversity, Equity, and Inclusion Commission and a Gender Officer (at the time of this plan's approval).

Law 17/2022, of September 5, on Science, Technology, and Innovation establishes the gender perspective as a transversal category with an impact on the research and innovation process. The following objectives of the law are highlighted and included in the plan:

- a) Promote the inclusion of the gender perspective as a transversal category in science, technology, and innovation, as well as a balanced presence of women and men in all areas of the Spanish Science, Technology, and Innovation System.
- b) Promote and ensure equal, diverse, inclusive, and safe work environments where science is conducted and research is carried out, preventing and eradicating any situation of direct or indirect discrimination.

From these objectives, articles 4 bis and 4 ter on gender mainstreaming and effective equality are derived, proposing a dual approach: inclusion of the gender category in the creation of science and technology policies, as well as specific equality measures that guide universities and related organizations to achieve real equality in the science they produce and their internal structures. These objectives and guidelines are fundamental for this ICCUB equality plan because they have a direct impact on the organization and structure of the activities it undertakes.

In summary, this equality plan is mainly based on two state laws that establish the principles and contents of the equality plan: Organic Law 3/2007, of March 22, for the effective equality of women and men, as well as Royal Decree 901/2020, of October 13, which regulates equality plans and their registration and amends Royal Decree 713/2010, of May 28, on the registration and deposit of collective agreements and contracts. More specifically, Law 14/2011, of June 1, on Science, Technology, and Innovation, and Organic Law 4/2007, of April 12, which amends Organic Law 6/2001, of December 21, on Universities, are considered due to the activity carried out by ICCUB.

2.2. University of Barcelona

Once the state law is established, it is important to consider that the Institute of Cosmos Sciences is part of the University of Barcelona, and therefore, it is subject to its regulations. Regarding gender equality, there are two main regulations: the equality plan and the Protocol for the prevention, detection, and response to situations of sexual harassment and harassment based on sex, gender identity, and sexual orientation, as well as other sexist and LGBTBIQ+phobic behaviors.

2.2.1. Protocol for the Prevention, Detection, and Action against Harassment Situations

Since 2019, the University of Barcelona has had a protocol for the prevention, detection, and response against situations of sexual harassment and harassment based on sex, gender identity, and sexual orientation, as well as sexist behaviors. This document applies to teaching and research staff (PDI), technical, management, and administrative and service staff (PTGAS), and students, as well as any member of the UB university community. It is also applicable to all university activities and related contexts, such as those organized within academic settings.

The protocol focuses on four main points:

- a) Formally declare and disseminate the rejection of all types of violence and sexist and LGBTBIQ+phobic behaviors in all their forms or manifestations.
- b) Promote a culture of prevention against harassment behaviors and sexist behaviors outlined in this protocol through training and informative sensitization actions for the entire university community.
- c) Raise complaints, report, investigate, and, if necessary, sanction any behavior that may constitute harassment, discrimination, or violence, in accordance with this protocol.
- d) Accompany and advise members of the university community who have experienced these behaviors.

Thus, the document has preventive intentions and establishes measures to act against sexist behaviors, harassment based on gender, sexual identity and/or gender. In summary, these are the areas of action:

- a) Sexual harassment.
- b) Harassment based on sex.
- c) Harassment based on sexual identity.
- d) Harassment based on sexual orientation.
- e) Harassment based on gender expression.
- f) Sexist behaviors.
- g) Malpractice in the teacher-student relationship related to the protocol's areas of action.
- h) Secondary victimization.
- i) Physical violence.
- j) Psychological violence.
- k) Digital violence.
- l) Second-order violence.
- m) Sexual assault.
- n) Sexual abuse.

As per the procedure, the protocol establishes seven steps:

1. Initiation of complaint or report: it can be raised by the affected person, by persons with academic and/or administrative responsibilities, by third parties, or by student associations or unions.
2. Processing of the procedure: preparation of a report to decide what action to take with the complaint. It may not be admitted for processing, but it may be referred to the relevant unit, the facts may be escalated to the rectorate, referred to the Public Prosecutor's Office, or an internal procedure may be initiated in accordance with the protocol.
3. Actions for processing the procedure: the investigation will be carried out.
4. Provisional report and qualification of the facts: evaluation of the facts and drafting of a provisional report in which a proposal for resolution and solution is made.
5. Notification of the provisional report, hearing of the interested parties, and review of the file: notification of the provisional report and timeline for submitting allegations.
6. Final report and submission to the rectorate.
7. Resolution by the rector and conclusion of the procedure: upon receiving the final report, the rector will issue the resolution, which will conclude the procedure.

Considering all this and in relation to the institute, the protocol applies when a person files a complaint (related to the areas of action), which can be the victim or another person, such as someone from the work team or the DEIC. In any case, once the

complaint is made, it is the Equality Unit that follows up, so, also for privacy reasons, only the affected persons or those whom the Equality Unit and the victim consider can help improve the reported situation would be aware of the case. For this reason, one of the first actions is to make the DEIC and the protocol known so that, if necessary, the staff knows who and how to approach.

On the other hand, if the reported situation requires legal or punitive actions, it is the university's legal services that would handle them, so the Equality Unit is exclusively dedicated to helping the victim. It should be noted that even without an official complaint, the Unit can intervene and offer resources that can help improve the situation.

2.2.2. III Equality Plan of the University of Barcelona

The second regulation of the University of Barcelona in which the Institute of Cosmos Sciences is included is the III Equality Plan, which is approved in 2020 and is valid for four years from its approval. This is a general plan that includes a contextualization of the University, a diagnosis of the equality situation, and the proposal of objectives and measures to achieve equal opportunities and the eradication of violence within the university community. Below is a summary of the most relevant parts and direct impact on the Institute's activity.

The plan is divided into seven axes where the gender perspective is applied or should be applied within the university structure:

1. **Promotion of equality:** the main axis that contains the guidelines to achieve equality. These are the structural characteristics that guide the University in the social and cultural transformation of the community and institution. Lines:
 - a) Social and institutional transformation.
 - b) Visibility and sensitization on gender equality.
 - c) Non-sexist and non-androcentric communication and external relations.
 - d) Implications of the members of the university community.
2. **Participation and balanced representation in the university community and organization and management:** an axis aimed at generating a change in institutional culture and achieving balanced representation of women and men in positions of responsibility. It may include, for example, alternation in the position or change in the titles of positions and the way of referring to them.
3. **Equality in work and academic life:** still under development and negotiation; related to service and teaching staff and labor relations. It addresses aspects that have a negative impact on the personal and development of women, such as co-responsibility and conciliation. Additionally, some of the measures included can be applied to the student body. Lines:
 - a) Equality at work
 - Access, promotion, and training.
 - Work organization and working conditions.
 - Time organization, co-responsibility, and conciliation.
 - Underrepresentation of women.
 - Occupational health.
 - b) Equality in academic life
 - Co-responsibility and conciliation of personal, family, and work life.

- Conflict.
- Special situations.
- LGTBI

4. **Gender perspective in teaching:** includes content and teaching approaches considering the impact on future citizenship. It should be noted that the University is part of the "Xarxa Vives," which produces teaching guides with a gender perspective. Lines: a) Cross-cutting actions. b) Teaching organization: team formation and guides. c) Teaching and research. d) Awards.

5. **Gender perspective in research, transfer, innovation, and entrepreneurship: to position the research, transfer, and innovation carried out at the University in the best places in international rankings, highlighting women's research and the use of the gender perspective.** The following aspects are prioritized:

a) Enhance the work of women researchers and their participation in research groups, as well as make their contributions visible in scientific, technical, and transfer fields.

b) Ensure effective equality of women and men in the research career.

c) Promote balanced representation of women and men in different collegiate bodies and at all levels of decision-making.

d) Ensure that the evaluations of research staff and their research and transfers carried out by the relevant bodies take into account the gender perspective and non-discrimination, neither direct nor indirect, based on sex or gender.

e) Promote that research and transfer projects incorporate the gender and women's perspective.

f) Establish incentives that promote research related to women's issues, gender, and sexual/gender diversity and its intersectionality.

6. **Policy for the prevention and eradication of violence and sexist attitudes:** Creation and dissemination of the protocol for the prevention, detection, and action against situations of sexual harassment or harassment based on sex, gender identity, or sexual orientation, and other sexist or LGTBIQ+phobic behaviors. Actions:

a) Protocol against harassment and improvement actions.

b) Sensitization and training on sexist violence.

7. **Diversities and intersectionalities with gender:** an axis that includes situations where women have other characteristics that increase the degree of inequality and discrimination, justifying, for example, the application of positive action measures. Attention is paid to other diversities to give voice to the realities of LGTBI people and commit to the community's diversity. These are actions aimed at cultural change: structural adjustments, building, nomenclature or language use to eliminate multiple discrimination.

a) Intersectional situations: functional, religious, racial diversity, etc.

b) Sexual diversity: LGTBIQ+.

With these axes, the University establishes actions and monitoring indicators that serve as a guide in the application of the equality plan in the university community. Regarding the institute, these axes should serve as guidelines in the equality policies proposed in this document as they are the general lines followed as an institution.

In short, the University of Barcelona's regulations are relatively broad, so the institute is framed by the equality plan and the protocol, but without specifying the needs and structure of the ICCUB. The institute follows the guidance of the documents and directly applies the action protocol, as it establishes useful prevention and action mechanisms for the institute's staff, in addition to being able to report situations of inequality.

3. Diagnosis

To conduct a comprehensive diagnosis on gender equality and inclusion at the institute, the company Daleph, a consultancy with a gender department, was hired. The objective was to establish a starting point to contextualize the current situation of equality at ICCUB through data analysis, policies, and staff perception. Additionally, it aimed to provide an comprehensive and objective view of the current situation as a basis for identifying needs and formulating effective measures to promote equality.

The diagnosis¹ was carried out both quantitatively and qualitatively. For the quantitative analysis, data on members disaggregated by gender were analyzed. The qualitative analysis was conducted through document analysis, a staff survey, and interviews with the human resources team. The survey was conducted using Microsoft Forms and addressed aspects related to general information about ICCUB and organizational culture. A total of 73 out of 211 possible members responded to the survey, representing 34.5% of the members. Of the responses obtained, 61.6% were men (45 responses), 32.9% were women (24 responses), and 5.5% preferred not to identify their gender (4 responses).

Gender Distribution of Members

As of **December 31, 2023**, ICCUB consists of 211 people, of which 24.2% (51 people) are women and 75.8% (160 people) are men. This proportion is far from what is understood as a balanced presence between women and men. In this sense, Organic Law 3/2007 establishes the existence of a balanced presence when the total number of people of each sex does not exceed 60% nor is less than 40%

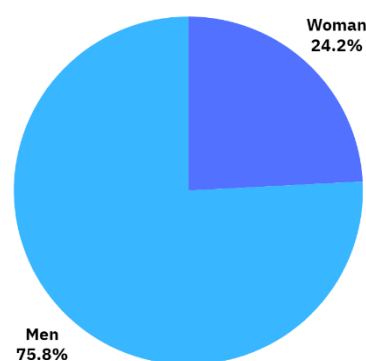


FIGURE 1 DISTRIBUTION OF MEMBERS BY GENDER

It is also important to consider the distribution of members by age and gender. The majority of the research staff, 37%, are in the age range of 18 to 29 years. This is followed by 19% of members between 30 and 39 years old.

¹ All data has been processed following the policy of the University of Barcelona

When analyzing the female group, women are concentrated in the age range of 18 to 29 years (28 women, 13.2% of the members and 54% of the women at ICCUB). In the other age ranges, there are between 3 and 7 women, representing around 0.3% of the total female presence in each range.

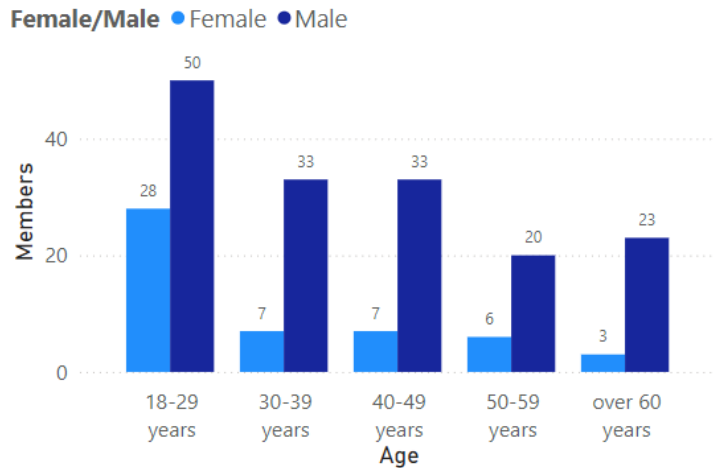


FIGURE 2 DISTRIBUTION OF MEMBERS BY AGE AND GENDER

The age range of 18 to 29 years also concentrates a large part of the men, 51, representing 23% of the members and 30.7% of the men at ICCUB. The analysis reflects that this first range shows a distribution closer to the 40-60 balance with 35.4% women and 64.6% men. These data show the "leaky pipeline" phenomenon, common in science, which causes a higher presence of women in the initial phase of the scientific career but decreases as age and professional stage advance. ICCUB must continue to attract young female talent.

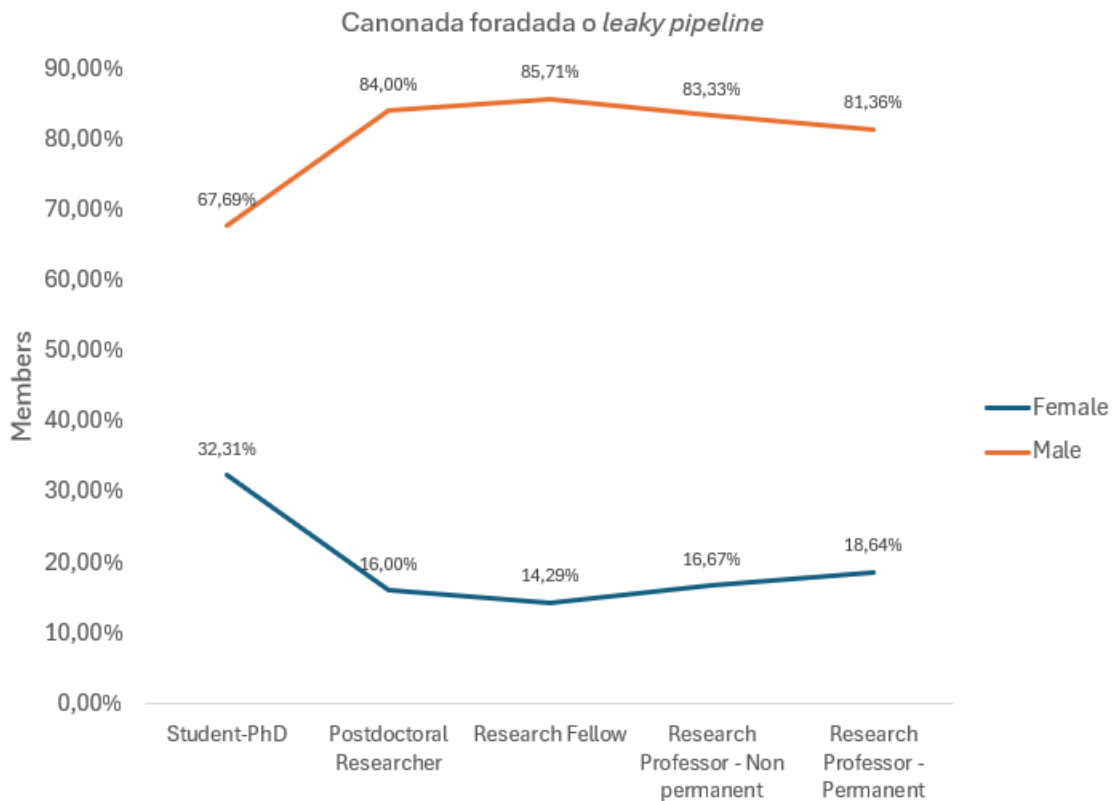


FIGURE 3 LEAKY PIPELINE. PERCENTAGE OF MEMBERS BY PROFESSIONAL CATEGORY AND GENDER

TABLE 1 DATA ON GENDER AND AGE DISTRIBUTION

AgeGroup	FemaleCount	FemalePercentage	FemaleAgeGroupPercentage	MaleCount	MalePercentage	MaleAgeGroupPercentage	Total	% Tot. Plantilla
18-29 years	28	54,90%	35,44%	51	31,88%	64,56%	79	37%
50-59 years	6	11,76%	23,08%	20	12,50%	76,92%	26	12%
30-39 years	7	13,73%	17,50%	33	20,63%	82,50%	40	19%
40-49 years	7	13,73%	17,50%	33	20,63%	82,50%	40	19%
over 60 years	3	5,88%	11,54%	23	14,38%	88,46%	26	12%
Total	51	100,00%	24,17%	160	100,00%	75,83%	211	100%

Regarding the analysis of members by seniority and gender at the institute, 57.3% of the members are concentrated in the 0 to 5 years of seniority range; the remaining 42.7% are distributed heterogeneously in the other six ranges. As seniority increases, the presence of people decreases. This is consistent with scientific activity since doctoral and postdoctoral students have contracts equal to or less than four years. On the other hand, "tenure-track" positions, incorporating researchers in the process of stabilization due to retirements at the institute, Professors - Lectors and Ramon y Cajal, with 8.5% of seniority between 0-4 years, are of vital importance to see the evolution of gender in the future. Another professional category that includes part of the seniority between 0 and 4 years is the Labor group, with 21%.

The analysis reflects that men are represented in all seven seniority ranges, while women are only in four. The seniority range that concentrates almost all women is 0 to 5 years, with 62.75% of the total women, following the "leaky pipeline" phenomenon already mentioned. They are also represented in the 10 to 14 years, 15 to 19 years, and over 30 years ranges with between 2 and 4 women per range. Most men are also in the 0 to 4 years range, but there is a greater balance of representation in the other year ranges.

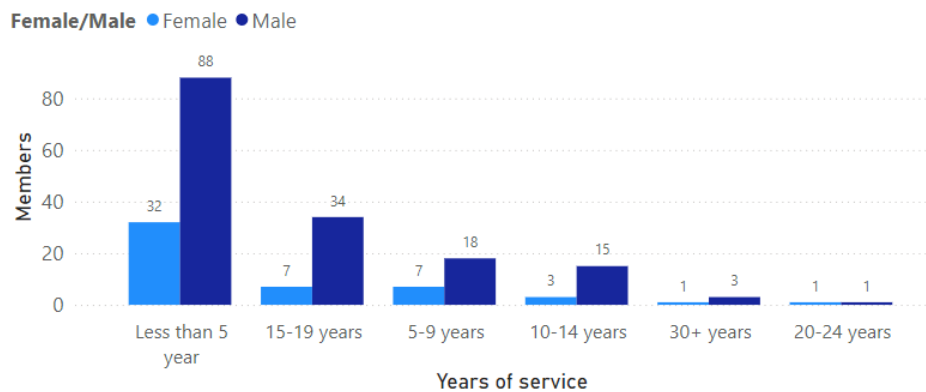


FIGURE 4 DISTRIBUTION OF MEMBERS BY SENIORITY AND GENDER

Now let's look at the employment category and contract type:

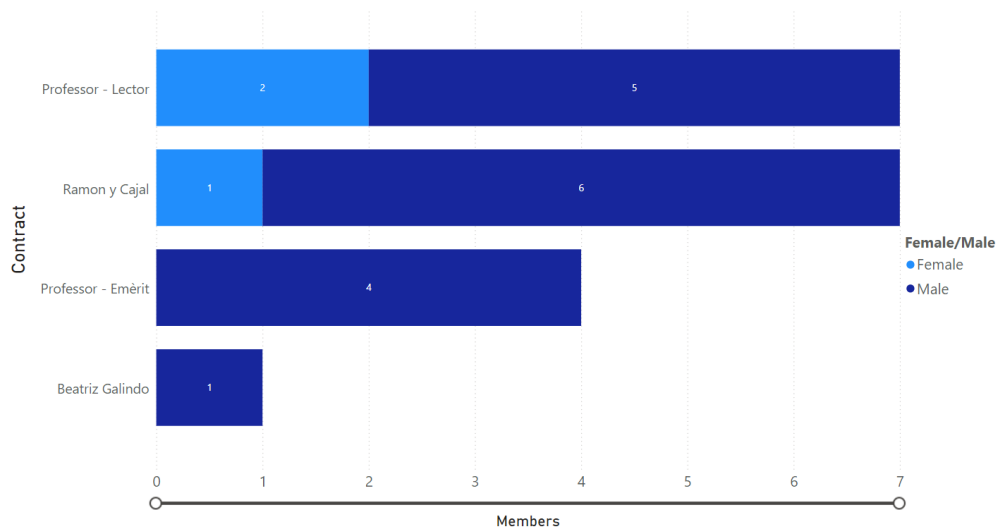


FIGURE 5 DISTRIBUTION OF MEMBERS BY CONTRACT TYPE AND GENDER WITHIN THE NON-PERMANENT FACULTY CATEGORY

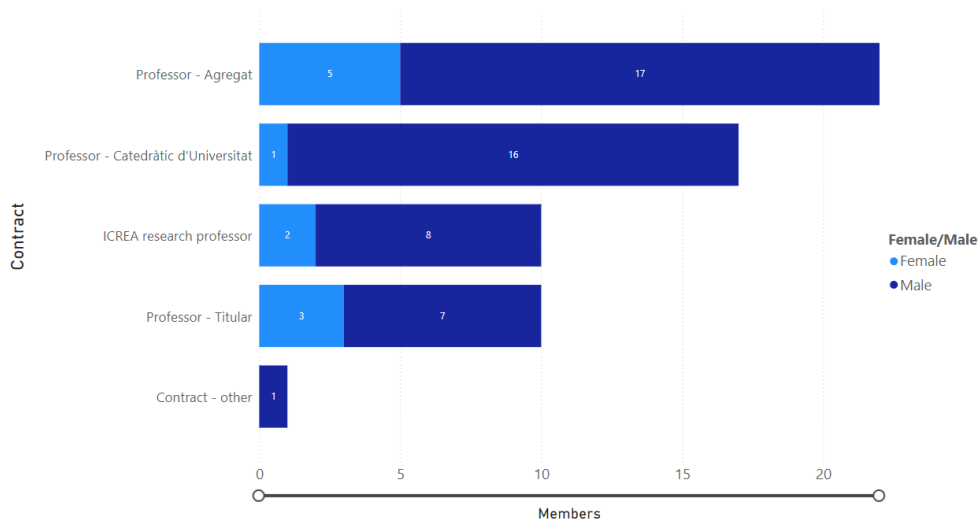


FIGURE 6 DISTRIBUTION OF MEMBERS BY CONTRACT AND GENDER WITHIN THE PERMANENT FACULTY CATEGORY

Regarding contract type and gender distribution, it is considered that ICCUB members are personnel from other institutions or entities that carry out their research activity entirely at the institute. Additionally, ICCUB is one of the four units that make up the IIEC. The scientific secretariat of ICCUB does not have information on these contractual relationships. Data on members for whom information is not available, 27.2%, have been indicated as "Not available or Other contract."

The data reflect that temporality is present in 42.7% of the members, again due to the type of activity subject to funding. Only 30% of the members have a permanent contract.

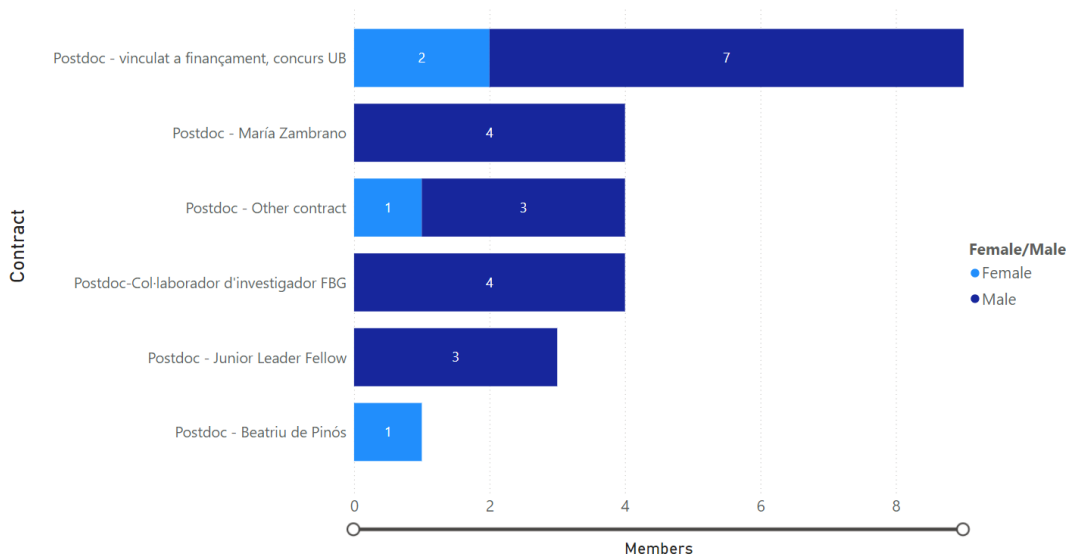


FIGURE 7 DISTRIBUTION OF MEMBERS BY GENDER AND CONTRACT TYPE

48% of women have a temporary contract compared to 41% of men with temporary contracts. 24% of women have permanent contracts compared to 31.9% of men. In this sense, women have greater labor/contractual instability than men. Regarding contract type (excluding "Not available"), the data reflect that women are concentrated in the temporary contract type not linked to funding (15 women, 30% of them), similar to men (27 men, 23.3% of men).

The difference between women and men in the labor contract regime is even higher, 1 to 5 in favor of men, because this is the main contractual modality of the Technological Unit, mainly formed by men. 15% of women have a labor contract compared to 85% of men. Additionally, it is worth mentioning that the weight of the labor contract on the female group is 16% (8% permanent and 8% temporary), while in the male group it is higher and stands at 34% (14.1% permanent and 14.1% temporary).

Continuing with this point, the contract type (excluding "Not available"), the data reflect that women are concentrated in the temporary contract type not linked to funding (15 women, 30% of them). The contract type where more men are assigned is also a temporary contract not linked to funding (27 men, 23.3% of men). Women in the career civil servant regime are, in percentage and absolute terms, three times fewer than men in the same regime (25% of women civil servants, 3 women; 75% of men civil servants, 9 men). However, the weight of women civil servants on the total number of women is 6%, and that of men is similar, 5.5%.

Another relevant graph is the following:

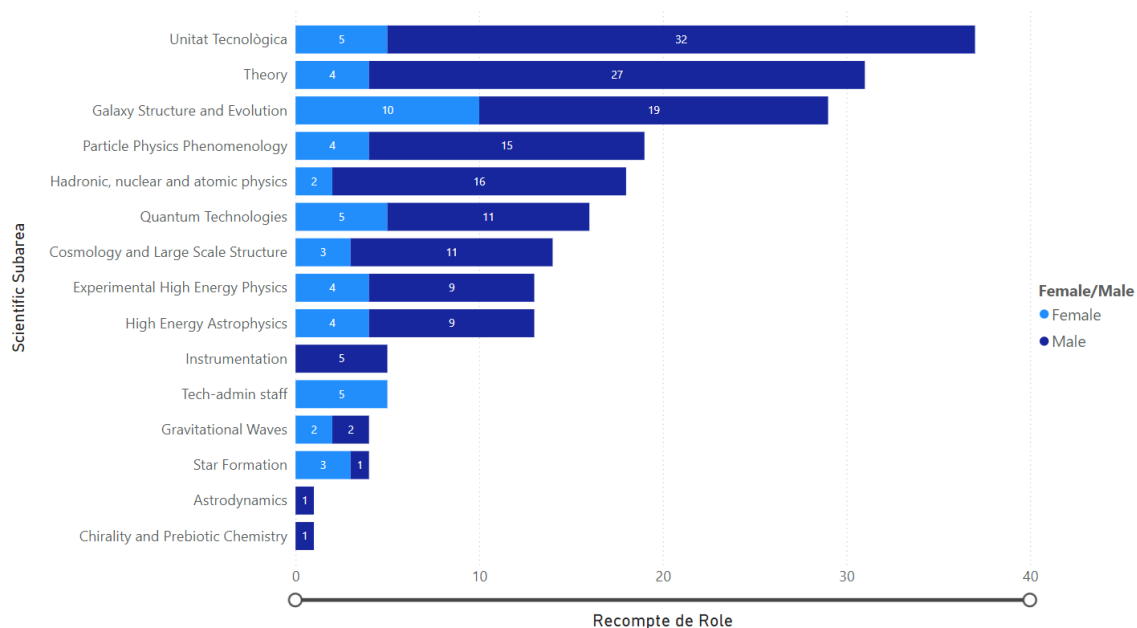


FIGURE 8 DISTRIBUTION OF MEMBERS BY RESEARCH AND AREA AND GENDER

As seen in this image, there are differences in the presence of women among the different research areas at the institute. Most areas have a higher proportion of men than women, suggesting significant gender inequality in different areas and disciplines. Some areas stand out for their higher female representation, such as Star Formation with 75%, or Gravitational Waves, which has a balanced representation with 50% women and 50% men.

On the other hand, there are areas with low female representation, such as Instrumentation, Astrodynamics, and Chirality and Prebiotic Chemistry, which have no women. Also, Hadronic, Nuclear and Atomic, and Technological Unit show low female representation with 11% and 14%, respectively.

Regarding areas with moderate representation, Galaxy and Evolution and Quantum have 34% and 31% women, respectively. General trends indicate that areas related to theoretical and experimental physics, such as Theory, Particle Physics, and High Energy, tend to have low female representation. However, more specialized or emerging areas, such as Star Formation and Gravitational Waves, show greater gender diversity.

Continuing, if we analyze full-time or part-time dedication, the data indicate that 72.3% of the total members work full-time, 76% are men, and 24% are women. 74% of the total women work full-time, same as for men (71.8% of the total).

Regarding part-time work, it is observed that there are more men (72.7%) than women (27.3%) working part-time. Even so, 12% of women work part-time, while 9.8% of men do. In this sense, it can be concluded that there are more women than men working part-time if the calculation is made on the absolute value of each sex. In any case, the difference is smaller, and 17.4% of the data related to the type of working hours are not available.

Regarding caregiving work, in terms of the number of minors, it is observed that a large part of the members do not have any (52.1%), and data is not available for 30%. In the case of staff with one minor, male presence predominates over female, with 92.9% men and 7.1% women. In the case of three minors, there is a 50%-50% balance. In any case,

if the classification of one, two, and three minors is analyzed without counting staff without children and the "Not available", Women are concentrated in the category of having 2 minors, with 70% of women, followed by the category of having 3 minors, with 20% of women. In contrast, men are concentrated in the categories of having 1 and 2 minors with the same weight, 46% of men. Finally, regarding nationality, the members of ICCUB are composed of people from 31 different nationalities. 71.8% of the members have Spanish nationality, while 31.2% are foreign. The most represented non-Spanish nationality is Italian with 4.2%, followed by German and French nationalities with 2.8%. The representation of other nationalities is lower. It is worth noting that women are only represented in 11 of the 31 existing nationalities. In the non-Spanish nationalities with the most staff, female representation is much lower than male. In summary:

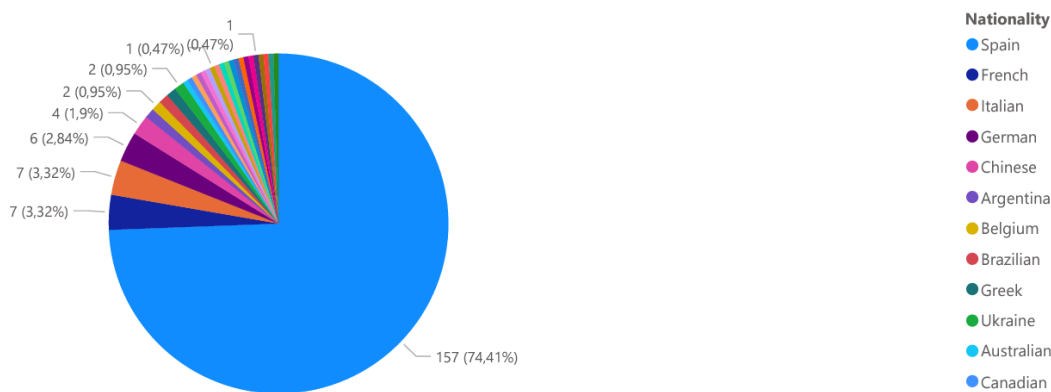


FIGURE 9 DISTRIBUTION OF MEMBERS BY NATIONALITY

Selection and Hiring Process

First, ICCUB has not designed the selection and hiring process, as being an institute of the University of Barcelona, it applies the regulations of the latter. In any case, the analyzed procedure is the one applied to the selection and hiring of all people who can apply for a position.

The selection and hiring process begins with the need to incorporate new staff. The principal investigator of each area fills out a form that goes through an internal procedure for validating the funding reservation. If there is funding to carry out the hiring, the job offer is published. The ICCUB website has an exclusive section where job offers are published and from where anyone can submit their application. It should be noted that the published job offers are written in English, using inclusive language. Additionally, these announcements are published on the [UB electronic](#) headquarters in Catalan.

Once people have registered for the job calls published on the website, the evaluation of the applications begins, which is carried out through the selection committee, formed by:

- Three researchers in the case of the selection of predoctoral and postdoctoral staff.
- Two researchers and one human resources person in the case of the selection of technical staff.

It should be noted that whenever possible, ICCUB includes female representation in the selection committees for staff evaluation.

Finally, the selection is published on the electronic headquarters of the University of Barcelona. At this point, the selected person must confirm or deny the selection. If confirmed, the employment contract is signed.

Part of the research staff (predoctoral and postdoctoral) is funded through grants or linked to funding. Therefore, although the selection process of the University of Barcelona is generally used, there is predoctoral and postdoctoral research staff that is not directly selected by ICCUB or UB, but arrives at the Institute through various entities and/or funding agencies, such as the La Caixa Foundation, the State Research Agency, or the European Commission, among others. Thus, this staff is selected externally. The selection process used by external funding entities has not been analyzed.

Second, the data indicates that in 2023 there were more incorporations than departures. The membership grew by 45 people in 2023. Regarding new hires, in 2023 there were a total of 69 new incorporations, of which 33.3% were women and 66.7% men. Regarding departures, there were a total of 24, of which 20.8% were female and 79.2% were male. Although the distribution of incorporations is not within the 40-60 balance, the percentage of women joining is higher than the current percentage of women among the members.

The job position with the most female incorporations was that of training research staff with 9 women, followed by associate professor and labor staff with 4 each. In the case of men, new incorporations were concentrated in labor staff with 12 men, followed by training research staff with 9 men and postdoctoral research staff with 4 men. A 50-50 balance is observed in the incorporations between women and men in the position of training research staff.

It should be noted that 57% of female incorporations with information occurred in predoctoral and postdoctoral research positions (12 out of 21). 43% of male incorporations (17 out of 39) have occurred in predoctoral and postdoctoral research positions. This indicates that in temporary positions (those linked to research: linked to funding or grants), there are more female incorporations than male. If this positive trend in incorporations compared to departures continues over the next few years, and with these percentages of female incorporation, in addition to an increase in members, female presence will rise; however, not at a sufficient rate to reach the 40-60 balance established by the regulations.

The data indicates that the staff's perception of the selection and hiring processes is that they are conducted with neutrality. This statement is supported by the results obtained in the "maybe" and "yes" responses, which accumulated a result of 31 (42.5%) and 27 (36.9%) responses, respectively. Only 13 people believe that the hiring and selection processes are not neutral (17.8%).

Additionally, an observation section was included to obtain information related to the selection and hiring processes. 27 observations were obtained, emphasizing the selection process and summarized in three aspects:

- Non-participation: Some had not participated in any selection process and had no formed opinion on the neutrality of the selection and hiring process.
- Effort of the entity to promote equal opportunities in job access. It is perceived that there is an evident inequality of representation and the effort of the entity to promote equal opportunities through the selection processes is highlighted. In fact, more than one observation valued positive discrimination actions towards women. In addition to gender representation inequality, some people also refer to the entity's effort to incorporate people from different identity categories. Thus,

from the analysis of the responses obtained, it is perceived that the staff believes that these inequalities need to be reversed through concrete actions, although there is also some observation in which positive discrimination is not seen as neutral.

- Structural and unconscious biases. Several people have expressed the presence of structural and unconscious biases in the selection processes. It is perceived, in some cases, that gender stereotypes continue to shape some people's views on certain positions, which are still considered masculine and undervalue women's ability to dedicate themselves to them."

Shared Responsibility for Personal, Work, and Family Life Rights

This section analyzes whether the rights of work, personal, and family life are equal for women and men, as women often need more reconciliation since they usually take on most of the tasks related to caring for dependents.

The institute does not have a formal digital disconnection or teleworking policy. However, measures are in place to facilitate the personal, family, and work life balance: flexible entry and exit hours and teleworking. The measures for reconciling personal, family, and work life are available on the UB intranet. In any case, each area communicates them to its staff.

Next, the survey results regarding staff perception of reconciliation measures are analyzed. First, regarding care tasks, a person may have various family burdens simultaneously. In any case, 41.1% of respondents do not have family or caregiving responsibilities, 60% are men, 36.6% are women, and the remaining 4.4% prefer not to say. Caring for children is the second most common family burden situation, with 29% of responses. Childcare has more male than female responses.

Regarding the impact of caring for minors and dependents on professional careers, it is interesting to note that 24.7% of respondents consider that caregiving has a negative impact on their career development, while 19.2% do not consider this impact to be negative. It is worth noting that the perception that caregiving does not impact their professional career is much higher among men than women.

Regarding the adequacy of reconciliation measures, the analysis of responses shows a diversity of perceptions. Although 15.1% of respondents consider the current measures adequate, 39.7% are unsure, and 12.3% consider them inadequate. It is noteworthy that the dichotomy between responses on the adequacy or inadequacy of reconciliation measures is mostly from men in both cases. Female responses are more or less evenly distributed between the options of "maybe" or "don't know."

Regarding the communication of existing reconciliation measures, staff indicate that the measures are not communicated enough or are unsure if they are communicated. In this sense, there is a perceived need to implement actions to improve the communication of measures. Regarding how the measures facilitate personal, family, and work life, regardless of their adequacy, there is greater uncertainty, as 47.9% do not know if the current measures work.

The analysis of responses highlights the need to review three aspects:

- Adequately communicate and make visible the existing reconciliation measures.
- Review the current reconciliation measures to ensure they are understood and respond to what was formulated.

- Update reconciliation measures to address new realities and personal situations.

Additionally, a question was formulated to obtain information on possible additional reconciliation measures. The observations emphasize three aspects:

- Nature of scientific work: It is noted that, although flexibility and disconnection measures exist, teaching and research staff do not apply them. The nature and demands of scientific work combined with teaching and the pursuit of excellence (publications, awards, etc.) require dedication and effort that do not facilitate the application of measures, especially regarding digital disconnection.
- ICCUB's capacity to promote its own reconciliation measures: The fact that ICCUB is an institute of UB is perceived as an impediment to promoting its own measures beyond those of UB. Thus, it is not perceived that ICCUB has regulatory (internal) capacity to implement measures. In any case, it is noted that progress must be made towards incorporating measures agreed with UB.
- New reconciliation measures: Some people propose additional reconciliation measures to the existing ones, including:
 - Own digital disconnection policy (mainly disconnection from email outside working hours).
 - Formalization of flexible hours.
 - Flexibility in work organization: intensive work on demand and compensation with days off.
 - Organization of meetings within a specific time slot. It is noted that some of the staff's activities (work meetings, conference attendance, etc.) are not planned with enough advance notice.
 - Creation of lactation or care spaces.

Professional Classification

This chapter includes the analysis of the professional classification of the staff. This is carried out through the classification of members into various existing professional groups and the results of the survey conducted among the staff. Specifically, the classification of members by professional link and gender, classification of members by job position and gender, and self-perception of the staff regarding their current professional situation were analyzed.

First, the institute's members are structured into civil servants, labor staff, and staff linked to funding. It is observed that 39% of the members are concentrated in staff linked to funding or grants (temporary). This is followed by labor staff with 23.5% and civil servants with 12.7%, which means that between both stable contractual relationships, they make up 36.2% of the members. It is worth noting that this data is not available for 24.9% of the members.

Regarding women, they are mostly concentrated in staff linked to funding or grants with 46%, followed by 16% who are labor staff and 8% who are civil servants. In relation to men, 36.8% of men are staff linked to funding or grants, followed by labor staff with 25.8% and civil servants with 14.1%. This translates into women having greater temporality, as their hiring is mostly linked to funding or grants. Although most men are also concentrated in staff linked to funding or grants, the percentages of this in relation to civil servants or labor staff are higher than those of women. Therefore, it could be said that the male labor structure is more stable than the female one.

Second, regarding the classification by job position and gender, the job positions with the highest concentration of people are training research staff with 18.8% of the total,

labor staff with 15.5%, and training research staff with 10.3%. Information is not available for 11.7% of the members. In relation to gender, a balance is observed in the case of training research staff, while the rest of the job positions are male dominated.

The job positions with the highest female representation are training and postdoctoral research staff with 40% and 32% of women respectively. Female labor staff represent 18% of women and associate professors represent 10%. In the rest of the job positions, there is less than 8% representation of the total women. Overall, a notable underrepresentation of women is observed in the rest of the job positions. This underrepresentation of women at ICCUB is not solely due to possible biases in the selection processes but is a consequence of the lack of female representation in the scientific world and STEM professions.

Next, the survey results related to staff perception of their job position and future were analyzed. 42.6% stated that they do not wish to hold a managerial or high-responsibility position at ICCUB, followed by 23.3% who do not believe they will ever do so, and 19.2% who anticipate holding such a position in the future, but not immediately. The number of male and female responses regarding considering holding a managerial position is similar; however, twice as many men as women stated that they do not wish to hold such a position. It is interesting to observe that, of the people who anticipate that they will eventually hold a position, 10 are men and 3 are women. In any case, the responses obtained show a diversity of perspectives and aspirations among the staff regarding managerial or high-responsibility positions.

Training

The Institute of Cosmos Sciences does not have its own annual training plan but is attached to the annual training plan of the University of Barcelona. Nevertheless, ICCUB staff can enroll in the training courses they deem appropriate. There is no limit on the number of training sessions to be taken, meaning staff can enroll in all the training sessions that interest them. However, in some cases, there are difficulties in accessing some training sessions, either due to the number of available places, the language in which they are taught, or the workload.

Additionally, ICCUB complements the training offer by incorporating training proposals from the staff. For instance, researchers, among others, can propose the implementation of internal courses. The final decision on whether or not to develop the training is made by the ICCUB management team. 35 people received training, of which 82.86% were men and 17.14% women.

Regarding the duration of the training, in 2023, 458.5 hours of training were conducted, of which 35.01% were received by women and 64.99% by men. Although it cannot be said that men and women are proportionally balanced, women received a higher amount of training than their representation among the members.

In summary, the data indicate that proportionally the female representation in the number of trained people is lower than the male. However, this representation begins to balance when analyzing the number of training hours received. This increase may have occurred because women have taken longer training sessions than men, or alternatively, women have taken more training sessions and therefore accumulated more hours.

The survey results show a divergence in the perception of training in equality and diversity. Although a significant 41.4% of respondents claim to have received training in this area, 16.4% say otherwise. It should be noted that training is voluntary and people

can enroll in those that interest them. However, there is no periodic (and mandatory) training policy in equality and diversity to ensure that all staff have minimum knowledge. This generates a reflection on the importance of training in equality and promoting a more inclusive and conscious organizational culture, especially considering that 36.9% of respondents consider it important to receive this training from ICCUB.

It is notable that 49.3% of respondents do not understand what intersectional gender perspective refers to in the design of the training plan; in fact, 75% of the responses about the lack of understanding of the concept are male. Additionally, 27.4% of respondents are doubtful about the application of the intersectional gender perspective in the design of the training plan. This underscores the need for greater clarity and awareness in these aspects.

Regarding how the training received by ICCUB contributes to professional advancement, there is a clear division: 56.2% consider that it does contribute to their professional development and 43.8% do not see it the same way. Women value the training received better; in fact, 80% of the women who responded to the survey perceive that the training received does contribute to professional advancement; this percentage is reduced to 47% in the male group. Although only 35 people have received training, the perception of its contribution to professional advancement is quite high.

Furthermore, the survey collects training proposals in equality and diversity from the staff: training in the prevention of sexual harassment and/or gender-based harassment stands out with 56.20% of preferences, followed by training in work-life balance and family responsibilities with 52.10% and training in Gender equality for managers and middle managers with 37%. Conversely, training on basic concepts in equality and inclusive language are the least highlighted.

Additionally, an open question was formulated to obtain information on possible training in equality and diversity:

- Equity, diversity, and inclusion with the aim of promoting a fair and collaborative academic environment.
- Applicable legislation on equality and gender issues.
- Incorporation of gender mainstreaming in the organization (for example, in hiring processes, thesis supervision, among others).
- Incorporation of the gender perspective in thesis supervision.
- Gender management in people management.

Professional Promotion

This section analyzes information about the professional promotion system at the institute. ICCUB does not have an internal professional promotion procedure or policy. Promotions are carried out following the procedure of the University of Barcelona and only apply to internal staff. For research staff, the promotion capacity is conditioned by the funding to which it is linked. Although it is not common, on some occasions, when the Institute's funding has allowed it, some researchers have been stabilized. Thus, when the economic and human resources situation allows, internal promotion constitutes a mechanism to retain talent and develop professionally.

In 2023, a total of 12 promotions were made, of which 33.3% were female and 66.7% were male. The results are far from a balanced proportion but are more balanced than the total distribution of members.

Next, the survey results regarding staff perception of professional promotion are analyzed. Of the 73 people who responded to the survey, 58.9% state that their professional trajectory has been moderately linear and consider that they have been able to advance in their career. Despite some personal sacrifices, they do not identify significant mismatches between their personal and professional life that affect their promotion capacity. Therefore, in general, no difficulties in professional promotion related to their personal and family situation are perceived. However, when responses are analyzed by gender, 25% of those who accept this statement are women while the percentage of men is 75%.

Conversely, 24.7% of people have indicated that they feel the lack of alignment between the demands of their job and their personal life has impacted their promotion opportunities, although they have progressed slowly and are satisfied with their current situation. Additionally, they have future evolution prospects. Therefore, despite being satisfied with their professional progress, they have faced some difficulties in developing their personal and family life. 38% of the responses are female while 62% are male. 6.8% consider that there may be difficulties in their career progression due to their personal and family situation. Only 5 responses are obtained, but the percentage of women and men who have this perception is similar, 40% women and 60% men.

In any case, 34.6% of people have answered that professional promotion is conditioned by achieving work objectives incompatible with personal life and family commitments, of the responses 51.9% are men, 40.7% are women, and 7.4% prefer not to say. On the other hand, 10.3% of people have answered that most of the vacant positions for hiring or promotion involve responsibilities incompatible with personal and family life.

Additionally, the survey provided space for comments on the perception of professional promotion. The following stands out:

- The demand for scientific work and the perception that "the more you work, the more possibilities for professional promotion." Greater dedication to work at the expense of time dedicated to personal life can create inequality situations in promotion processes. Especially when people in the same job position can choose to increase effort compared to others who have family burdens. However, perceptions related to professional promotion being conditioned by achieving work objectives, which are generally compatible with personal life and care, are also identified.
- The widespread concern of people who have provided some observation about the existence of unconscious biases in selection processes.
- It is stated that ICCUB does not have a clear, transparent, and explicit family policy.

To conclude, the survey results reflect a variety of perceptions and experiences regarding the relationship between the personal and professional life of respondents. Although a majority do not perceive significant difficulties in their professional promotion related to their personal situation, a minority have experienced negative impacts on their career progression opportunities due to the existence of mismatches between both areas of their life. It is fair to say that as the perception of the lack of alignment between the demands of their job and their personal life increases, more female responses are

produced. Women perceive more that there may be difficulties in their career progression due to their personal and family situation.

Female underrepresentation

Despite significant advances in promoting gender equality in various aspects of society, female representation in scientific disciplines remains notably low. These differences manifest in the lower presence of women in leadership roles, academia, and scientific research. This raises fundamental questions about equity and social justice in the field of science. The analysis of female underrepresentation aims to identify situations that facilitate the design and implementation of effective measures to promote gender equality, diversity, and the inclusion of women in the scientific field.

The reasons behind this underrepresentation are complex and consist of a combination of social, cultural, and institutional factors. Historically, girls can be influenced by gender stereotypes around scientific and technological disciplines from an early age. This translates into lower participation in scientific careers, partly due to the lack of role models in these fields. As women advance in their careers, they often face additional obstacles, such as the lack of role models, gender discrimination, the wage gap, and difficulties in reconciling personal, family, and work life.

During the analysis period for the preparation of this diagnosis (snapshot as of December 31, 2023), women represent 23.5% of the total ICCUB members, and men represent 76.5%. The results do not show a gender balance between women and men. The composition of the Institute's members is male-dominated. However, although women are underrepresented at the Institute, no discrimination against women is identified, as measures are currently being applied to facilitate the incorporation of women (positive and reconciliation measures).

In this context, it is important to recognize that this gender gap in science is not exclusive to ICCUB but is influenced by various factors. The previous analysis suggests the need to implement policies and measures that promote gender equality at all levels and areas. The inclusion of women in leadership roles and the implementation of specific support programs can help address this inequality and create more inclusive and equitable environments for all people at the Institute.

Next, the survey results regarding ICCUB staff's perception of female representation at the institute are analyzed. It is observed that although it is perceived that there are clearly more men than women or that most people are men. Specifically, 46.6% of respondents perceive that there is a large majority of men within their functions, while 35.6% observe a disproportion between men and women in favor of men.

On the other hand, regarding the perception of female presence within research groups or teams, the perception is more accentuated in favor of male presence, with 79.5% of respondents indicating a lack of women within their research groups or teams; only 19.2% consider that there is some gender balance in this area.

In this sense, it seems that although the staff is aware and perceives gender inequality within the same teams and research groups, when this perception is expanded to the entire Institute, it changes, and there is not as much awareness of the existing inequality. It is crucial to address this inequality through policies and initiatives that promote gender equality and diversity in research teams. This would not only have a positive social impact but also positive effects on improving the quality and diversity of research results.

Organizational Culture

On September 13, 2018, the Institute of Cosmos Sciences approved the creation of the Diversity, Equity, and Inclusion Commission (DEIC Commission). The commission's objective is to promote specific actions to provide a welcoming environment for staff and visitors, regardless of gender, gender identity, sexual orientation, ethnicity, beliefs, or disabilities. The Diversity, Equity, and Inclusion Commission has its own section on the Institute's website. It can be consulted at the following link: <https://icc.ub.edu/deic-commission>.

In addition to having its own Diversity, Equity, and Inclusion Commission, ICCUB subscribes to the Code of Ethics of Integrity and Good Practices of the University of Barcelona. The document was prepared by the Ethics Committee of the University of Barcelona and approved by the Governing Council on October 9, 2018. The main objective of the document is to guide and support the rights and obligations of the university community in exercising their freedom and responsibility. The document integrates the principle of equality in section five: Equality of Rights. This section establishes the right of all members of the University of Barcelona not to be discriminated against based on place of birth, racial or ethnic origin, ideology, language, religion, sex, gender identity, age, disability, socioeconomic status, or any other personal or social circumstance.

Finally, it is worth noting that ICCUB also subscribes to the Code of Integrity in Research of the University of Barcelona. The Code was prepared by the Vice-Rectorate for Research and was approved by the Governing Council on May 15, 2020. Section 3.5 of the document integrates the principle of Respect, which establishes that research staff must be respectful of colleagues participating in the research, society, ecosystems, cultural heritage, and the environment.

Next, the survey results regarding ICCUB staff's perception of equal opportunities, diversity, and non-discrimination are analyzed. The data show the level at which ICCUB workers perceive that it integrates equal opportunities for everyone and non-discrimination based on origin, culture, sexual orientation, or others. It is observed that 54.8% of people chose the "partially" option, while 43.8% believe that it is taken into consideration. Only one person (a woman) answered that equal opportunities are not taken into account.

Thus, the data provide an interesting view of the perception of the level of integration of equal opportunities and non-discrimination at ICCUB. Although most responses indicate a partial consideration of these principles, it is encouraging to note that a significant proportion of staff recognizes that it is being taken into account. In any case, this partiality view denotes that it is perceived that equal opportunities are not being considered in their entirety. This suggests the need to continue working to ensure real and equitable equality for all people at the Institute.

This question contained an additional section to include qualitative observations. A total of 28 responses were obtained. The observations emphasize two aspects:

- General awareness of the possible existence of discrimination situations in the workplace and their positive approach at ICCUB. However, they also point out the persistence of conscious and unconscious biases in inclusion and non-discrimination policies and practices based on origin, culture, sexual orientation, or others.

- The need to adopt more proactive measures to promote equality, with specific examples:
 - Review of selection and hiring processes to avoid discrimination and increase the representation of minority groups.
 - Training and awareness to address unconscious gender biases.
 - Implementation of measures that generate structural changes to ensure more equitable representation and a more inclusive organizational culture.

In summary, progress in awareness of the issue is recognized, but a deeper commitment to implementing policies and practices that promote diversity and equal opportunities is urged.

Regarding the level of knowledge, the data indicate that ICCUB staff consider that they have a good level of knowledge in gender equality, gender perspective, intersectional perspective, and its impact in the workplace. Specifically, 43.8% of people consider that they have an intermediate level of knowledge, with the majority of people having this perception being men. 45.2% of the staff consider that their level of knowledge is high or very high. This perception is equally distributed between men and women. In contrast, only 9.6% consider that their level of knowledge is low. In this sense, it seems that women perceive that they know more than men about gender equality, gender perspective, intersectional perspective, and its impact in the workplace.

Regarding ICCUB's equality and diversity policy, 43.8% of respondents claimed to know it. Although this is a positive statement, 41.1% are unsure and responded with "I don't know." In this sense, it would be interesting for the Institute to make the tools currently available in this area (website, policy, among others) known.

Regarding the perception of diverse representation of workers from a gender perspective, 56.2% of the responses received agree that ICCUB has a diverse representation of people. It should be noted that 75% of the people who responded with this perception are men (13 women, 17 men, and 1 person who prefers not to say their gender). Conversely, 30.1% disagree with the statement, with homogeneous male and female responses.

In conclusion, the survey results reflect a mostly positive perception regarding the level of knowledge and the Institute's equality and diversity policy. However, the need for improvement in certain areas, such as information and dissemination of available tools to promote equality and diversity, is detected. It is encouraging to see that most staff perceive diverse representation within ICCUB, but it is important to address discrepancies and areas of disagreement to ensure an inclusive and equitable environment for everyone at the institution.

Equality in Leadership and Responsibility

During the preparation of this diagnosis, interviews were conducted with ICCUB staff related to the perception of the distribution of women and men in leadership and decision-making positions. In this sense, the internal perception at the Institute is that there is a balance between women and men in leadership positions. In any case, it is stated that it may not be a 50-50 balance, but it is representative considering the number of women in the institution.

The reality shows that management and decision-making positions (ICCUB Council) are occupied by a total of 32 people, of which 34% are women and 66% are men. Although

the proportion between sexes is not within the 40-60 parameters of LO 3/2007, a proportion close to this balance is observed. The representation of women in management and decision-making positions at ICCUB is higher than the distribution of members by sex, suggesting progress towards gender equality in leadership and decision-making levels.

Conclusion

First, it is undeniable that the composition of the members reflects a clear gender imbalance, with a clear male predominance. This masculinization of the organization is more evident in the older categories, although new incorporations show a slight change in trend, potentially indicating an opening towards greater gender inclusion in the future. It is fair to say that the underrepresentation of women in scientific institutions is a persistent phenomenon that reflects deeply rooted social, cultural, and institutional inequalities. Despite advances in gender equality in other areas, women continue to be underrepresented in leadership and research roles in science, technology, engineering, and mathematics (STEM).

Second, the results indicate relative equity in promotion and hiring processes, with a general perception of gender neutrality among the staff. This observation suggests that, despite the existing gender imbalance, the organization implements policies that seek to ensure equal opportunities and promotion based on professional merit, regardless of gender. Female professional progression in the scientific field remains a challenge. Although there have been advances in women's participation in this field, obstacles still exist that limit their access to leadership and scientific research roles.

Some of the most common barriers include the lack of female role models, gender stereotypes that can influence educational and professional choices, the gender pay gap, the lack of support for work-life balance, and subtle discrimination in selection and promotion processes. To address these issues, it is crucial to implement specific initiatives that promote gender equality and diversity, such as mentoring programs, work-life balance policies, and actions to raise awareness about gender biases.

Third, it seems evident that ICCUB has implemented various measures to facilitate work-life balance, such as flexible hours and teleworking. This not only benefits workers in general but is especially beneficial for women who often take on greater responsibilities and family burdens. Despite having some measures, the general perception is one of ignorance or non-application, so family and caregiving responsibilities continue to affect the professional development of some people at the institute.

Finally, it is important to highlight the presence of a diversity, equity, and inclusion commission created to promote specific measures in this area. This initiative demonstrates the organization's commitment to promoting gender equality and diversity in the workplace and could serve as a platform for the implementation of new policies and programs in the future.

4. Objectives and actions

4.1. Scope and Duration of the Plan

The objectives and actions outlined below aim to impact the structure and culture of the institute, applying to research staff throughout their professional careers and to administrative and service staff. This is a long-term plan, with immediate actions, that will

be in effect for four years from its approval, but always available for possible revision if deemed necessary. The document was approved by the DEIC (Diversity, Equality, and Inclusion Commission) on November 12, 2024, for subsequent approval by the Institute's council.

4.2. Objectives

The Equality Plan aims to promote a fair, inclusive, and equitable academic and work environment, ensuring equal opportunities for all members of the institute's community, regardless of gender or other characteristics. This plan establishes concrete actions to eliminate barriers, fostering a culture of respect and diversity.

General Objectives:

1. Structure equality and diversity within the institute so that it becomes an intrinsic part of its culture.
2. Ensure equal opportunities, taking into account all realities and diversities that may arise.
3. Promote equality in the hiring and retention of female researchers.

4.3. Actions

To organize the necessary actions, they have been distributed into four areas of action based on the previous objectives:

1. Promotion of equality and diversity: an axis that guides the institute's new equality policy.
2. Visibility of women, diversity, and equality: an axis focused on giving visibility to the women of the institute and their work, as well as incorporating communication with a gender perspective.
3. Coordination with other institutions: an axis with actions to improve relations with other similar entities regarding gender, equality, and diversity.
4. Equality in academic life: an axis that includes reconciliation measures and non-penalization for balancing academic and personal life.

Next, the planned actions are detailed in a table describing the action, the responsible persons, the resources, and the priority of the action (from 1 to 3, with 1 being the highest priority).

AXIS 1: Promotion of Equality and Diversity

Actions	Description	Indicators	Responsible	Ressources	Priority
Positive Action Measures	Implement positive action measures to reverse the situation of inequality of women's presence in the institute. Specific measures: • Specific grants to reverse the situation: focus on the transition from master's student to doctorate to retain women in the institute.	Number of grants and follow-up	Equality technician and institute management	15000€	1
Institutional Declaration of Commitment to Equality and Diversity	Write an institutional declaration related to the institute's commitment to equality and diversity to publish on the website.	Publication on the official website (and DEIC) and intranet	Institute management	0€	2
Planning Social Activities	Organize recreational activities, related or not to research, that serve to unite the institute.	Number of activities carried out	DEIC and volunteers	0€	2
Gender and Diversity Training Plan	Plan and organize training on equality and diversity for each course based on current needs.	Implementation of the plan and application	Gender technician and third parties if necessary	20000€	1
Incentive Plan for Training Attendance	Establish incentives for research staff attending activities carried out within the DEIC framework in addition to training. They can be direct incentives or advantages. For this, funds from Maria de Maeztu will be used, for example, giving more points in budget	Increase of participants in activities and training	DEIC and institute management	0€	1

	requests to those teams attending activities and training.				
Inclusion of Gender Perspective and Inclusion in Official Institute Events	Inclusion of the gender perspective in official events organized by the institute. For example, providing gender-related data or selecting people who represent the institution in a gender and diversity balanced way.	Balance in the representation of the institute, updating data for relevant dates	DEIC and institute management	0€	2
Gender Equality in the Organization of Congresses, ICCUB Colloquia, and Seminars	Each congress organized with institutional support from ICCUB must have at least female representation in the field, and in any case, it should be greater than 25%.	Number of conferences, percentage of female speakers, percentage of female participants	Scientific secretariat	0€	3
Equality in Governing Bodies	Monitoring equality in governing bodies and promoting adherence to the principle of proportionality of women and men within the institute.	% of men and women in the bodies	DEIC and equality technician	0€	1
Leadership Program for Women and Mixed with Inclusion Perspective	Encourage women to take leadership roles within the institution and correct the "scissors" trend in science graphs. The course is aimed at female researchers, technical staff, and research managers. Additionally, a leadership program with a gender and inclusion perspective will be conducted for all relevant institute staff (both men and women).	Participation in the course, positions of responsibility, or other leadership-related merits	DEIC, equality technician, external trainer	6000€	1
Mentoring Program	Specific mentoring program among women at different levels: PhD to master's students and among women in the institute. Additionally, seek other	Number of female participants, feedback.	DEIC and volunteers	2000€	2

	program options offered by related institutions and disseminate them within the institute.				
Hiring and Promotion Process	Ensure the process is neutral and fair for all participants. In the job posting, provide a neutral definition of responsibilities, mention the necessary training, experience, and job expectations, as well as a description of the environment. Conduct a neutral and fair process where all participants have the same opportunities, following UB regulations regarding evaluation committees and parity.	Monitoring the number of participants in the processes (number of men and women), increase in hiring women	DEIC, research teams, scientific secretariat	0€	2
Gender Bias Training for Research Staff on Selection Panels and Committees	Training on unconscious biases is key to eliminating possible inequalities in selection and promotion processes. Conduct as best practices and include a video on biases. Include a checklist as a guide when participating in committees.	Number of trained research staff and number of panels with trained staff	DEIC and gender technician	0€	2
Budget Distribution with Gender Perspective	Budget distribution may be gender-biased; this action aims to distribute considering gender perspective and equality. It is a control and monitoring measure.	Proportional budget distribution	DEIC, institute management	0€	3
Internal Review of DEIC	Bimonthly scheduling of the commission meeting. In each meeting, follow up on the people forming the DEIC to see if participation and commitment remain active.	Conducting meetings	DEIC	0€	2

Annual Diagnosis and Publication of the Equality Report and Dissemination at the Institute Level	Annual monitoring of the data presented here to see the institute's evolution and correct the equality plan if necessary.	Conducting the evaluation and dissemination	Gender technician and/or Secretariat	0€	1
AXIS 2: Visibility of Women, Equality, and Diversity					
Actions	Description	Indicators	Responsible	Resources	Priority
Non-Sexist Communication: Inclusive and Non-Discriminatory Language	Review official documents and web pages. Internal and external communication.	Use of inclusive language and number of documents reviewed	Equality technician	0€	3
Translation of Official Documentation	Based on the institute's multiculturalism, the use of different languages (English, Catalan, and Spanish mainly) can help in the inclusion of staff.	Number of adapted documents	Communication team and equality technician	0€	2
Promotion of DEIC and Its Activities	Updated website, dissemination of activities and responsibilities.	Website update, effective dissemination within the institute	DEIC, equality technician, communication	0€	1
Visibility of Women's Work in Internal and External Communication Channels	Continue to highlight the work of research staff, especially the merits and research of female researchers, making them more visible and emphasizing their work.	Ratio of news related to female scientists	Communication team	0€	3
Dissemination of the Equality Plan (ICCUB)	1) Create a summarized version/presentation of the plan and actions. 2) Disseminate the document so that all staff are aware of its existence and how they can use it.	Staff awareness of the plan through a survey	Equality technician, DEIC, communication team	0€	1

Dissemination of the Anti-Harassment Protocol (UB)	Disseminate the document so that all staff are aware of its existence and how they can use it.	Staff awareness of the protocol through a survey	Equality technician, DEIC, communication team	0€	2
AXIS 3: Coordination with Other Institutions					
Actions	Description	Indicators	Responsible	Resources	Priority
Maintain and Improve Relationship with UB on Gender Issues	Participation of institutes in the university and faculty equality commission has been established. The action consists of maintaining the relationship and increasing the institute's presence in these commissions and their activities.	Presence in meetings and activities	Equality technician and institute management	0€	2
Maintain and Improve Relationship with SOMMa on Gender Issues	Participation of institutes in the SOMMa equality commission and gender working groups has been established. The action consists of maintaining the relationship and increasing the institute's presence in these commissions and their activities.	Presence in meetings and activities	Equality technician and institute management	0€	2
Research Institutes	Relationships with other research institutes (UB and others) are fundamental for ICCUB; this action aims to improve them concerning gender and equality, working jointly on related actions and activities.	Joint organization of activities and staff participation	Equality technician and institute management	0€	2
AXIS 4: Equality in Academic Life					
Actions	Description	Indicators	Responsible	Resources	Priority
Creation of a Wellness Room	Dedicated room for care, can be replicated by other faculties. The	Creation of the room and use	Faculty of Physics	0€	1

	institute cannot create it, but can encourage and help in the creation and proper use of the room.				
Reconciliation Measures	Creation of a good practices guide for institute staff. Examples: Schedule meetings during working hours; flexible hours; prioritize meetings between 10 am and 4 pm.	Use of measures and application. Annual follow-up through a survey	DEIC and research groups, as well as departments	0€	1
Incorporate Measures to Facilitate Reconciliation in Teaching Schedules for PDI with Children Under Six Years Old, as Long as Compatible with Departmental Teaching Needs	Facilitate family reconciliation for those with family responsibilities and teaching obligations. See the measures and facilitate them to departments for follow-up.	Measures applied and number of people requesting them	Management, coordination with departments	0€	1
Dissemination of Reconciliation Measures	Communication plan and inclusion of measures in official documents. Dissemination of measures to staff.	Inclusion of measures	Communication	0€	1
Ombudsperson Figure	Maintain and strengthen the existing Ombudsperson figure through formalization and training of volunteers and raising awareness of the figure.	People in the position and interventions carried out	DEIC and volunteers	5000€ for training course	1
Drafting and Dissemination of the Code of Conduct	Draft (adapt) and approve a good practices document for the entire institute community. Subsequently, it will also need to be publicized and made known to all staff.	Drafting, approval, and distribution of the document	Gender technician and institute management	0€	1
Drafting and Dissemination of the Welcome Protocol	Drafting, approval, and dissemination of a welcome protocol to help all new arrivals at the institute.	Drafting, approval, and distribution of the document	DEIC and institute management	0€	1

5. Implementation of the plan

To ensure effective implementation of the plan, a clear structure is established that includes the designation of responsible parties, necessary resources, execution timelines, and monitoring mechanisms. The following steps detail how to carry out the plan:

Responsible Persons

The equality plan will be included transversally in the institute's structure, so different parts and individuals must be involved in its implementation and monitoring.

- **DEIC:** Currently, it is the commission responsible for equality and diversity in the institute, and thus, it will be the main body to monitor and supervise the implementation of actions.
- **Scientific Secretariat of ICCUB:** The office responsible for leading the implementation and acting as a reference point for everything related to the plan. Its role includes direct supervision of actions, resource coordination, and resolution of any incidents.

Additionally, each involved area will have a designated responsible person to ensure that specific measures in their area of action are effectively carried out. These individuals must be informed and trained on the plan and what is expected of them.

Assigned Resources

To ensure the Equality Plan is correctly implemented, the necessary resources, already described in the previous section's table, will be allocated, including:

- **Human Resources:** Those responsible for implementation or facilitation, as well as individuals who may participate in the training of the various proposed courses.
- **Economic Resources:** Budget for training, awareness campaigns, and any logistical or material needs that arise during implementation. Each action proposes the required amount of money, considering the plan's four-year duration.
- **Material Resources:** Didactic and technological materials necessary to carry out the planned actions, such as online training resources, infrastructure for meetings, and information dissemination.

The efficient use of these resources will be periodically monitored by DEIC to ensure they are used appropriately and in accordance with the plan.

Execution timelines

The implementation process will be carried out in several phases, each with a defined timeline to ensure the objectives are met and monitored. From the plan's approval, work will begin on those actions with the highest priority and immediacy. The proposed timeline is as follows:

- **Awareness and Communication Phase (0-3 months):** Publication of this document along with an infographic summary to facilitate reading and make it a practical tool. Internal dissemination will be done through available communication channels (intranet, emails, meetings) and informative sessions for all staff.
- **Training and Capacity Building Phase (4-6 months):** To carry out the plan, the involved individuals and bodies must be trained in equality and the plan itself. This is one of the first phases that ensures the plan's positive and effective development.
- **Review and Adaptation of Procedures Phase (7-12 months):** Review and adaptation of internal processes, including the integration of equality policies into internal policies and the institute's culture.
- **Monitoring and Adjustments Phase (12 months onwards):** Continuous monitoring and necessary adjustments to correct deviations and optimize results.

Communication and Awareness

Transparency and participation of all staff are key to the Equality Plan. To achieve this, the following communication measures will be implemented:

- **Continuous Internal Communication:** All institute communication channels (internal bulletins, intranet, emails, and periodic meetings) will be used to keep staff informed about the plan's progress, updates, and any new measures.
- **Informative Sessions:** Meetings with different teams and departments will be organized to explain the plan's content, objectives, and benefits of its implementation. Staff participation will be encouraged, inviting them to provide suggestions and comments.
- **Visibility of Implementation:** The plan's achievements and progress will be periodically shared with all staff, highlighting the importance of equality in the company's culture. This will contribute to greater awareness and commitment to the objectives.

Feedback and Participation Mechanisms

To ensure the Equality Plan is successfully implemented and remains relevant, feedback mechanisms will be established to allow all staff to express their opinions and suggestions. These will include:

- **Suggestion Box:** A physical or digital space where improvements can be proposed, possible areas for improvement can be pointed out, or concerns related to equality and the plan can be expressed.
- **Opinion Surveys:** Some actions will be measured with a survey conducted annually or biennially. This will serve to assess the plan's application and the evolution of equality and inclusion in the institute.

Modification and Adaptation

The document is intended as a tool for equality in the institute, so it must be dynamic and adaptable to the needs and new situations that may arise. Thus, any person, especially DEIC and the Council, can propose modifications and new actions if deemed necessary. To do so, the interested person can contact DEIC (via form or email to the chairperson), and the commission will review the request and present the modification to the Council for approval or rejection.

6. Conclusions

The Institute of Cosmos Sciences (ICCUB) at the University of Barcelona has a strong commitment to gender equality and diversity, reflected in the creation of an equality plan that seeks to eliminate any form of discrimination and promote an inclusive and equitable environment. This commitment aligns with state and regional regulations, as well as the internal policies of the University of Barcelona. In summary, the conclusions are as follows:

First, the plan is based on a regulatory framework that includes Organic Law 3/2007 for the effective equality of women and men, Royal Decree 901/2020 on equality plans and their registration, Law 14/2011 on Science, Technology, and Innovation, the UB Protocol for the prevention and action against sexual and gender-based harassment, and the III Equality Plan of the UB. These regulations provide an essential legal and structural basis for the development and implementation of equality policies at ICCUB.

Second, the diagnosis reveals a gender imbalance at ICCUB, with 23.5% women and 76.5% men among the members. This quantitative and qualitative analysis provides a comprehensive view of the current situation and serves as a basis for formulating effective measures to promote gender equality. This masculinization of the organization is more evident in the older categories and in groups dedicated to theoretical physics, although new incorporations show a slight change in trend, potentially indicating an opening towards greater gender inclusion in the future. Despite having some measures for reconciling personal and professional life, the general perception is one of ignorance or non-application, so family and caregiving responsibilities continue to affect the professional development of some people at the institute.

Third, the plan establishes specific objectives and actions distributed across four areas of action: promotion of equality and diversity, visibility of women, diversity and equality, coordination with other institutions, and equality in academic life. The first axis aims to establish inclusion and diversity as structural values of the institute and reverse the situation of gender inequality. The second axis promotes the use of inclusive communication and the visibility of women's work in internal and external channels. The third axis focuses on collaboration with the University of Barcelona and other entities to promote equality. The fourth and final axis proposes actions to help reconcile work-life balance.

The plan includes positive action measures to correct the underrepresentation of women at the institute, such as specific grants for women and leadership programs. These measures aim to encourage the participation and retention of women in science and leadership roles. Additionally, a continuous training plan on equality and diversity for all institute staff is proposed, essential for creating an inclusive organizational culture and raising awareness among staff about the importance of gender equality.

In conclusion, the ICCUB Equality Plan is a comprehensive and structured document that addresses the need to promote gender equality at the institute. With a regulatory framework, a diagnosis, and consequent specific actions, the plan is well-positioned to create a more inclusive and equitable environment. The effective implementation of this plan will significantly contribute to equal opportunities and the improvement of the inclusive culture at ICCUB.