

# Executive Summary SCIENTIFIC REPORT 2023



# Executive Summary SCIENTIFIC REPORT 2023



Instituto de Investigación Sanitaria  
Gregorio Marañón



**Hospital General Universitario  
Gregorio Marañón**

**uc3m**  
Universidad  
**Carlos III**  
de Madrid



**FUNDACIÓN INVESTIGACIÓN BIOMÉDICA  
HOSPITAL GREGORIO MARAÑÓN**



**CONSEJERÍA DE SANIDAD  
Comunidad de Madrid**  
Dirección General de Investigación  
y Docencia

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Report prepared by the Biomedical Research Foundation of Hospital Gregorio Marañón  
and the Health Research Institute of Hospital Gregorio Marañón.

# INDEX

|                                                               |           |
|---------------------------------------------------------------|-----------|
| <b>1. PRESENTATION</b>                                        | <b>7</b>  |
| <b>2. INTRODUCTION</b>                                        | <b>11</b> |
| <b>3. HIGHLIGHTS</b>                                          | <b>15</b> |
| <b>4. EXECUTIVE SUMMARY</b>                                   | <b>19</b> |
| • Global analysis                                             | 21        |
| • Organizational structure of liSGM                           | 39        |
| 1. Organizational Chart                                       | 39        |
| • Structure of research areas and groups                      | 41        |
| • Research Support Services (RSSs)                            | 45        |
| • Innovation, knowledge transfer, and translation to practice | 47        |
| • Interventional and non interventional clinical studies      | 49        |
| • Funding of liSGM                                            | 51        |
| • List of active projects in 2022 by area of research         | 55        |
| • Scientific publications                                     | 59        |
| • Training: courses, seminars, and meetings                   | 83        |
| • Clinical Practice Guidelines                                | 87        |
| • Doctoral theses defended                                    | 89        |
| • Cooperative Research Structures                             | 91        |
| Partners Companies                                            | 93        |





1

## PRESENTATION

Photography: Miguel Ángel Cano



## PRESENTATION

We are delighted to present the 2023 Scientific Report from the **Institute for Health Research at the Hospital General Universitario Gregorio Marañón (IiSGM)**. Our main goal is to share the research and innovative activities carried out within our institution with various stakeholders and the broader community. In addition, we would like to recognize the outstanding dedication of the researchers in each Research Group.

Over recent years, research activity has experienced significant growth. The **number of publications** has increased from the previous year to reach a total of 1,192 publications in 2023. It is important to highlight the rigorous assessment process for publications associated with IiSGM, which strengthens the credibility of this indicator. Moreover, it's notable that IiSGM researchers led 50% of the publications, reflecting strong international collaboration. Additionally, 56% of our research outputs were published in first-decile or first-quartile journals, marking a significant improvement over previous years.

**IiSGM's innovation efforts** are also remarkable, featuring a diverse portfolio of innovative projects, including three successful spin-offs (Corify Care, Telara Pharma, and ThyTech), along with a new one (Ownmed Innovation), all aimed at meeting the evolving needs of the healthcare system. Notably, more than 50% of our patents have been licensed, showcasing significant potential for future development and generating interest from industrial and commercial sectors.

This outstanding research and innovation success is driven by our researchers' **exceptional ability to secure competitive funding for projects and human resources**. These resources are particularly essential as they lay the groundwork for the continuous renewal of researchers across generations. We must also highlight the commitment of IiSGM groups to **researcher training**, demonstrated by the large number of doctoral theses defended in 2023 and the ambitious

Training Plan, which includes 13 accredited courses coordinated by the IiSGM Training Commission.

The managing entity of IiSGM, the **Foundation for Biomedical Research of the Hospital Gregorio Marañón (FIBHGM)**, remains dedicated to improving internal processes and upholding a commitment to ongoing quality improvement. Key achievements include receiving the European Excellence Award in Human Resources Management for the **Human Resources Strategy for Researchers (HRS4R)** and being the only Health Research Institute **fully certified under the ISO9001:2015 quality standard**.

These accomplishments result from the dedication of all IiSGM professionals, and we express our deepest gratitude to them, particularly in the context of the demanding environment of hospital-based scientific research. The exceptional results outlined in this report are the product of a coordinated, collective effort driven by a strategy focused on improving patient care. Notably, a new group, Group 1.06, «Biomedical Applications of Engineering», led by Javier Pascau González and Arrate Muñoz Barrutia, joined the IiSGM structure in 2023 within Research Area 1, «Biomedical Engineering».

Lastly, we would like to extend our appreciation to all **Area Coordinators, Group Leaders, Research Groups, Research Support Services (SAIs), Clinical Services, and especially our young researchers**, who form the core of IiSGM's progress and activities.

Once again, the results presented in this report confirm that our institution continues to evolve and grow, fostering high expectations for the future. This positions us well to face significant upcoming challenges while contributing to the pillars of biomedical research: observation, generating questions from clinical practice, and encouraging multidisciplinary collaboration to find solutions.

Thank you very much.

**Dr. Ismael Buño Borde**  
IiSGM Scientific Director

**Dra. Sonia García de San José**  
Manging Director HGUGM  
(Hospital General Universitario Gregorio Marañón)



# 2

## INTRODUCTION



## INTRODUCTION

### MISSION

The IISGM is an institution that develops excellent research and innovation, focused on the patient and aimed at obtaining results with high impact on the clinical practice and the productive sector, generating value for the efficiency of the SNS and the quality of life of the population as the final recipient.

### VISION

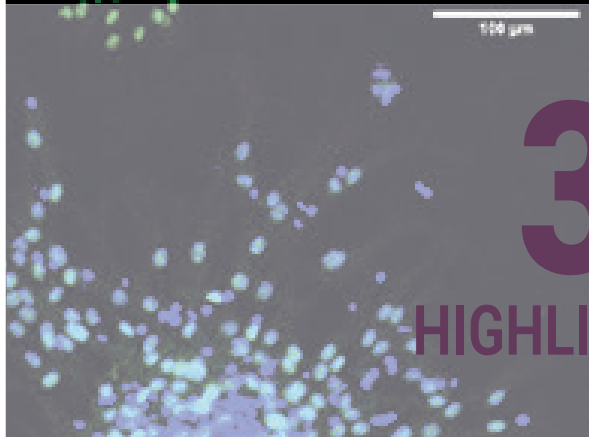
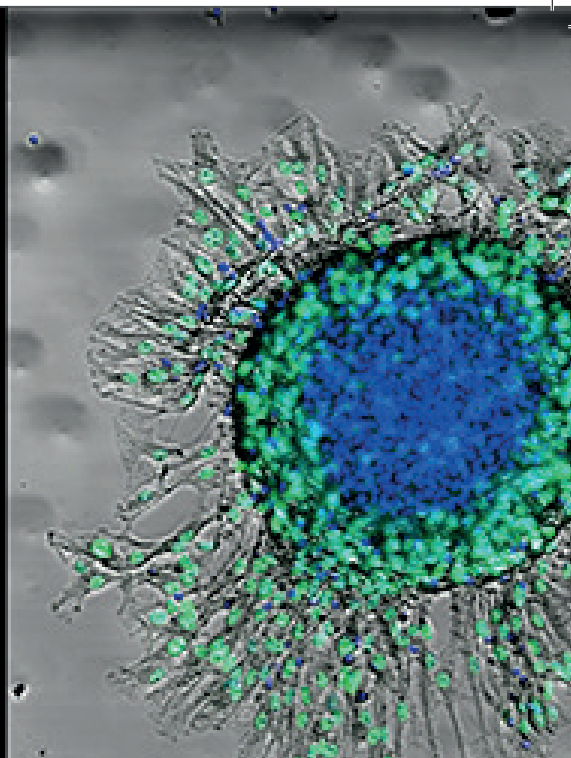
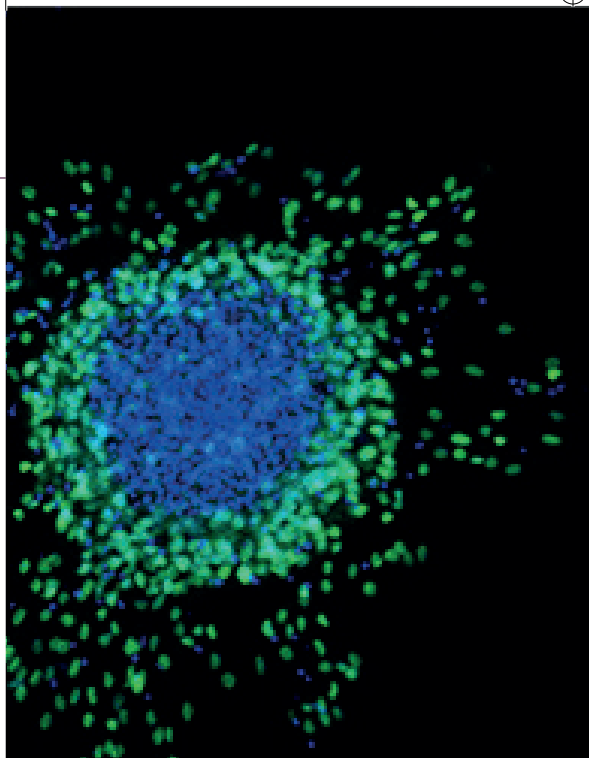
The IISGM must maintain its position as a leading center in biomedical research and scientific and technological innovation at a national and international level under quality standards, being a benchmark for the population as a multidisciplinary entity that offers innovative and efficient responses to health needs and challenges of the society.

### VALUES

- Excellence and leadership.
- Competitiveness and innovation.
- Internationalization.
- Commitment.
- Ethics and social responsibility.
- Accessibility and transparency.
- Equality.

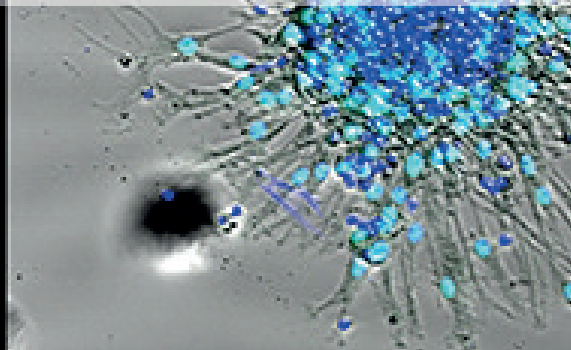
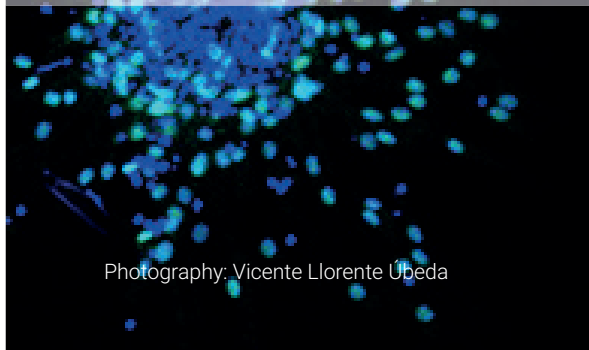
Bodies that constitute the Institute of Health Research in Hospital Gregorio Marañón (IISGM):





3

HIGHLIGHTS



Photography: Vicente Llorente Ubeda



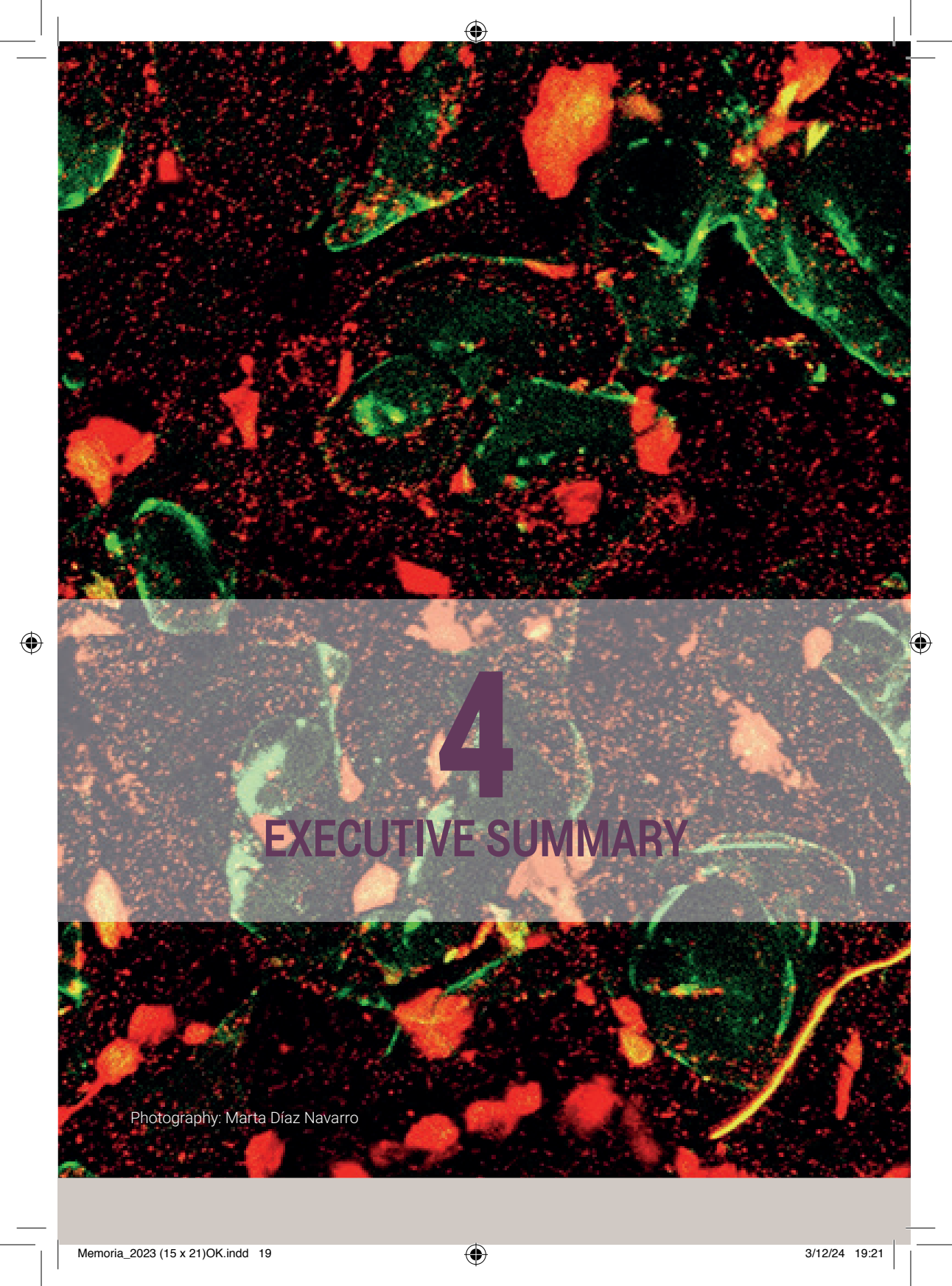
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## HIGHLIGHTS





The background of the entire page is an abstract, high-contrast image. It features a dense field of small, bright green and orange-yellow specks and irregular shapes against a solid black background. The shapes vary in size and intensity, creating a textured, almost cellular or microscopic appearance. A semi-transparent grey horizontal band runs across the middle of the page, serving as a backdrop for the title.

# 4

## EXECUTIVE SUMMARY

Photography: Marta Díaz Navarro



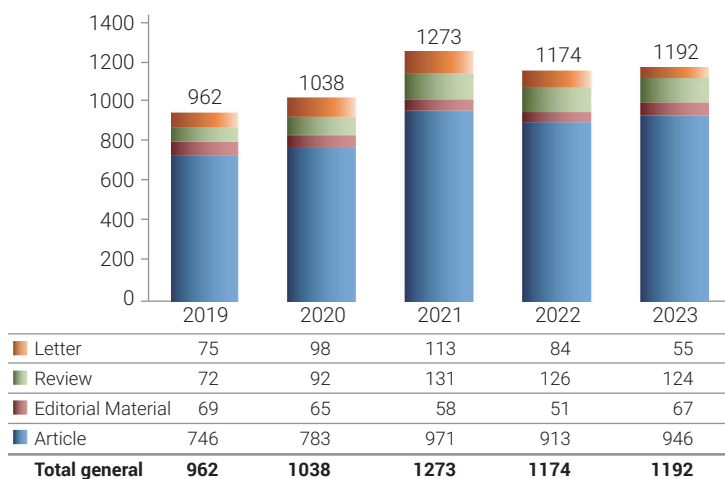
## GLOBAL ANALYSIS

Analysis of the scientific production of IISGM and its bibliometric impact is an essential element in the evaluation of the Institute's research activity, given that both factors reflect the competitiveness of its researchers. In order to prepare this research report, we analyzed journals indexed in the main collection of the Web of Science (WOS) and in PubMed, the most popular open-access database specialized in health sciences. It is important to note that before being assigned to the different research Areas and Groups, the only publications considered were those in which IISGM, Hospital General Universitario Gregorio Marañón, or both were included in the institutional affiliation data in Web of Science. Nevertheless, the search for publications is made based on the name(s) that the individual researcher at the Institute has pointed out as being his/her own. As in previous years, the total sum for the impact factor only takes into account information from indexed publications (eg, original articles, reviews, editorials, and proceedings papers) and excludes other types of publication (eg, letters to the editor and case reports). Of note, the impact factor presented in the figures corresponds to the relevant year of publication. Publications involving different groups or areas of the Institute are counted individually in each group and area, although only once for the calculation of the total impact factor of the Institute. The objective of the methodology used is none other than to apply internationally validated bibliometric tools for the analysis of scientific production, thus ensuring the robustness of the data contained in this Research Report. The following graphs provide a quantitative representation of the scientific output of IISGM during the year 2023 with a total of 1192 indexed publications (1137 excluding letters), which represent a global impact factor over 6355 points [6027 excluding letters].

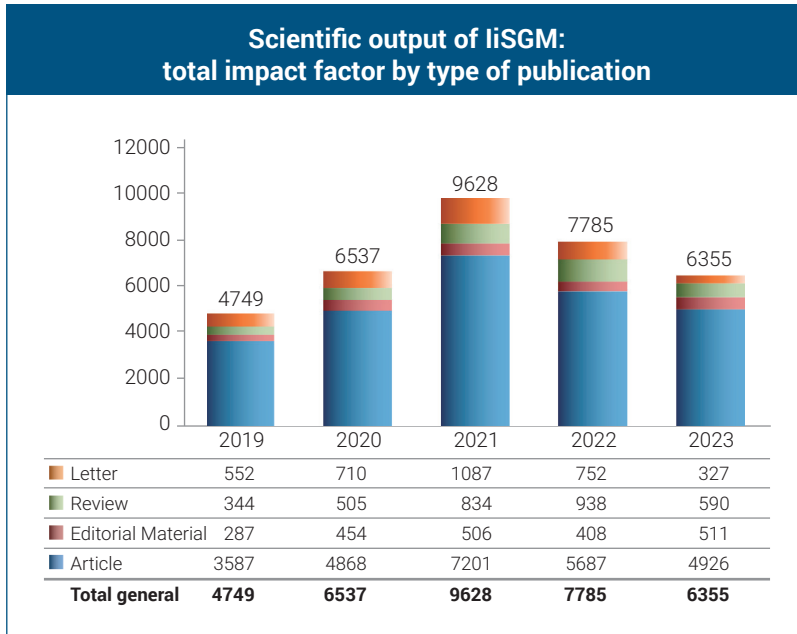
Regardless of the increase in 2021 and 2022, derived from both the «COVID effect» and the change in the Impact Factor calculation procedure,

the 2023 results maintain the increasing trend observed during recent years specifically regarding the number of publications.

### Scientific output of liSGM in indexed journals with impact factor: number of publications by type of publication

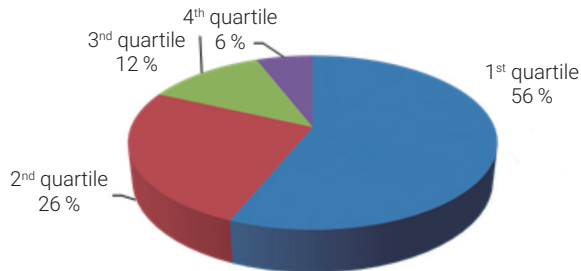


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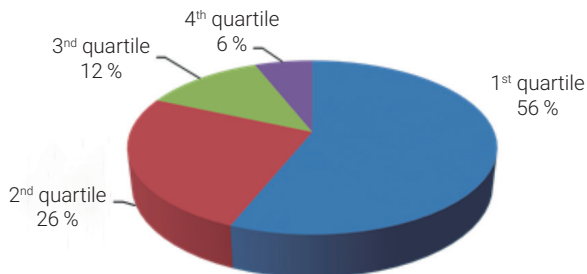


The previous figures summarize the total impact factor corresponding to the scientific production of the liSGM for each of the last 5 years and its distribution according to the different types of publication as can be observed, in this year 2023 the highest impact factor corresponds (in order) to: original articles, reviews, letters and editorials. It is important to note that, once again this year and as in the previous years, the main increase was mainly observed in the number of original articles.

**Scientific output of liSGM in indexed journals with impact factor: distribution by quartiles (relative to 2023, including letters)**

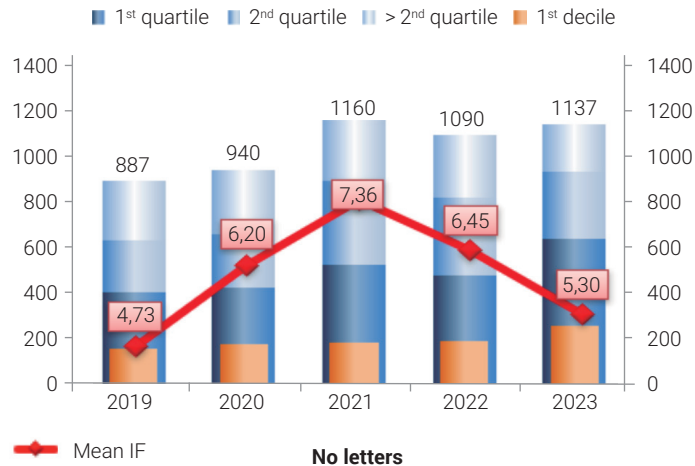
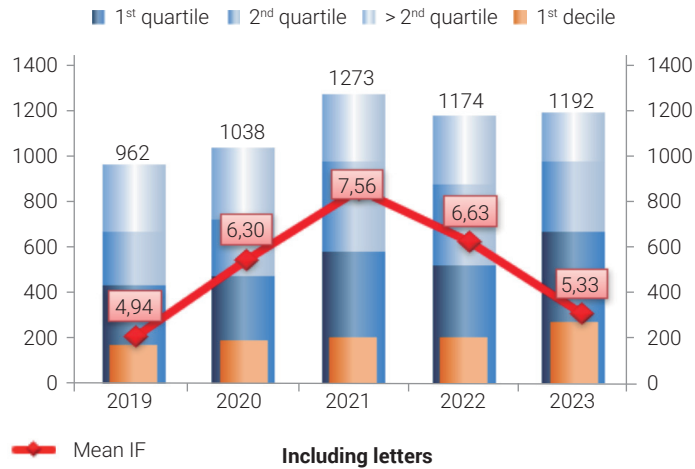


**Scientific output of liSGM in indexed journals with impact factor: distribution by quartiles (relative to 2023, no letters)**



## Executive Summary SCIENTIFIC REPORT 2023

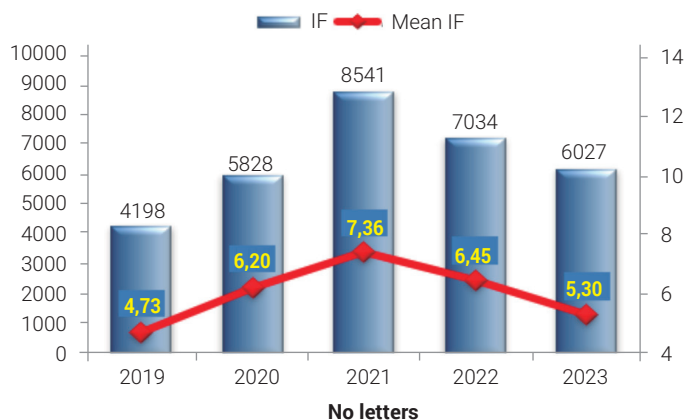
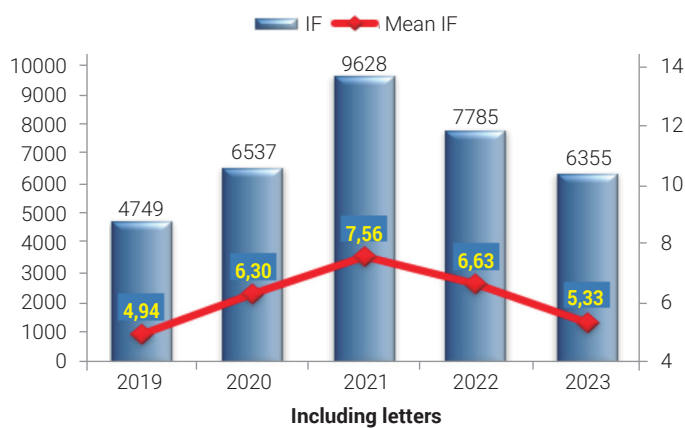
### Scientific output of liSGM in indexed journals with impact factor: distribution of publications by deciles and quartiles (absolute values)



\*Only publications in journals indexed in the JCR of the WOS main collection

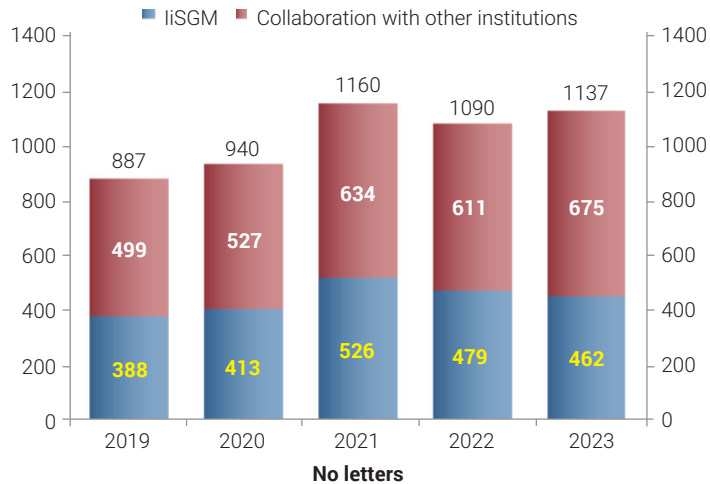
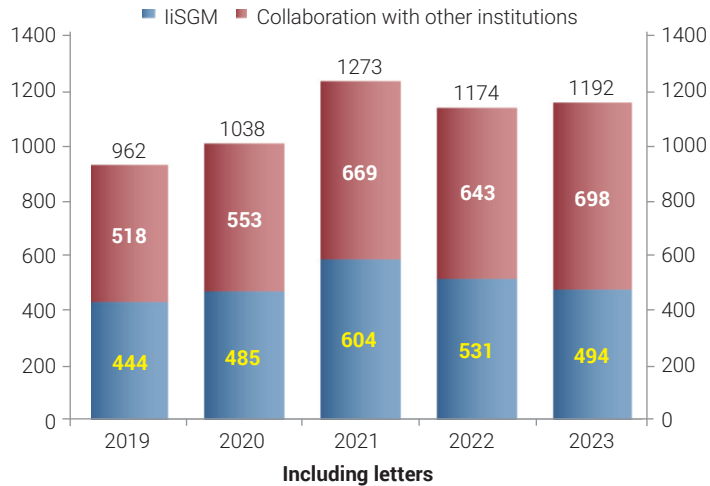
The distribution of IISGM publications according to quartile and decile is shown in the in the two previous graphs. The absolute number of publications in the first decile and first quartile has increased significantly compared to 2022.

**Global impact factor and mean impact factor by publication**

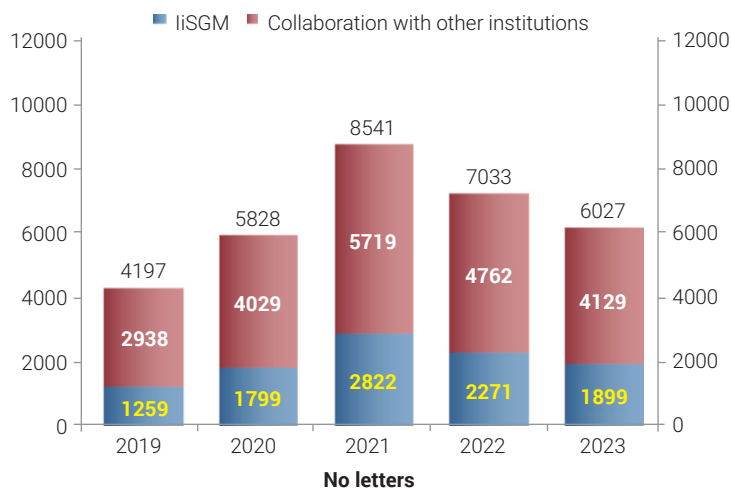
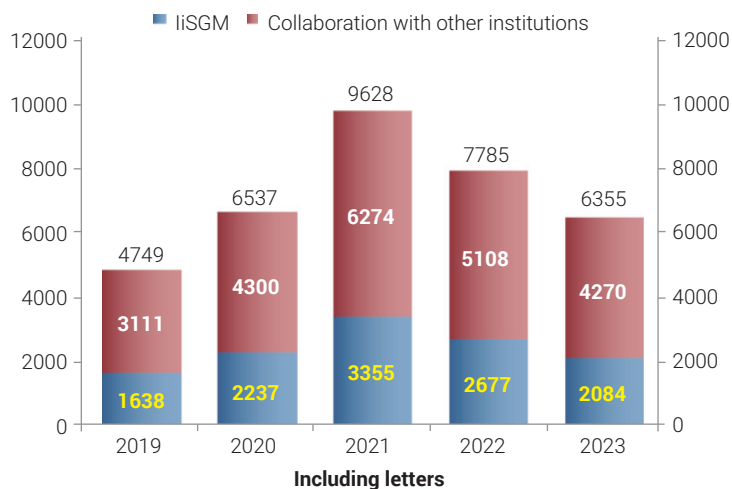


## Executive Summary SCIENTIFIC REPORT 2023

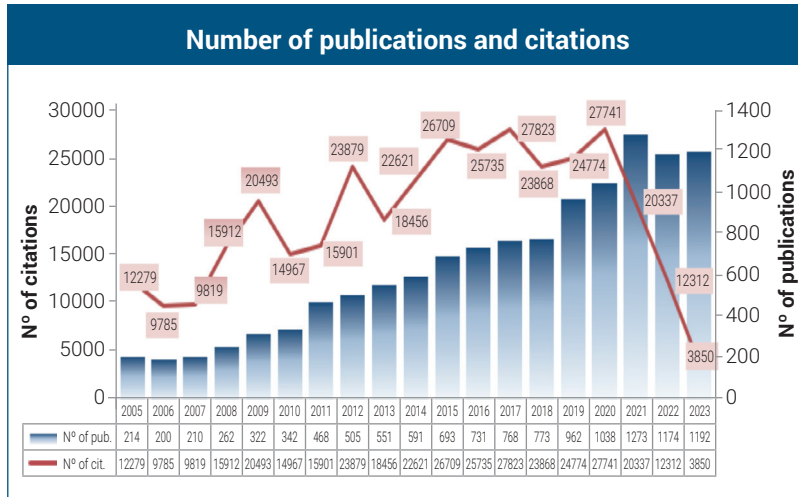
### Scientific output of liSGM in indexed journals with impact factor total number of publications



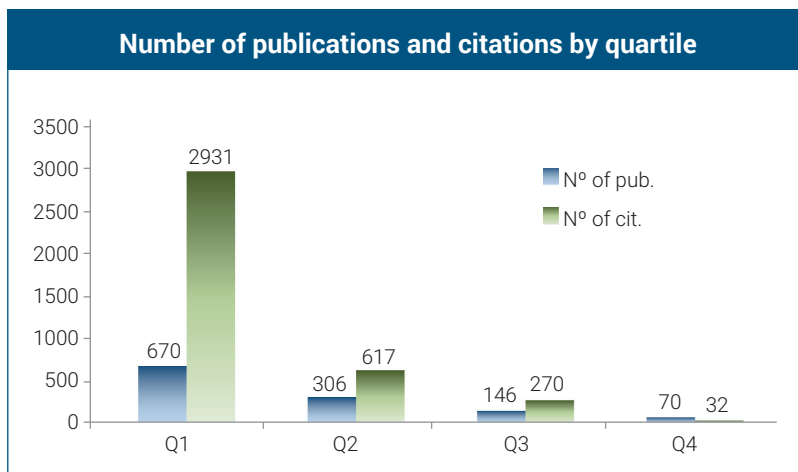
### Scientific output of liSGM in indexed journals with impact factor



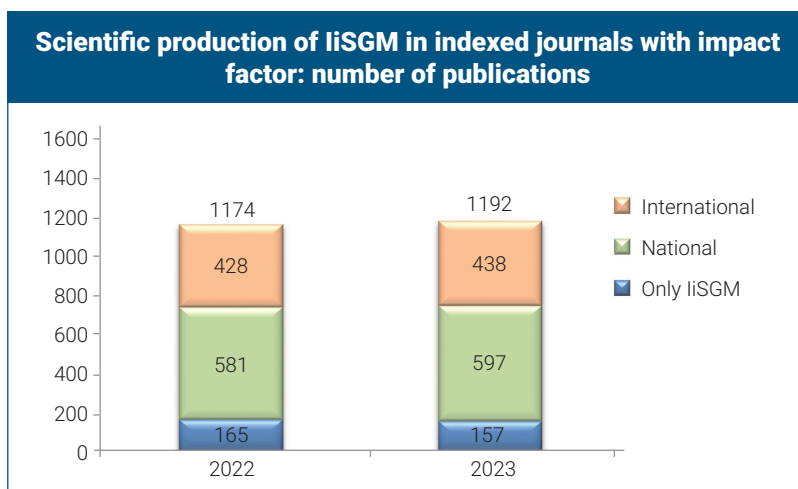
## Executive Summary SCIENTIFIC REPORT 2023



The number of citations for Institute publications over time is logically greater in elder publications, although the number of citations in relatively recent publications (2019-2023) is noteworthy, as is the number of first-quartile citations.



The analysis of activity specifically includes publications whose principal authors (first, last, or corresponding author) are liSGM researchers.



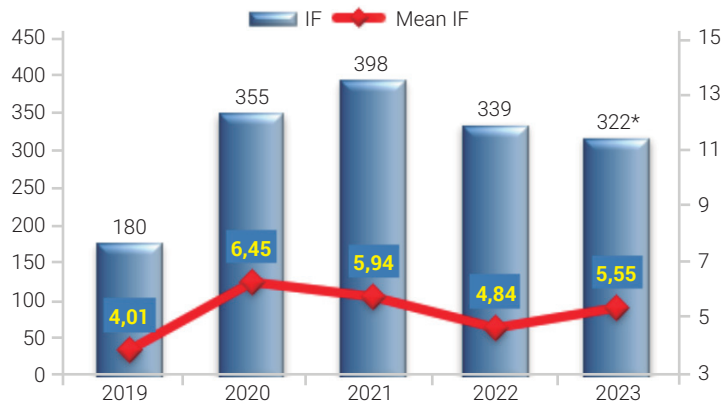
Finally, one of the most relevant elements within the scientific structure of Health Research Institutes is the grouping of research activity to priority areas, which are characterized by their scientific and social relevance and by their capacity for transferring knowledge to society. liSGM has seven priority research areas whose scientific activity is set out in detail below in 2 figures per Research Area:

- The first (on the left) summarizes the total impact factor together with the mean impact factor by publication.
- The second (on the right) summarizes the scientific output of the research area distributed by first decile and quartiles.

Both figures show the scientific output for the last 5 years.

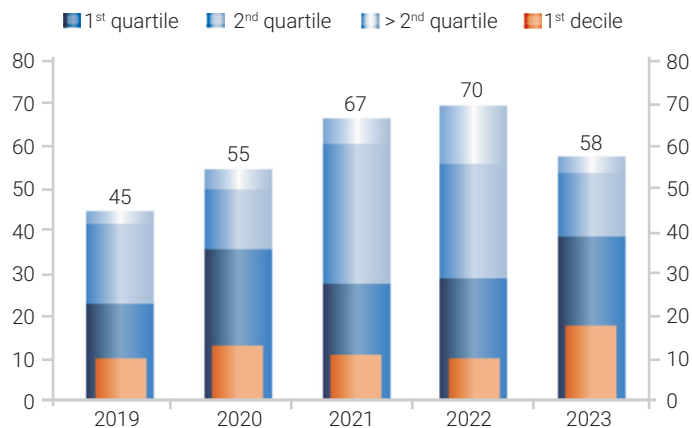
## AREA 1: BIOMEDICAL ENGINEERING

Scientific output of Area 1 in indexed journals with impact factor: total and mean impact factor



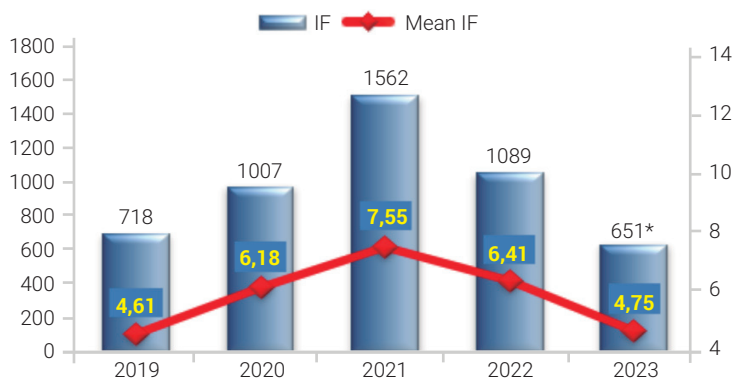
\* Excluding letters: 322

Scientific output of Area 1 in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



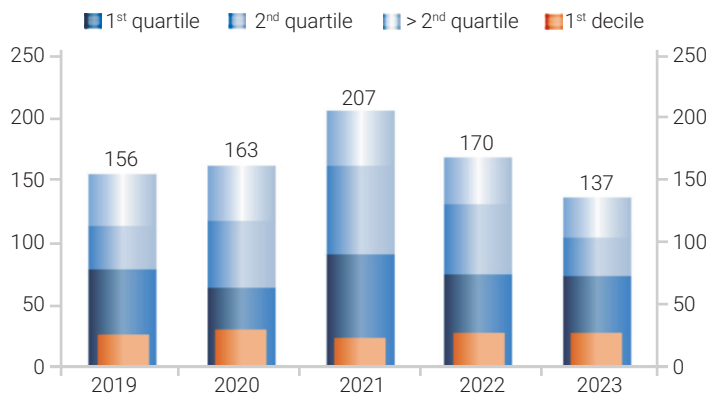
## AREA 2: CARDIOVASCULAR DISEASES

Scientific output of Area 2 in indexed journals with impact factor: total and mean impact factor



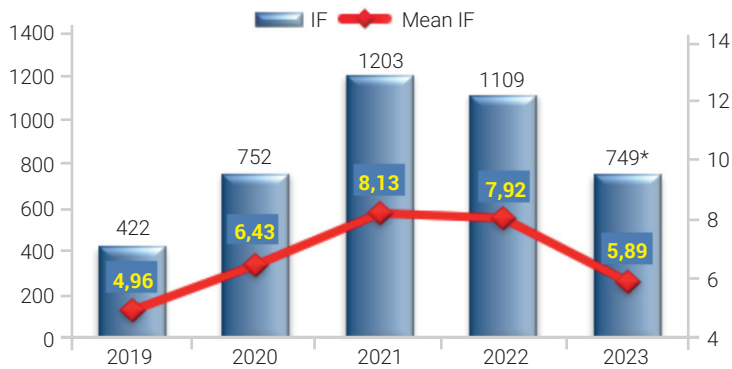
\* Excluding letters: 616

Scientific output of Area 2 in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



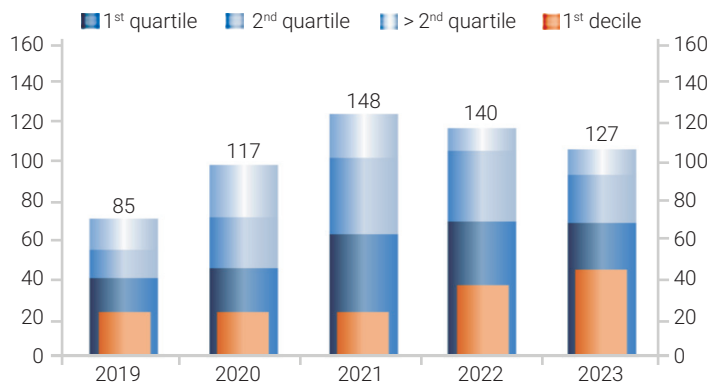
## AREA 3: NEUROSCIENCE AND MENTAL HEALTH

Scientific output of Area 3 in indexed journals with impact factor: total and mean impact factor



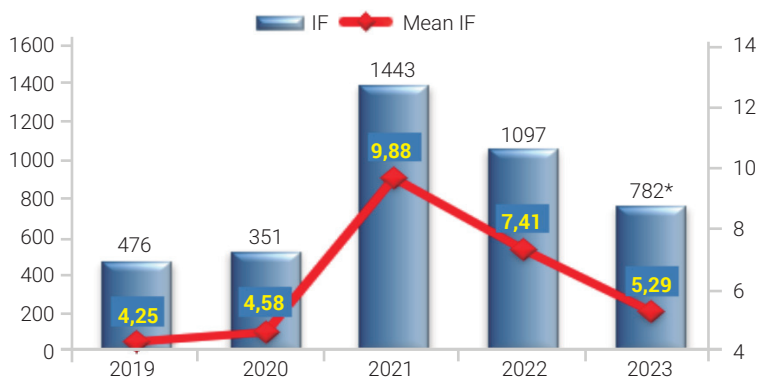
\* Excluding letters: 739

Scientific output of Area 3 in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



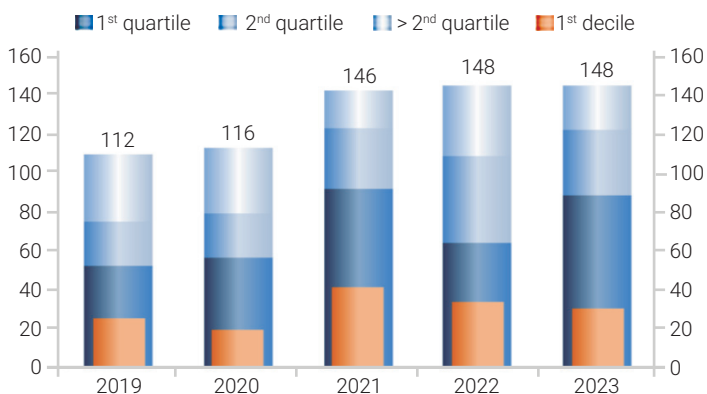
## AREA 4: CLINICAL MICROBIOLOGY, INFECTIOUS DISEASES AND AIDS

Scientific output of Area 4 in indexed journals  
with impact factor: total and mean impact factor



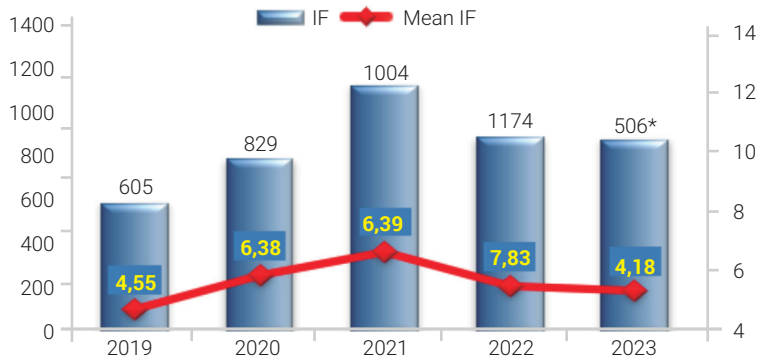
\* Excluding letters: 722

Scientific output of Area 4 in indexed journals with impact factor:  
distribution of publications by decile and quartile (absolute values)



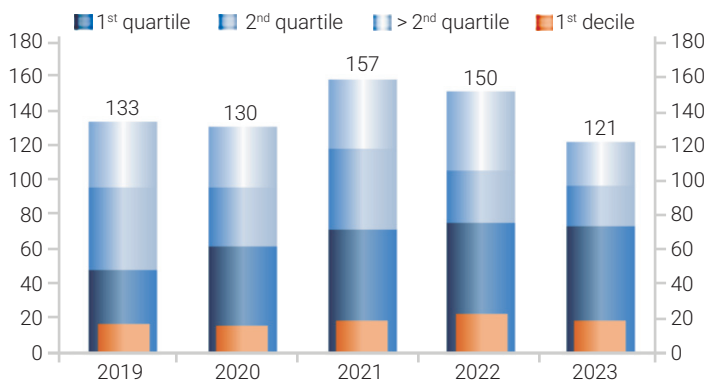
## AREA 5: DISEASES OF THE IMMUNE SYSTEM

Scientific output of Area 5 in indexed journals with impact factor: total and mean impact factor



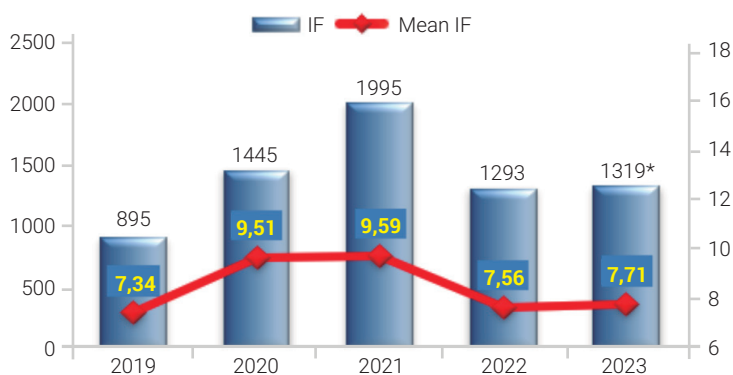
\* Excluding letters: 479

Scientific output of Area 5 in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



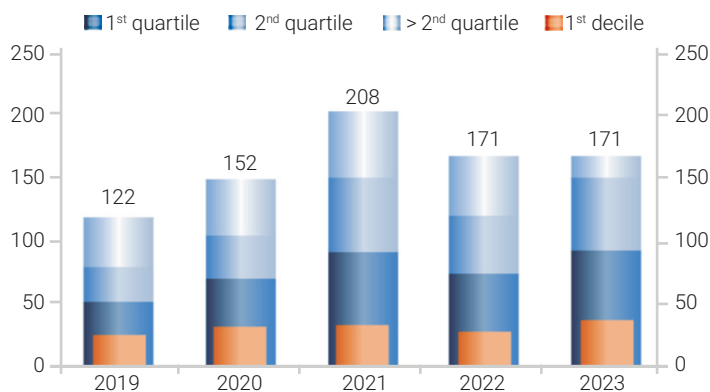
## AREA 6: TRANSLATIONAL ONCOLOGY

Scientific output of Area 6 in indexed journals with impact factor: total and mean impact factor



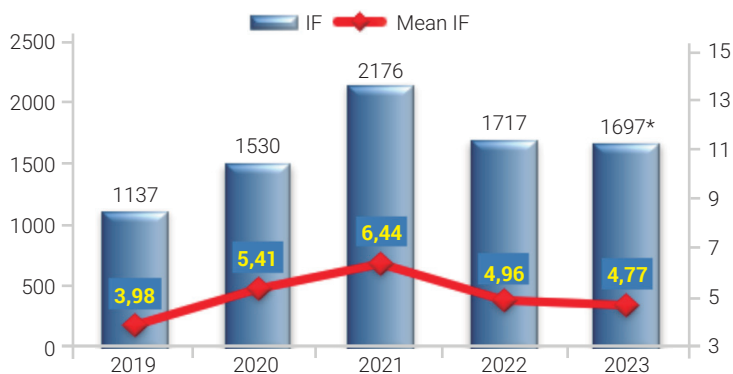
\* Excluding letters: 1194

Scientific output of Area 6 in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)

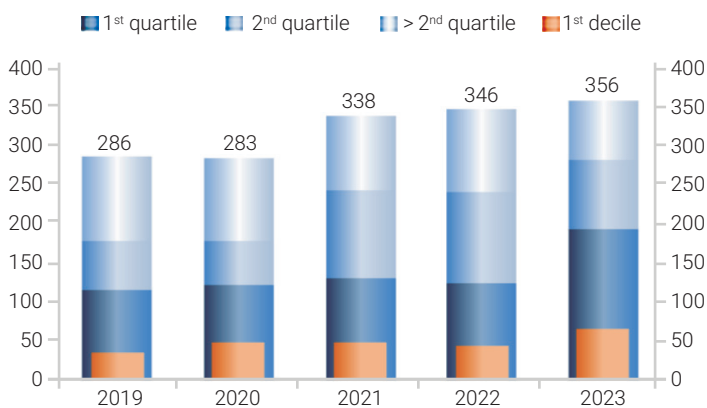


## AREA 7: SYSTEMIC DISEASES AND ORGAN TRANSPLANTATION

Scientific output of Area 7 in indexed journals with impact factor: total and mean impact factor

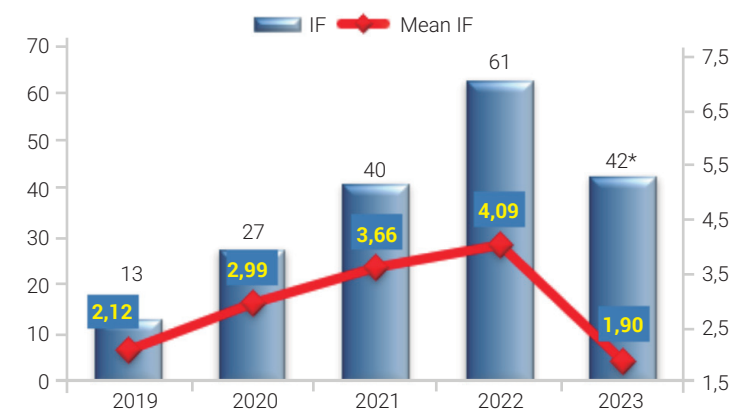


Scientific output of Area 7 in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



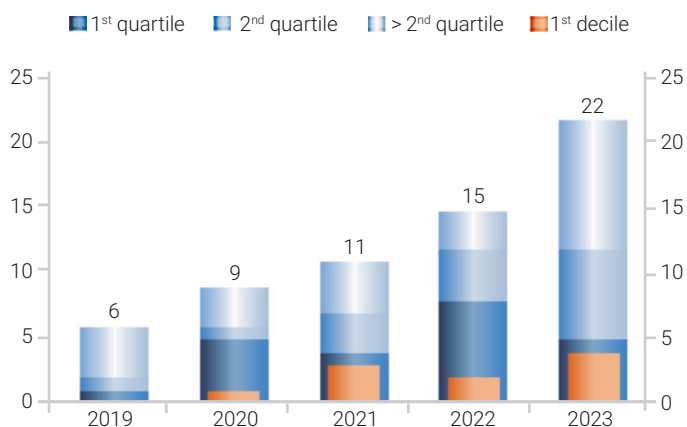
## NURSING RESEARCH GROUP

Scientific output of Nursing Group in indexed journals with impact factor: total and mean impact factor



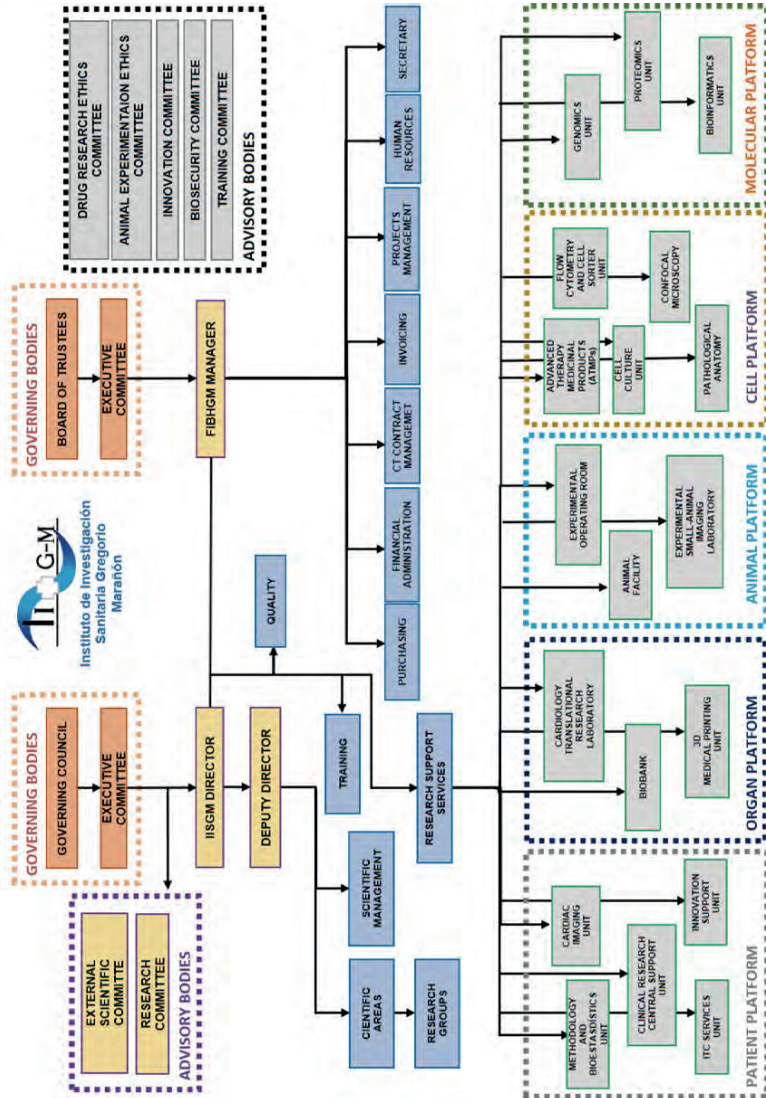
\* Excluding letters: 39

Scientific output of Nursing Group in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



## ORGANIZATIONAL STRUCTURE OF IISGM

### 1. Organizational Chart





## STRUCTURE OF RESEARCH AREAS

### AREA 1: Biomedical Engineering

**Coordinator:** *Manuel Desco Menéndez*

| Group                                                          | Group Leader                                              | Type of Group | Organization |
|----------------------------------------------------------------|-----------------------------------------------------------|---------------|--------------|
| 1.01 Advanced technological applications and human health      | Manuel Desco Menéndez                                     | CONSOLIDATED  | HGUGM-UC3M   |
| 1.02 Signal processing                                         | Antonio Artés Rodríguez                                   | CONSOLIDATED  | UC3M         |
| 1.03 Computer architecture, communications, and systems: ARCOS | Jesús Carretero Pérez                                     | CONSOLIDATED  | UC3M         |
| 1.04 Nonparametric statistics and intensive computing          | Juan Romo Urróz                                           | ASOCIATED     | UC3M         |
| 1.05 Structural and Functional Medical Imaging                 | Jesús de la Torre Fernández<br>Juan A. Guzmán de Villoria | EMERGING      | HGUGM        |
| 1.06 Biomedical applications of engineering                    | Javier Pascau González<br>Arrate Muñoz Barrutia           | EMERGING      | UC3M         |

### AREA 2: Cardiovascular diseases

**Coordinator:** *Francisco Fernández-Avilés Díaz/Javier Bermejo Thomas*

| Group                                                | Group Leader                                             | Type of Group | Organization |
|------------------------------------------------------|----------------------------------------------------------|---------------|--------------|
| 2.01 Natural history of heart disease                | Francisco Fernández-Avilés Díaz<br>Javier Bermejo Thomas | CONSOLIDATED  | HGUGM-UCM    |
| 2.02 Cardiovascular pathophysiology                  | Victoria Cachofeiro Ramos                                | CONSOLIDATED  | UCM          |
| 2.03 Cardiac celular electrophysiology               | Eva Delpón Mosquera                                      | CONSOLIDATED  | UCM          |
| 2.05 Cardiology and heart transplantation in infants | Constancio Medrano López                                 | EMERGING      | HGUGM        |
| 2.06 Blood lipids and cardiovascular risk            | Luis Antonio Álvarez-Sala Walther                        | EMERGING      | HGUGM-UCM    |
| 2.07 Acute cerebral ischemia. Stroke                 | Antonio Gil Núñez                                        | EMERGING      | HGUGM        |

UCM: Universidad Complutense de Madrid. HGUGM: Hospital General Universitario Gregorio Marañón. UC3M: Universidad Carlos III.

**AREA 3: Neuroscience and Mental Health****Coordinator:** *Celso Arango López*

| Group                                                                                           | Group Leader                   | Type of Group | Organization |
|-------------------------------------------------------------------------------------------------|--------------------------------|---------------|--------------|
| 3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment | Celso Arango López             | CONSOLIDATED  | HGUGM-UCM    |
| 3.03B Neurological diseases                                                                     | Francisco Javier Grandas Pérez | CONSOLIDATED  | HGUGM        |

**AREA 4: Clinical Microbiology: Infectious Diseases and AIDS****Coordinator:** *Patricia Muñoz García de Paredes*

| Group                                                                                | Group Head                           | Type of Group | Organization |
|--------------------------------------------------------------------------------------|--------------------------------------|---------------|--------------|
| 4.01 Clinical microbiology and infectious diseases                                   | Patricia Muñoz García de Paredes     | CONSOLIDATED  | HGUGM-UCM    |
| 4.02 Clinical and epidemiological aspects of HIV infection and associated conditions | Juan Carlos López Bernaldo de Quirós | CONSOLIDATED  | HGUGM        |

**AREA 5: Diseases of the Immune System****Coordinator:** *Eduardo Fernández-Cruz Pérez*

| Group                                                                                           | Group Head                             | Type of Group | Organization |
|-------------------------------------------------------------------------------------------------|----------------------------------------|---------------|--------------|
| 5.01 Pathophysiology and clinical research into chronic inflammatory and immunological diseases | Eduardo Fernández-Cruz Pérez           | CONSOLIDATED  | HGUGM        |
| 5.02 Molecular biology of HIV                                                                   | M <sup>a</sup> Ángeles Muñoz Fernández | CONSOLIDATED  | HGUGM        |
| 5.03 Systemic autoimmune diseases                                                               | José María Álvaro Gracia               | CONSOLIDATED  | HGUGM        |
| 5.05 Pathogenesis of the immunoallergic response                                                | José Manuel Zubeldia Ortuño            | EMERGING      | HGUGM        |
| 5.06 Immune regulation and homeostasis in diseases of the immune system                         | Rafael Correa Rocha Marjorie Pion      | EMERGING      | HGUGM        |
| 5.07 Infections in pediatric patients                                                           | María Luisa Navarro Gómez              | CONSOLIDATED  | HGUGM        |

UCM: Universidad Complutense de Madrid. HGUGM: Hospital General Universitario Gregorio Marañón. UC3M: Universidad Carlos III.

## Executive Summary SCIENTIFIC REPORT 2023

### AREA 6: Translational Oncology

**Coordinator:** *Miguel Martín Jiménez*

| Group                                                                                                      | Group Leader                                     | Type of Group | Organization |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------|--------------|
| 6.01 Interdisciplinary oncology and biotechnology                                                          | Ana Álvarez González<br>Mercedes Muñoz Fernández | CONSOLIDATED  | HGUGM-UCM    |
| 6.02 Translational medical oncology and personalized cancer therapy                                        | Miguel Martín Jiménez                            | CONSOLIDATED  | HGUGM-UCM    |
| 6.03 Genetics and clinical aspects of hematologic malignancies and hematopoietic stem cell transplantation | José Luis Díez Martín/Ismael Buño Borde          | CONSOLIDATED  | HGUGM        |
| 6.04 Surgical oncology                                                                                     | Luis González Bayón                              | EMERGING      | HGUGM        |

### AREA 7: Systemic Diseases and Organ Transplantation

**Coordinator:** *Rafael Bañares Cañizares*

| Group                                                                                                                                | Group Leader                                   | Type of Group | Organization |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------|--------------|
| 7.01 Vascular damage and inflammation in chronic kidney disease, dialysis, and kidney transplantation. Pathophysiology of the kidney | María de los Ángeles Goicoechea Díezhandino    | CONSOLIDATED  | HGUGM        |
| 7.02 Pathophysiology and natural history of liver and digestive diseases                                                             | Rafael Bañares Cañizares                       | CONSOLIDATED  | HGUGM-UCM    |
| 7.04 Diseases of the critically ill child                                                                                            | Jesús López-Herce Cid                          | CONSOLIDATED  | HGUGM        |
| 7.05B Physiological and therapeutic medical-surgical aspects of respiratory diseases                                                 | Luis Puente Maestu<br>Ignacio Garutti Martínez | CONSOLIDATED  | HGUGM        |
| 7.06 Regenerative medicine in plastic surgery                                                                                        | José M <sup>a</sup> Lasso Vázquez              | ASOCIATED     | HGUGM        |
| 7.07 Experimental kidney transplantation                                                                                             | Enrique Lledó García                           | EMERGING      | HGUGM        |
| 7.08 Pediatric endocrinology                                                                                                         | Marina Mora Sitjá<br>María Sanz Fernández      | ASOCIATED     | HGUGM        |

UCM: Universidad Complutense de Madrid. HGUGM: Hospital General Universitario Gregorio Marañón. UC3M: Universidad Carlos III.

## Structure of research areas and groups

| Group                                                                      | Group Leader                                                            | Type of Group                                   | Organization |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------|--------------|
| 7.10 Regeneration and biomaterials in musculoskeletal disease              | Francisco Javier Vaquero Martín                                         | EMERGING                                        | HGUGM-UCM    |
| 7.12 Emergency medicine                                                    | Javier Muñoz González                                                   | ASOCIATED                                       | HGUGM        |
| 7.16B Pathophysiology of the cardiovascular system and circulatory support | M <sup>a</sup> Begoña Quintana Villamandos<br>Juan Francisco del Cañizo | EMERGING                                        | HGUGM        |
| 7.18 Peritransplant evaluation (liver)                                     | José María Pérez Peña                                                   | ASOCIATED                                       | HGUGM        |
| 7.19 Perianesthetic assessment                                             | Carmen Fernández Riveira                                                | ASOCIATED                                       | HGUGM        |
| 7.20 Anesthesia, toxins, and arrhythmias                                   | Matilde Zaballos García                                                 | ASOCIATED                                       | HGUGM        |
| 7.21 Biopathology of aging                                                 | José Antonio Serra Rexach                                               | CONSOLIDATED                                    | HGUGM        |
| 7.22 Neonatal and developmental pathophysiology                            | Manuel Sánchez Luna                                                     | EMERGING                                        | HGUGM        |
| 7.26 Evaluation of health services and clinical epidemiology               | Nieves López Freneña                                                    | EMERGING                                        | HGUGM        |
| 7.27 Hospital pharmacy and pharmacogenomics                                | María Sanjurjo Sáez                                                     | CONSOLIDATED                                    | HGUGM        |
| 7.28 Clinical nutrition                                                    | M <sup>a</sup> Cristina de la Cuerda Compés                             | EMERGING                                        | HGUGM        |
| 7.29 Vascular pathophysiology and pharmacology                             | Francisco Pérez Vizcaino                                                | CONSOLIDATED                                    | UCM          |
| 7.31 Pathophysiology in women, pregnancy, labor, and puerperium            | Santiago Lizarraga Bonelli<br>Juan Antonio León Luis                    | EMERGING                                        | HGUGM        |
| 7.32 Physical medicine and rehabilitation                                  | Sonia Esteban<br>Marta Supervía Pola                                    | EMERGING                                        | HGUGM        |
| 7.33 Pathological Anatomy                                                  | Javier Menárguez Palanca                                                | EMERGING                                        | HGUGM        |
| 7.34 Multimorbidity, chronic diseases and health services. Primary Care    | Isabel del Cura González<br>Jesús Martín Fernández                      | CONSOLIDATED<br>(in the process of integration) | HGUGM        |
| 7.35 Dermatología taslacional: Investigación e Innovación                  | Ana Pulido Pérez<br>Marta Bergón Sendín                                 | EMERGING                                        | HGUGM        |

### Nursing Research Group

**Coordinator:** *Ana García Pozo*

| Group               | Group Head            | Organization |
|---------------------|-----------------------|--------------|
| Research in nursing | Ana María García Pozo | HGUGM        |

UCM: Universidad Complutense de Madrid. HGUGM: Hospital General Universitario Gregorio Marañón. UC3M: Universidad Carlos III.

## RESEARCH SUPPORT SERVICES (RSSs)

liSGM has organized research support services into various technology platforms according to the object of research. Thus, liSGM aims to promote the human and technological interrelationships necessary when investigating the object of biomedical research from different technological perspectives.

Five platforms have been developed, as follows:

1. Patient platform.
2. Organ platform.
3. Animal platform.
4. Cell platform.
5. Molecular platform.



| Publications generated with the participation of the Research Support Services (RSSs) |                                                     |                                                                                           |                                                                           |
|---------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
|                                                                                       | RSS                                                 | Publications of the main WOS collection in journals indexed in the JCR with impact factor | Publications of the main WOS collection in journals without impact factor |
| Patient platform                                                                      | Methodology and Biostatistics Unit                  | 10                                                                                        |                                                                           |
|                                                                                       | Cardiac Imaging Unit                                | 23                                                                                        | 3                                                                         |
| Organ platform                                                                        | Biobank                                             | 12                                                                                        |                                                                           |
|                                                                                       | Cardiology Translational Research Laboratory        | 32                                                                                        | 2                                                                         |
|                                                                                       | 3D Medical Printing Unit                            | 2                                                                                         | 2                                                                         |
|                                                                                       | Experimental Small-Animal Imaging Laboratory        | 16                                                                                        | 2                                                                         |
| Cell platform                                                                         | Advanced Therapy Medicinal Products Production Unit | 2                                                                                         |                                                                           |
|                                                                                       | Confocal Microscopy                                 | 2                                                                                         |                                                                           |
|                                                                                       | Pathological Anatomy                                | 5                                                                                         |                                                                           |
| Molecular platform                                                                    | Genomics Unit                                       | 6                                                                                         |                                                                           |

## INNOVATION, KNOWLEDGE TRANSFER AND TRANSLATION TO PRACTICE

### INNOVATION SUPPORT UNIT 2023

#### Intellectual Property KPIs

ISI activity in innovation during 2023 is summarized in the following:

- a) Copyright (computer software, database, scientific publications, etc.):
  - 7 copyright applications filed in 2023.
  - 6 copyright registered in 2023.
  - Portfolio of 55 copyrights at 31st December 2023.
- b) Patents (it includes utility models):
  - 6 patents applications.
  - 5 patents granted.
  - Portfolio of 79 patents (53 granted and 26 applications) at 31st December 2023.
  - 45 patents licensed (30 granted y 15 applications) at 31st December 2023.

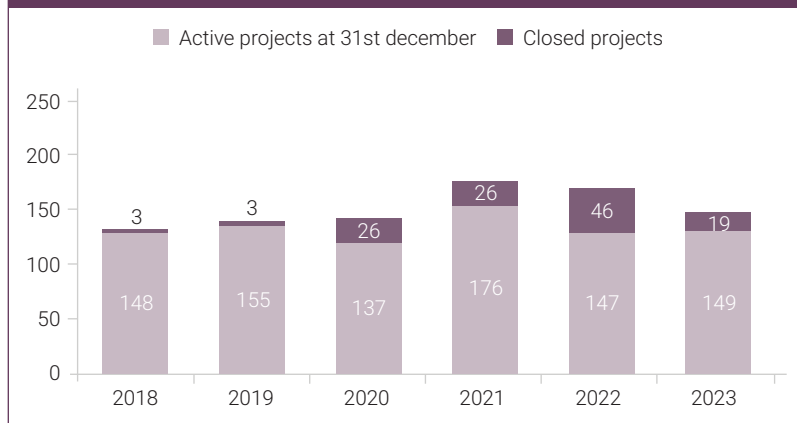
#### Technology Transfer KPIs

- a) Collaboration agreements:
  - 11 agreements.
- b) Others research & innovation agreements (assignment of rights, collaboration agreement, etc.):
  - 8 agreements.

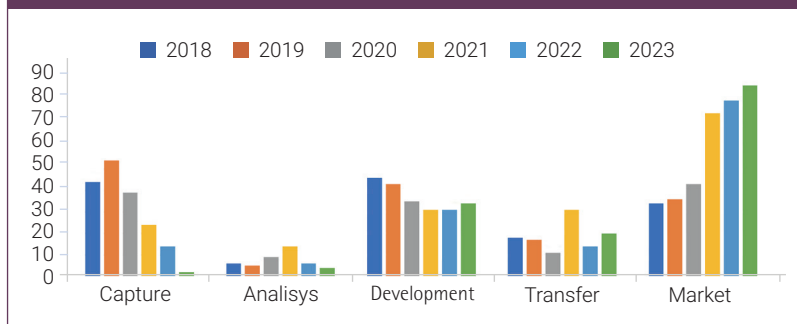
#### Innovation projects KPIs

During 2023, 22 new innovation projects were supported in the unit. The UAI managed a portfolio of 149 innovation projects at 31st December 2023.

## Total Number of Projects



## Phases of active projects



## INTERVENTIONAL AND NON INTERVENTIONAL CLINICAL STUDIES

During the year **2023**, a total of **1784** clinical trials were active in our hospital. A total of 225 new studies were implemented.

Approximately 89 % of the clinical trials with medicines started during 2023 were Phase I, II, and III studies.

As for the distribution by research areas, almost **47%** of the clinical trials were led by the Translational Oncology Area (Area 6).

| ACTIVE CLINICAL TRIALS |             |
|------------------------|-------------|
| 2019                   | 1115        |
| 2020                   | 1038        |
| 2021                   | 1145        |
| 2022                   | 1135        |
| <b>2023</b>            | <b>1784</b> |

| NEW CLINICAL STUDIES |                 |                       |            |
|----------------------|-----------------|-----------------------|------------|
|                      | Clinical Trials | Observational studies | Total      |
| 2019                 | 140             | 68                    | 208        |
| 2020                 | 162             | 81                    | 251        |
| 2021                 | 176             | 47                    | 223        |
| 2022                 | 151             | 60                    | 211        |
| <b>2023</b>          | <b>170</b>      | <b>55</b>             | <b>255</b> |

## Interventional and non interventional clinical studies

**DISTRIBUTION OF CLINICAL TRIALS SIGNED BY PHASE (%)**

|                              | 2019 | 2020  | 2021  | 2022  | 2023        |
|------------------------------|------|-------|-------|-------|-------------|
| Phase I                      | 7.28 | 5.29  | 20.7  | 25.1  | <b>15.9</b> |
| Phase II                     | 37.1 | 40    | 33.9  | 29.8  | <b>28.2</b> |
| Phase III                    | 43.7 | 45.88 | 42.55 | 42.43 | <b>44.7</b> |
| Phase IV                     | 4.6  | 4.11  | 2.3   | 2.65  | <b>2.9</b>  |
| Others (Medical device, etc) | 7.29 | 4.70  | 0.57  | 0     | <b>8.2</b>  |

**DISTRIBUTION OF CLINICAL STUDIES SIGNED IN 2023  
(National/International)**

|               | Nº  | %     |
|---------------|-----|-------|
| National      | 69  | 32,7  |
| International | 142 | 67,30 |

**DISTRIBUTION OF CLINICAL STUDIES SIGNED IN 2023  
BY RESEARCH AREA OF IISGM**

|                       | Nº | %    |
|-----------------------|----|------|
| Area 1                | 0  | 0    |
| Area 2                | 10 | 4,7  |
| Area 3                | 10 | 4,7  |
| Area 4                | 7  | 3,2  |
| Area 5                | 16 | 7,5  |
| Area 6                | 99 | 46,5 |
| Area 7                | 53 | 24,9 |
| Nursing group         | 0  | 0    |
| Associated clinicians | 16 | 7,5  |

## FUNDINGS OF IISGM

The global analysis of Institute funding was performed by collecting all income obtained by research groups both from competitive/non-competitive projects and from clinical trials, agreements with various entities, and donations.

The objective of this methodology is to be able to provide information on the capacity of IISGM groups to generate income.

The total income generated by IISGM researchers own activity in 2023 came to 22.204.190 €. To these revenues we must add, for the 5th year in a row, the nominative subsidy of 756.020 € granted to this foundation by the Consejería of Health of the Community of Madrid, which would raise total revenues of the Foundation to **22.883.796 €**.

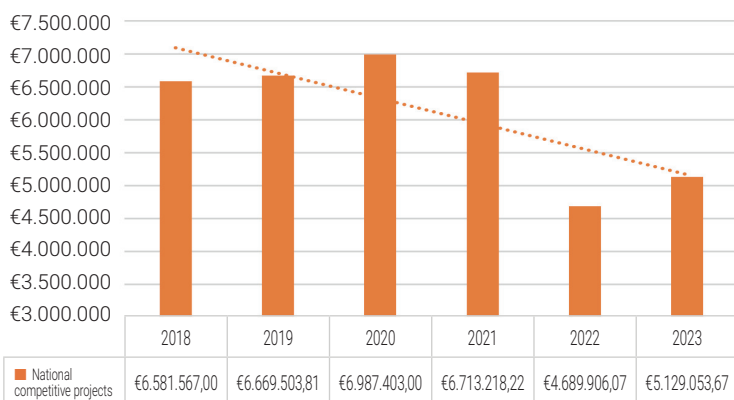
|                                       | 2018         | 2019         | 2020                  | 2021         | 2022         | 2023         |
|---------------------------------------|--------------|--------------|-----------------------|--------------|--------------|--------------|
| Total income generated by researchers | 15,503,687 € | 16,476,182 € | 19,183,609 €          | 17,699,418 € | 18,684,150 € | 22,204,190 € |
| Nominative subsidy Madrid Community   | 612,220 €    | 622,220 €    | 622,220 € + 850,000 € | 622,220 €    | 756.020€     | 679,606 €    |

The revenues generated by researchers in 2023 is 9,4% higher than in 2022.

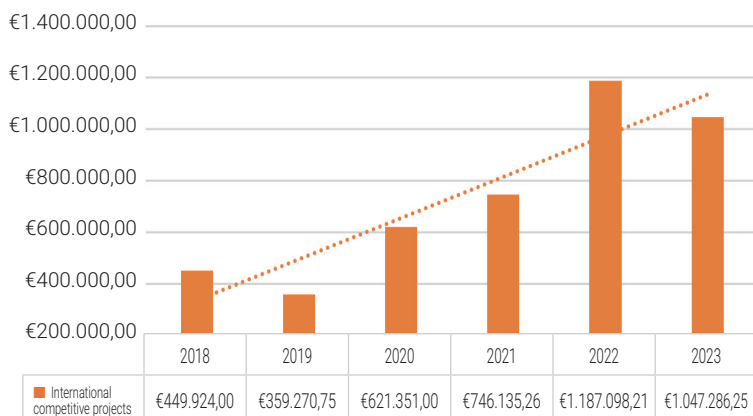
As in previous years, this income is earmarked for the support and development of research activities in the groups.

## EVOLUTION OF INCOME GENERATED BY RESEARCHERS BY CATEGORY

### National competitive projects

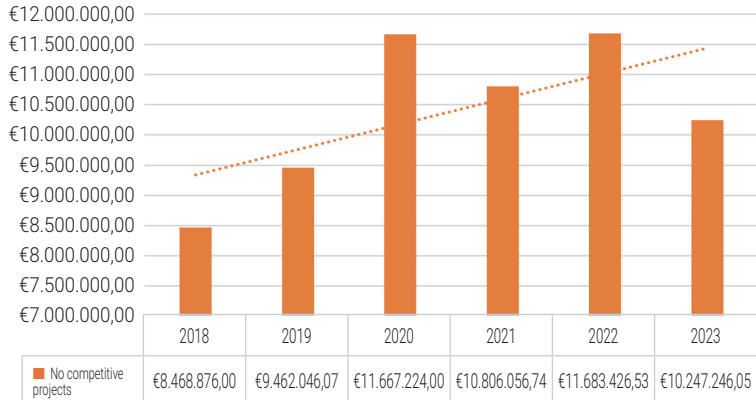


### International competitive projects

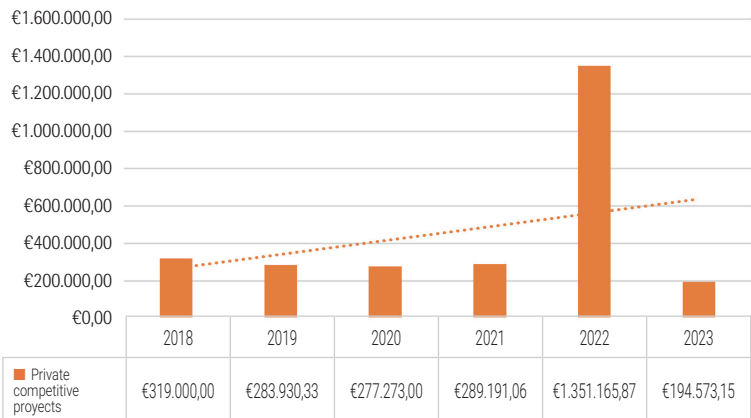


## Executive Summary SCIENTIFIC REPORT 2023

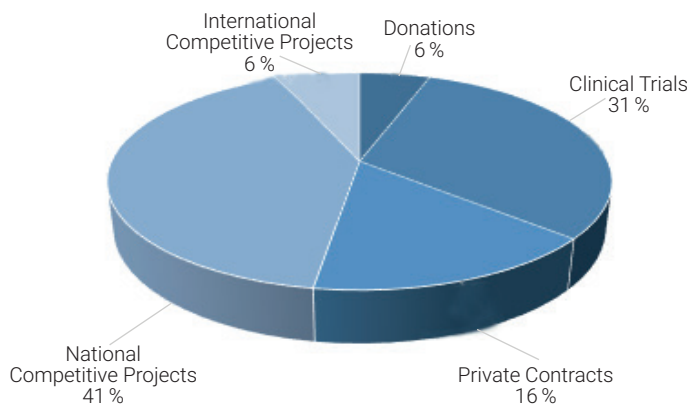
## No competitive projects



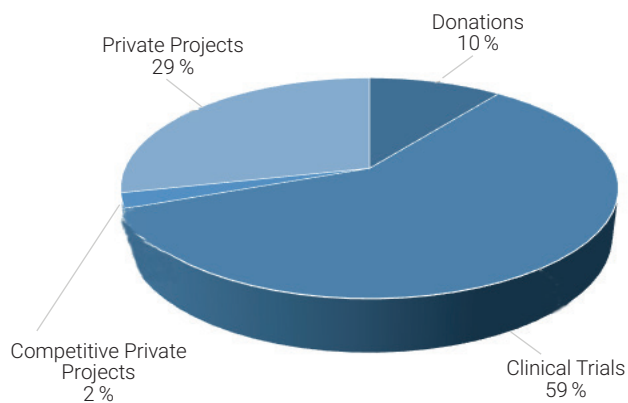
## Private competitive projects



Distribution of total funding (2023)



Distribution of Private funding (2023)



## LIST OF ACTIVE PROJECTS IN 2023 BY AREA OF RESEARCH

|                                                                        |                                                                                                 | Research projects | Human resources |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------|-----------------|
| AREA 1.<br>Biomedical<br>Engineering                                   | 1.01 Advanced technological applications and human health                                       | 21                | 12              |
|                                                                        | 1.02 Signal processing                                                                          | 10                | 5               |
|                                                                        | 1.06 Biomedical applications of engineering                                                     | 12                | 2               |
| AREA 2.<br>Cardiovascular<br>Diseases                                  | 2.01 Natural history of heart disease                                                           | 19                | 3               |
|                                                                        | 2.03 Cardiac cellular electrophysiology                                                         | 1                 | 1               |
|                                                                        | 2.06 Blood lipids and cardiovascular risk                                                       | 1                 | 0               |
| AREA 3.<br>Neuroscience<br>and Mental<br>Health                        | 3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment | 23                | 10              |
|                                                                        | 3.03B Neurological diseases                                                                     | 3                 | 0               |
| AREA 4. Clinical<br>Microbiology<br>Infectious<br>Diseases and<br>AIDS | 4.01 Clinical microbiology and infectious diseases                                              | 19                | 23              |
|                                                                        | 4.02 Clinical and epidemiological aspects of HIV infection and associated conditions            | 2                 | 1               |
| AREA 5. Diseases<br>of the Immune<br>System                            | 5.01 Pathophysiology and clinical investigation of chronic inflammatory and immune diseases     | 4                 | 3               |
|                                                                        | 5.02 Molecular biology of HIV                                                                   | 3                 | 2               |
|                                                                        | 5.03 Systemic autoimmune diseases                                                               | 2                 | 1               |
|                                                                        | 5.05 Pathogenesis of the immunological response                                                 | 1                 | 0               |
|                                                                        | 5.06 Immune regulation and homeostasis in diseases of the immune system                         | 5                 | 3               |
|                                                                        | 5.07 Infections in pediatric patients                                                           | 5                 | 1               |

(Continued)

## List of active projects in 2023 by area of research

(Cont.)

|                                                             |                                                                                                                                      | Research projects | Human resources |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|
| AREA 6.<br>Traslational<br>Oncology                         | 6.01 Interdisciplinary oncology and biotechnology                                                                                    | 2                 | 1               |
|                                                             | 6.02 Translational medical oncology and personalized cancer therapy                                                                  | 5                 | 0               |
|                                                             | 6.03 Genetics and clinical aspects of hematologic malignancies and hematopoietic stem cell transplantation                           | 5                 | 1               |
| AREA 7. Systemic<br>Diseases<br>and Organ<br>Trasplantation | 7.01 Vascular damage and inflammation in chronic kidney disease, dialysis, and kidney transplantation. Pathophysiology of the kidney | 5                 | 1               |
|                                                             | 7.02 Pathophysiology and natural history of liver and digestive diseases                                                             | 5                 | 3               |
|                                                             | 7.04 Diseases of the critically ill child                                                                                            | 8                 | 4               |
|                                                             | 7.10 Regeneration and biomaterials in musculoskeletal disease                                                                        | 1                 | 0               |
|                                                             | 7.16B Pathophysiology of the cardiovascular system and circulatory support                                                           | 2                 | 1               |
|                                                             | 7.21 Biopathology of aging                                                                                                           | 1                 | 0               |
|                                                             | 7.22 Neonatal and developmental pathophysiology                                                                                      | 1                 | 0               |
|                                                             | 7.27 Hospital pharmacy and pharmacogenomics                                                                                          | 7                 | 1               |
|                                                             | 7.28 Clinical nutrition                                                                                                              | 1                 | 0               |
|                                                             | 7.29 Pharmacology and vascular pathophysiology                                                                                       | 8                 | 4               |
|                                                             | 7.31 Pathophysiology in women, pregnancy, labor, and puerperium                                                                      | 3                 | 2               |

(Continued)

## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

|                                                    |                                                                         | Research projects | Human resources |
|----------------------------------------------------|-------------------------------------------------------------------------|-------------------|-----------------|
| AREA 7. Systemic Diseases and Organ Trasplantation | 7.32 Physical medicine and rehabilitation                               | 1                 | 0               |
|                                                    | 7.34 Multimorbidity, chronic diseases and health services. Primary Care | 13                | 2               |
| Nursing Research Group                             | Nursing Research Group                                                  | 1                 | 0               |
| Clinical Researchers Associated                    | Clinical Researchers Associated                                         | 2                 | 0               |
| Research Support Services (RSSs)                   | Research Support Services (RSSs)                                        | 0                 | 3               |



## SCIENTIFIC PUBLICATIONS

The list presented below shows all the referenced publications in which investigators from the IiSGM participated in during 2023.

Publications with an impact factor greater than **10 points are highlighted**. In order to obtain the total impact factor, only information from publications indexed as original articles, reviews, editorials and letters in the main collection of the Web of Science (WOS) have been taken into account.

It is important to note that publications involving different groups or areas of the Institute are computed individually in each group and area, although only once for purposes of the calculation of the Institute's total impact factor.

| Journal                                                            | Nº | IF  | Amount IF |
|--------------------------------------------------------------------|----|-----|-----------|
| ACTA NEUROLOGICA BELGICA                                           | 1  | 2   | 2         |
| ACTA NEUROPATHOLOGICA                                              | 1  | 9,3 | 9,3       |
| ACTA NEUROPSYCHIATRICA                                             | 1  | 2,6 | 2,6       |
| ACTA PAEDIATRICA                                                   | 2  | 2,4 | 4,8       |
| ACTA PSYCHIATRICA SCANDINAVICA                                     | 1  | 5,3 | 5,3       |
| Actas Dermo-Sifiliograficas                                        | 2  | 3,8 | 7,6       |
| ACTAS ESPANOLAS DE PSIQUIATRIA                                     | 1  | 1   | 1         |
| Actas Urologicas Espanolas                                         | 3  | 1,2 | 3,6       |
| Advances in Data Analysis and Classification                       | 1  | 1,4 | 1,4       |
| Advances In Laboratory Medicine-Avances En Medicina De Laboratorio | 4  | 1,1 | 4,4       |
| Advances in Rheumatology                                           | 1  | 2   | 2         |

(Continued)

(Cont.)

| Journal                                                    | Nº | IF          | Amount IF   |
|------------------------------------------------------------|----|-------------|-------------|
| ADVANCES IN THERAPY                                        | 1  | 3,4         | 3,4         |
| AGING & MENTAL HEALTH                                      | 1  | 2,8         | 2,8         |
| AIDS                                                       | 2  | 3,4         | 6,8         |
| ALIMENTARY PHARMACOLOGY & THERAPEUTICS                     | 1  | 6,6         | 6,6         |
| ALLERGOLOGIA ET IMMUNOPATHOLOGIA                           | 1  | 2,5         | 2,5         |
| ALLERGY                                                    | 2  | 12,6        | 25,2        |
| Allergy Asthma and Clinical Immunology                     | 1  | 2,6         | 2,6         |
| Alzheimers Research & Therapy                              | 1  | 7,9         | 7,9         |
| AMERICAN JOURNAL OF CARDIOLOGY                             | 2  | 2,3         | 4,6         |
| AMERICAN JOURNAL OF EMERGENCY MEDICINE                     | 1  | 2,7         | 2,7         |
| AMERICAN JOURNAL OF GASTROENTEROLOGY                       | 3  | 8           | <b>24</b>   |
| AMERICAN JOURNAL OF HEMATOLOGY                             | 1  | <b>10,1</b> | <b>10,1</b> |
| AMERICAN JOURNAL OF PERINATOLOGY                           | 1  | 1,5         | 1,5         |
| AMERICAN JOURNAL OF PSYCHIATRY                             | 2  | <b>15,1</b> | <b>30,2</b> |
| AMERICAN JOURNAL OF RESPIRATORY CELL AND MOLECULAR BIOLOGY | 1  | 5,9         | 5,9         |
| AMERICAN JOURNAL OF TRANSPLANTATION                        | 2  | 8,9         | <b>17,8</b> |
| AMYLOID-JOURNAL OF PROTEIN FOLDING DISORDERS               | 1  | 5,2         | 5,2         |
| ANAIS BRASILEIROS DE DERMATOLOGIA                          | 1  | 2,6         | 2,6         |
| ANALES DE PEDIATRIA                                        | 26 | 1,5         | <b>39</b>   |
| ANALES DEL SISTEMA SANITARIO DE NAVARRA                    | 1  | 1           | 1           |
| Andes Pediatrica                                           | 2  | 0,5         | 1           |
| Angiologia                                                 | 1  | 0,1         | 0,1         |
| ANNALS OF HEMATOLOGY                                       | 4  | 3           | <b>12</b>   |
| ANNALS OF ONCOLOGY                                         | 1  | <b>56,7</b> | <b>56,7</b> |

(Continued)

## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

| Journal                                                  | Nº | IF          | Amount IF   |
|----------------------------------------------------------|----|-------------|-------------|
| Annals of Pediatric Surgery                              | 1  | 0,4         | 0,4         |
| ANNALS OF PHARMACOTHERAPY                                | 1  | 2,3         | 2,3         |
| ANNALS OF SURGERY                                        | 1  | 7,5         | 7,5         |
| ANNALS OF SURGICAL ONCOLOGY                              | 2  | 3,4         | 6,8         |
| ANNALS OF THE RHEUMATIC DISEASES                         | 1  | <b>20,3</b> | <b>20,3</b> |
| Antibiotics-Basel                                        | 9  | 4,3         | 38,7        |
| ANTIMICROBIAL AGENTS AND CHEMOTHERAPY                    | 2  | 4,1         | 8,2         |
| Antimicrobial Resistance and Infection Control           | 1  | 4,8         | 4,8         |
| Antioxidants                                             | 5  | 6           | 30          |
| Anuario de Psicología Jurídica                           | 1  | 0,9         | 0,9         |
| Applied Health Economics and Health Policy               | 1  | 3,1         | 3,1         |
| Applied Sciences-Basel                                   | 2  | 2,5         | 5           |
| ARCHIVES OF PATHOLOGY & LABORATORY MEDICINE              | 1  | 3,7         | 3,7         |
| ARCHIVOS DE BRONCONEUMOLOGIA                             | 6  | 8,7         | <b>52,2</b> |
| Archivos de Cardiología de Mexico                        | 1  | 0,7         | 0,7         |
| ARCHIVOS ESPANOLAS DE UROLOGIA                           | 1  | 0,6         | 0,6         |
| ARTHRITIS CARE & RESEARCH                                | 3  | 3,7         | <b>11,1</b> |
| ARTHRITIS RESEARCH & THERAPY                             | 3  | 4,4         | <b>13,2</b> |
| ATENCION PRIMARIA                                        | 1  | 1,8         | 1,8         |
| AUSTRALIAN CRITICAL CARE                                 | 1  | 2,6         | 2,6         |
| AUTISM                                                   | 1  | 5,2         | 5,2         |
| AUTISM RESEARCH                                          | 1  | 5,3         | 5,3         |
| AUTOIMMUNITY REVIEWS                                     | 1  | 9,2         | 9,2         |
| BASIC & CLINICAL PHARMACOLOGY & TOXICOLOGY               | 1  | 2,7         | 2,7         |
| BIOCHIMICA ET BIOPHYSICA ACTA-MOLECULAR BASIS OF DISEASE | 2  | 4,2         | 8,4         |

(Continued)

(Cont.)

| Journal                                        | Nº | IF          | Amount IF   |
|------------------------------------------------|----|-------------|-------------|
| BIOCONJUGATE CHEMISTRY                         | 1  | 4           | 4           |
| Biofilm                                        | 1  | 5,9         | 5,9         |
| BIOMEDICAL PHYSICS & ENGINEERING EXPRESS       | 1  | 1,3         | 1,3         |
| BIOMEDICINE & PHARMACOTHERAPY                  | 7  | 6,9         | <b>48,3</b> |
| Biomedicines                                   | 6  | 3,9         | <b>23,4</b> |
| Biomolecules                                   | 2  | 4,8         | 9,6         |
| BIOSTATISTICS                                  | 1  | 1,8         | 1,8         |
| BIPOLAR DISORDERS                              | 1  | 5           | 5           |
| BIRTH-ISSUES IN PERINATAL CARE                 | 1  | 2,8         | 2,8         |
| BJU INTERNATIONAL                              | 1  | 3,7         | 3,7         |
| BLOOD                                          | 2  | 21          | 42          |
| Blood Advances                                 | 5  | 7,4         | 37          |
| Blood Cancer Journal                           | 1  | <b>12,9</b> | <b>12,9</b> |
| BLOOD PURIFICATION                             | 1  | 2,2         | 2,2         |
| BMC GASTROENTEROLOGY                           | 1  | 2,5         | 2,5         |
| BMC GERIATRICS                                 | 3  | 3,4         | <b>10,2</b> |
| BMC INFECTIOUS DISEASES                        | 2  | 3,4         | 6,8         |
| BMC MICROBIOLOGY                               | 1  | 4           | 4           |
| BMC Nursing                                    | 1  | 3,1         | 3,1         |
| BMC Pregnancy and Childbirth                   | 1  | 2,8         | 2,8         |
| Bmc Primary Care                               | 2  | 2           | 4           |
| BMC Psychiatry                                 | 2  | 3,4         | 6,8         |
| BMC Pulmonary Medicine                         | 1  | 2,6         | 2,6         |
| BMC SPORTS SCIENCE MEDICINE AND REHABILITATION | 2  | 2,1         | 4,2         |
| BMJ Open                                       | 2  | 2,4         | 4,8         |
| BMJ Open Respiratory Research                  | 1  | 3,6         | 3,6         |

(Continued)

## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

| Journal                                   | Nº | IF          | Amount IF   |
|-------------------------------------------|----|-------------|-------------|
| Boletin De Pediatria                      | 1  | 0,1         | 0,1         |
| BONE MARROW TRANSPLANTATION               | 6  | 4,5         | <b>27</b>   |
| Brain Sciences                            | 1  | 2,7         | 2,7         |
| BRAZILIAN JOURNAL OF ANESTHESIOLOGY       | 1  | 1,7         | 1,7         |
| BREAST CANCER RESEARCH                    | 2  | 6,1         | <b>12,2</b> |
| BREAST CANCER RESEARCH AND TREATMENT      | 2  | 3           | 6           |
| BRITISH JOURNAL OF ANAESTHESIA            | 1  | 9,1         | 9,1         |
| BRITISH JOURNAL OF DERMATOLOGY            | 1  | <b>11</b>   | <b>11</b>   |
| BRITISH JOURNAL OF HAEMATOLOGY            | 6  | 5,1         | <b>30,6</b> |
| BRITISH JOURNAL OF PHARMACOLOGY           | 2  | 6,8         | <b>13,6</b> |
| BRITISH JOURNAL OF PSYCHIATRY             | 2  | 8,7         | <b>17,4</b> |
| BRITISH JOURNAL OF SURGERY                | 2  | 8,6         | <b>17,2</b> |
| Cancer Medicine                           | 2  | 2,9         | 5,8         |
| Cancers                                   | 14 | 4,5         | <b>63</b>   |
| CARDIOLOGY                                | 1  | 1,9         | 1,9         |
| CARDIOLOGY IN THE YOUNG                   | 1  | 0,9         | 0,9         |
| Cardiology Journal                        | 1  | 2,5         | 2,5         |
| CARDIOVASCULAR DIABETOLOGY                | 1  | 8,5         | 8,5         |
| CARDIOVASCULAR PATHOLOGY                  | 1  | 2,3         | 2,3         |
| Cardiovascular Revascularization Medicine | 1  | 1,6         | 1,6         |
| Case Reports in Oncology                  | 1  | 0,7         | 0,7         |
| Cell Death & Disease                      | 1  | 8,1         | 8,1         |
| Cell Genomics                             | 1  | <b>11,1</b> | <b>11,1</b> |
| CELL PROLIFERATION                        | 1  | 5,9         | 5,9         |
| Cells                                     | 1  | 5,1         | 5,1         |
| CELLULAR AND MOLECULAR LIFE SCIENCES      | 1  | 6,2         | 6,2         |
| CEREBRAL CORTEX                           | 1  | 2,9         | 2,9         |

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| Journal                                                | Nº | IF          | Amount IF   |
|--------------------------------------------------------|----|-------------|-------------|
| CHILD AND ADOLESCENT MENTAL HEALTH                     | 2  | 6,8         | <b>13,6</b> |
| Child and Adolescent Psychiatry and Mental Health      | 1  | 3,4         | 3,4         |
| Children-Basel                                         | 3  | 2           | 6           |
| CIRCULATION                                            | 1  | <b>35,5</b> | <b>35,5</b> |
| CIRCULATION-HEART FAILURE                              | 1  | 7,8         | 7,8         |
| Cirurgia Cardiovascular                                | 5  | 0,3         | 1,5         |
| CIRUGIA ESPANOLA                                       | 6  | 1,3         | 7,8         |
| Clinica e Investigacion en Arteriosclerosis            | 3  | 1,9         | 5,7         |
| CLINICAL & TRANSLATIONAL ONCOLOGY                      | 18 | 2,8         | <b>50,4</b> |
| Clinical and Experimental Nephrology                   | 1  | 2,2         | 2,2         |
| CLINICAL AND EXPERIMENTAL RHEUMATOLOGY                 | 2  | 3,4         | 6,8         |
| Clinical and Translational Allergy                     | 1  | 4,6         | 4,6         |
| CLINICAL CANCER RESEARCH                               | 5  | <b>10</b>   | <b>50</b>   |
| Clinical Child Psychology and Psychiatry               | 1  | 1,8         | 1,8         |
| CLINICAL COLORECTAL CANCER                             | 1  | 3,3         | 3,3         |
| CLINICAL ENDOCRINOLOGY                                 | 1  | 3           | 3           |
| CLINICAL GENETICS                                      | 2  | 2,9         | 5,8         |
| CLINICAL GERONTOLOGIST                                 | 1  | 2,6         | 2,6         |
| CLINICAL INFECTIOUS DISEASES                           | 4  | 8,2         | <b>32,8</b> |
| CLINICAL JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY | 1  | 8,5         | 8,5         |
| CLINICAL KIDNEY JOURNAL                                | 6  | 3,9         | <b>23,4</b> |
| CLINICAL LUNG CANCER                                   | 1  | 3,3         | 3,3         |
| CLINICAL MICROBIOLOGY AND INFECTION                    | 4  | <b>10,9</b> | <b>43,6</b> |
| CLINICAL NURSING RESEARCH                              | 1  | 1,7         | 1,7         |
| CLINICAL NUTRITION                                     | 8  | 6,6         | <b>52,8</b> |
| Clinical Nutrition ESPEN                               | 2  | 2,9         | 5,8         |

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## Executive Summary SCIENTIFIC REPORT 2023

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| Journal                                | Nº | IF  | Amount IF   |
|----------------------------------------|----|-----|-------------|
| CLINICAL PSYCHOLOGY & PSYCHOTHERAPY    | 1  | 3,2 | 3,2         |
| CLINICAL RHEUMATOLOGY                  | 1  | 2,9 | 2,9         |
| CLINICAL TRIALS                        | 1  | 2,2 | 2,2         |
| ClinicoEconomics and Outcomes Research | 1  | 2,1 | 2,1         |
| COLORECTAL DISEASE                     | 5  | 2,9 | <b>14,5</b> |
| COMPUTERS IN BIOLOGY AND MEDICINE      | 1  | 7   | 7           |
| COMPUTING                              | 1  | 3,3 | 3,3         |
| CORONARY ARTERY DISEASE                | 1  | 1,5 | 1,5         |
| CRITICAL CARE                          | 1  | 8,8 | 8,8         |
| CUREUS JOURNAL OF MEDICAL SCIENCE      | 1  | 1   | 1           |
| Current Cardiology Reviews             | 1  | 2,4 | 2,4         |
| Current Heart Failure Reports          | 4  | 3,8 | <b>15,2</b> |
| Current Oncology                       | 1  | 2,8 | 2,8         |
| CURRENT OPINION IN INFECTIOUS DISEASES | 2  | 3,6 | 7,2         |
| CURRENT PHARMACEUTICAL DESIGN          | 1  | 2,6 | 2,6         |
| CURRENT PROBLEMS IN CARDIOLOGY         | 1  | 3   | 3           |
| Current Urology Reports                | 1  | 2,5 | 2,5         |
| CYTOGENETIC AND GENOME RESEARCH        | 1  | 1,7 | 1,7         |
| CYTOMETRY PART B-CLINICAL CYTOMETRY    | 3  | 2,3 | 6,9         |
| DEATH STUDIES                          | 1  | 2,1 | 2,1         |
| DERMATOLOGY                            | 1  | 3   | 3           |
| Diagnostics                            | 1  | 3   | 3           |
| DIGESTIVE DISEASES AND SCIENCES        | 1  | 2,5 | 2,5         |
| EARLY INTERVENTION IN PSYCHIATRY       | 3  | 2,1 | 6,3         |
| EBioMedicine                           | 1  | 9,7 | 9,7         |
| Eclinicalmedicine                      | 3  | 9,6 | <b>28,8</b> |
| EJNMMI Physics                         | 1  | 3   | 3           |

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| Journal                                                   | Nº | IF          | Amount IF   |
|-----------------------------------------------------------|----|-------------|-------------|
| EJSO                                                      | 1  | 3,5         | 3,5         |
| Emergencias                                               | 10 | 5,4         | <b>54</b>   |
| EMERGENCY MEDICINE JOURNAL                                | 1  | 2,7         | 2,7         |
| EMERGING INFECTIOUS DISEASES                              | 2  | 7,2         | <b>14,4</b> |
| ENDOCRINE                                                 | 4  | 3           | 12          |
| Endocrine Connections                                     | 1  | 2,6         | 2,6         |
| Endocrinología Diabetes Y Nutrición                       | 6  | 1,8         | <b>10,8</b> |
| Endocrinology Diabetes And Metabolism Case Reports        | 1  | 0,7         | 0,7         |
| ENDOSCOPY                                                 | 2  | <b>11,5</b> | <b>23</b>   |
| ENFERMEDADES INFECCIOSAS Y MICROBIOLOGIA CLINICA          | 7  | 2,6         | <b>18,2</b> |
| Enfermería Clínica                                        | 3  | 0,7         | 2,1         |
| ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE       | 2  | 7,5         | <b>15</b>   |
| Entropy                                                   | 1  | 2,1         | 2,1         |
| EPIDEMIOLOGY AND PSYCHIATRIC SCIENCES                     | 2  | 5,9         | <b>11,8</b> |
| Epilepsia Open                                            | 1  | 2,8         | 2,8         |
| ERJ Open Research                                         | 3  | 4,3         | <b>12,9</b> |
| ESC heart failure                                         | 1  | 3,2         | 3,2         |
| Esmo Open                                                 | 2  | 7,1         | <b>14,2</b> |
| EuroIntervention                                          | 1  | 7,6         | 7,6         |
| EUROPACE                                                  | 1  | 7,9         | 7,9         |
| EUROPEAN ARCHIVES OF OTO-RHINO-LARYNGOLOGY                | 1  | 1,9         | 1,9         |
| EUROPEAN ARCHIVES OF PSYCHIATRY AND CLINICAL NEUROSCIENCE | 1  | 3,5         | 3,5         |
| EUROPEAN CHILD & ADOLESCENT PSYCHIATRY                    | 6  | 6           | <b>36</b>   |
| European Geriatric Medicine                               | 1  | 3,5         | 3,5         |

(Continued)

## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

| Journal                                                      | N° | IF          | Amount IF   |
|--------------------------------------------------------------|----|-------------|-------------|
| EUROPEAN HEART JOURNAL                                       | 1  | <b>37,6</b> | <b>37,6</b> |
| EUROPEAN HEART JOURNAL-ACUTE CARDIOVASCULAR CARE             | 2  | 3,9         | 7,8         |
| European Heart Journal-Cardiovascular Imaging                | 1  | 6,7         | 6,7         |
| European Heart Journal-Cardiovascular Pharmacotherapy        | 3  | 5,3         | <b>15,9</b> |
| EUROPEAN HEART JOURNAL-QUALITY OF CARE AND CLINICAL OUTCOMES | 2  | 4,8         | 9,6         |
| EUROPEAN JOURNAL OF CANCER                                   | 2  | 7,6         | <b>15,2</b> |
| EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY                  | 1  | 3,1         | 3,1         |
| EUROPEAN JOURNAL OF CLINICAL INVESTIGATION                   | 1  | 4,4         | 4,4         |
| EUROPEAN JOURNAL OF DERMATOLOGY                              | 8  | 2           | <b>16</b>   |
| European Journal of General Practice                         | 2  | 2,3         | 4,6         |
| EUROPEAN JOURNAL OF HAEMATOLOGY                              | 1  | 2,3         | 2,3         |
| EUROPEAN JOURNAL OF HEART FAILURE                            | 1  | <b>16,9</b> | <b>16,9</b> |
| EUROPEAN JOURNAL OF HOSPITAL PHARMACY                        | 1  | 1,6         | 1,6         |
| EUROPEAN JOURNAL OF HUMAN GENETICS                           | 1  | 3,7         | 3,7         |
| EUROPEAN JOURNAL OF INTERNAL MEDICINE                        | 2  | 5,9         | <b>11,8</b> |
| EUROPEAN JOURNAL OF MEDICAL GENETICS                         | 3  | 1,6         | 4,8         |
| EUROPEAN JOURNAL OF NEUROLOGY                                | 1  | 4,5         | 4,5         |
| EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING   | 1  | 8,6         | 8,6         |
| EUROPEAN JOURNAL OF PEDIATRIC SURGERY                        | 1  | 1,5         | 1,5         |
| EUROPEAN JOURNAL OF PEDIATRICS                               | 11 | 3           | <b>33</b>   |
| EUROPEAN JOURNAL OF PSYCHIATRY                               | 1  | 2,5         | 2,5         |
| EUROPEAN JOURNAL OF TRAUMA AND EMERGENCY SURGERY             | 2  | 1,9         | 3,8         |
| EUROPEAN JOURNAL OF VASCULAR AND ENDOVASCULAR SURGERY        | 1  | 5,7         | 5,7         |

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| Journal                                          | Nº | IF          | Amount IF   |
|--------------------------------------------------|----|-------------|-------------|
| EUROPEAN NEUROPSYCHOPHARMACOLOGY                 | 5  | 6,1         | <b>30,5</b> |
| EUROPEAN PSYCHIATRY                              | 4  | 7,2         | <b>28,8</b> |
| EUROPEAN RESPIRATORY JOURNAL                     | 2  | <b>16,6</b> | <b>33,2</b> |
| EUROPEAN UROLOGY                                 | 1  | <b>25,3</b> | <b>25,3</b> |
| European Urology Focus                           | 2  | 4,8         | 9,6         |
| European Urology Open Science                    | 1  | 3,2         | 3,2         |
| Eurosurveillance                                 | 1  | 9,9         | 9,9         |
| EXPERIMENTAL DERMATOLOGY                         | 2  | 3,5         | 7           |
| EXPERT OPINION ON DRUG SAFETY                    | 2  | 3           | 6           |
| Expert Review of Cardiovascular Therapy          | 1  | 1,8         | 1,8         |
| Expert Review of Clinical Pharmacology           | 1  | 3,6         | 3,6         |
| Expert Review of Hematology                      | 1  | 2,3         | 2,3         |
| FARMACIA HOSPITALARIA                            | 11 | 1           | 11          |
| Foods                                            | 1  | 4,7         | 4,7         |
| Frontiers in Behavioral Neuroscience             | 1  | 2,6         | 2,6         |
| Frontiers in Bioengineering and Biotechnology    | 1  | 4,3         | 4,3         |
| Frontiers In Bioscience-Landmark                 | 1  | 3,3         | 3,3         |
| Frontiers in Cardiovascular Medicine             | 2  | 2,8         | 5,6         |
| Frontiers in Cell and Developmental Biology      | 1  | 4,6         | 4,6         |
| Frontiers in Cellular and Infection Microbiology | 4  | 4,6         | <b>18,4</b> |
| Frontiers in Endocrinology                       | 3  | 3,9         | <b>11,7</b> |
| Frontiers in Genetics                            | 1  | 2,8         | 2,8         |
| Frontiers in Immunology                          | 7  | 5,7         | <b>39,9</b> |
| Frontiers in Microbiology                        | 4  | 4           | <b>16</b>   |
| Frontiers in Oncology                            | 2  | 3,5         | 7           |
| Frontiers In Pediatrics                          | 1  | 2,1         | 2,1         |
| Frontiers in Pharmacology                        | 3  | 4,4         | <b>13,2</b> |

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## Executive Summary SCIENTIFIC REPORT 2023

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| Journal                                                                     | Nº | IF          | Amount IF   |
|-----------------------------------------------------------------------------|----|-------------|-------------|
| Frontiers in Physiology                                                     | 1  | 3,2         | 3,2         |
| Frontiers in Psychiatry                                                     | 2  | 3,2         | 6,4         |
| FRONTIERS IN PSYCHOLOGY                                                     | 1  | 2,6         | 2,6         |
| Frontiers in Public Health                                                  | 2  | 3           | 6           |
| Frontiers in Surgery                                                        | 2  | 1,6         | 3,2         |
| FUTURE GENERATION COMPUTER SYSTEMS-THE INTERNATIONAL JOURNAL OF ESCIENCE    | 3  | 6,2         | <b>18,6</b> |
| FUTURE MICROBIOLOGY                                                         | 1  | 2,5         | 2,5         |
| GACETA SANITARIA                                                            | 1  | 1,5         | 1,5         |
| Galicia Clinica                                                             | 1  | 0,1         | 0,1         |
| Gastroenterologia y Hepatologia                                             | 7  | 2,2         | <b>15,4</b> |
| GASTROINTESTINAL ENDOSCOPY                                                  | 1  | 6,7         | 6,7         |
| Genes                                                                       | 1  | 2,8         | 2,8         |
| Genes & Diseases                                                            | 1  | 6,9         | 6,9         |
| Genome Medicine                                                             | 1  | <b>10,4</b> | <b>10,4</b> |
| Gerontology                                                                 | 1  | 3,1         | 3,1         |
| GUT                                                                         | 5  | <b>23</b>   | <b>115</b>  |
| GYNECOLOGIC ONCOLOGY                                                        | 1  | 4,5         | 4,5         |
| HAEMATOLOGICA                                                               | 2  | 8,2         | <b>16,4</b> |
| HEAD AND NECK-JOURNAL FOR THE SCIENCES AND SPECIALTIES OF THE HEAD AND NECK | 1  | 2,3         | 2,3         |
| HEALTH & PLACE                                                              | 1  | 3,8         | 3,8         |
| Healthcare                                                                  | 5  | 2,4         | <b>12</b>   |
| HEART                                                                       | 1  | 5,1         | 5,1         |
| Heart Failure Clinics                                                       | 1  | 2,5         | 2,5         |
| Heart Rhythm O2                                                             | 1  | 2,5         | 2,5         |
| Heliyon                                                                     | 1  | 3,4         | 3,4         |
| Hemasphere                                                                  | 3  | 7,6         | <b>22,8</b> |

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| Journal                                                    | Nº | IF          | Amount IF   |
|------------------------------------------------------------|----|-------------|-------------|
| HEMATOLOGICAL ONCOLOGY                                     | 2  | 3,3         | 6,6         |
| HEPATOLOGY                                                 | 4  | <b>12,9</b> | <b>51,6</b> |
| HISTOLOGY AND HISTOPATHOLOGY                               | 1  | 2,5         | 2,5         |
| HISTOPATHOLOGY                                             | 1  | 3,9         | 3,9         |
| HIV MEDICINE                                               | 3  | 2,8         | 8,4         |
| Hormone and Metabolic Research                             | 1  | 2           | 2           |
| Hospital Pharmacy                                          | 1  | 0,8         | 0,8         |
| HUMAN BRAIN MAPPING                                        | 1  | 3,5         | 3,5         |
| HUMAN IMMUNOLOGY                                           | 2  | 3,1         | 6,2         |
| HUMAN PATHOLOGY                                            | 1  | 2,7         | 2,7         |
| IEEE Access                                                | 2  | 3,4         | 6,8         |
| IEEE Journal of Biomedical and Health Informatics          | 1  | 6,7         | 6,7         |
| IEEE MICRO                                                 | 1  | 2,8         | 2,8         |
| IEEE TRANSACTIONS ON MEDICAL IMAGING                       | 1  | 8,9         | 8,9         |
| Ieee Transactions On Radiation And Plasma Medical Sciences | 1  | 4,6         | 4,6         |
| IEEE Transactions on Services Computing                    | 1  | 5,5         | 5,5         |
| IEEE TRANSACTIONS ON SIGNAL PROCESSING                     | 1  | 4,6         | 4,6         |
| Immunity & Ageing                                          | 2  | 5,2         | <b>10,4</b> |
| INDIAN JOURNAL OF PEDIATRICS                               | 1  | 2,1         | 2,1         |
| INFECTION                                                  | 1  | 5,4         | 5,4         |
| INFECTIOUS DISEASES                                        | 1  | 4           | 4           |
| Infectious Diseases and Therapy                            | 1  | 4,7         | 4,7         |
| INFORMATION PROCESSING & MANAGEMENT                        | 1  | 7,4         | 7,4         |
| INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED    | 1  | 2,2         | 2,2         |
| Insuficiencia Cardiaca                                     | 1  | 0,1         | 0,1         |
| INTENSIVE CARE MEDICINE                                    | 1  | 27,1        | 27,1        |

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## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

| Journal                                                          | Nº | IF  | Amount IF   |
|------------------------------------------------------------------|----|-----|-------------|
| Interface Focus                                                  | 1  | 3,6 | 3,6         |
| INTERNAL AND EMERGENCY MEDICINE                                  | 3  | 3,2 | 9,6         |
| INTERNATIONAL IMMUNOLOGY                                         | 1  | 4,8 | 4,8         |
| INTERNATIONAL IMMUNOPHARMACOLOGY                                 | 1  | 4,8 | 4,8         |
| INTERNATIONAL JOURNAL FOR QUALITY IN HEALTH CARE                 | 1  | 2,7 | 2,7         |
| INTERNATIONAL JOURNAL OF ANTIMICROBIAL AGENTS                    | 1  | 4,9 | 4,9         |
| International Journal of Bioprinting                             | 1  | 6,8 | 6,8         |
| INTERNATIONAL JOURNAL OF CARDIOLOGY                              | 5  | 3,2 | <b>16</b>   |
| INTERNATIONAL JOURNAL OF DERMATOLOGY                             | 2  | 3,5 | 7           |
| INTERNATIONAL JOURNAL OF EPIDEMIOLOGY                            | 1  | 6,4 | 6,4         |
| INTERNATIONAL JOURNAL OF GYNECOLOGICAL CANCER                    | 1  | 4,1 | 4,1         |
| INTERNATIONAL JOURNAL OF GYNECOLOGY & OBSTETRICS                 | 3  | 2,6 | 7,8         |
| International Journal of Healthcare Management                   | 1  | 1,4 | 1,4         |
| INTERNATIONAL JOURNAL OF HIGH PERFORMANCE COMPUTING APPLICATIONS | 1  | 3,5 | 3,5         |
| INTERNATIONAL JOURNAL OF INFECTIOUS DISEASES                     | 4  | 4,8 | <b>19,2</b> |
| International Journal of Medical Sciences                        | 1  | 3,2 | 3,2         |
| INTERNATIONAL JOURNAL OF MENTAL HEALTH NURSING                   | 1  | 3,6 | 3,6         |
| INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES                      | 11 | 4,9 | <b>53,9</b> |
| INTERNATIONAL JOURNAL OF NEUROPSYCHOPHARMACOLOGY                 | 1  | 4,5 | 4,5         |
| INTERNATIONAL JOURNAL OF NURSING KNOWLEDGE                       | 1  | 1,4 | 1,4         |

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| Journal                                                                                           | Nº | IF          | Amount IF   |
|---------------------------------------------------------------------------------------------------|----|-------------|-------------|
| INTERNATIONAL JOURNAL OF PSYCHIATRY IN CLINICAL PRACTICE                                          | 1  | 2,9         | 2,9         |
| INTERNATIONAL JOURNAL OF SOCIAL PSYCHIATRY                                                        | 1  | 2,5         | 2,5         |
| International Journal of Surgery                                                                  | 2  | <b>12,5</b> | <b>25</b>   |
| INTERNATIONAL JOURNAL OF SURGICAL PATHOLOGY                                                       | 1  | 0,9         | 0,9         |
| INTERNET INTERVENTIONS-THE APPLICATION OF INFORMATION TECHNOLOGY IN MENTAL AND BEHAVIOURAL HEALTH | 1  | 3,6         | 3,6         |
| iScience                                                                                          | 1  | 4,6         | 4,6         |
| JACC-BASIC TO TRANSLATIONAL SCIENCE                                                               | 1  | 8,4         | 8,4         |
| JACC-Cardiovascular Imaging                                                                       | 1  | <b>12,8</b> | <b>12,8</b> |
| JACC-Cardiovascular Interventions                                                                 | 2  | <b>11,7</b> | <b>23,4</b> |
| JACC-Heart Failure                                                                                | 1  | <b>10,3</b> | <b>10,3</b> |
| JAMA Internal Medicine                                                                            | 1  | <b>22,5</b> | <b>22,5</b> |
| JAMA Oncology                                                                                     | 2  | <b>22,5</b> | <b>45</b>   |
| Jci Insight                                                                                       | 1  | 6,3         | 6,3         |
| Jco Precision Oncology                                                                            | 1  | 5,3         | 5,3         |
| Jhep Reports                                                                                      | 4  | 9,5         | <b>38</b>   |
| Jmir Formative Research                                                                           | 1  | 2           | 2           |
| Jmir Research Protocols                                                                           | 2  | 1,4         | 2,8         |
| Jnci Cancer Spectrum                                                                              | 1  | 3,4         | 3,4         |
| JOINT BONE SPINE                                                                                  | 1  | 3,8         | 3,8         |
| JOURNAL DER DEUTSCHEN DERMATOLOGISCHEN GESELLSCHAFT                                               | 2  | 5,5         | 11          |
| Journal for ImmunoTherapy of Cancer                                                               | 1  | <b>10,3</b> | <b>10,3</b> |
| Journal of Affective Disorders                                                                    | 4  | 4,9         | <b>19,6</b> |
| Journal of Allergy and Clinical Immunology-In Practice                                            | 2  | 8,2         | <b>16,4</b> |

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## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

| Journal                                                  | Nº | IF          | Amount IF    |
|----------------------------------------------------------|----|-------------|--------------|
| JOURNAL OF ALZHEIMERS DISEASE                            | 1  | 3,4         | 3,4          |
| JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY                    | 5  | 3,9         | <b>19,5</b>  |
| JOURNAL OF ASTHMA                                        | 2  | 1,7         | 3,4          |
| JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS            | 2  | 3,2         | 6,4          |
| Journal Of Bone And Joint Infection                      | 1  | 1,8         | 1,8          |
| JOURNAL OF BONE AND MINERAL RESEARCH                     | 1  | 5,1         | 5,1          |
| JOURNAL OF CANCER RESEARCH AND CLINICAL ONCOLOGY         | 3  | 2,7         | 8,1          |
| JOURNAL OF CARDIOPULMONARY REHABILITATION AND PREVENTION | 2  | 3,3         | 6,6          |
| Journal of Cardiovascular Development and Disease        | 2  | 2,4         | 4,8          |
| Journal of Clinical and Experimental Hepatology          | 1  | 3,3         | 3,3          |
| JOURNAL OF CLINICAL APHERESIS                            | 1  | 1,4         | 1,4          |
| JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM           | 1  | 5           | 5            |
| JOURNAL OF CLINICAL LIPIDOLOGY                           | 1  | 3,6         | 3,6          |
| Journal of Clinical Medicine                             | 29 | 3           | <b>87</b>    |
| JOURNAL OF CLINICAL MICROBIOLOGY                         | 5  | 6,1         | <b>30,5</b>  |
| Journal of Clinical Neonatology                          | 1  | 0,2         | 0,2          |
| Journal of Clinical Nursing                              | 1  | 3,2         | 3,2          |
| JOURNAL OF CLINICAL ONCOLOGY                             | 7  | <b>42,1</b> | <b>294,7</b> |
| JOURNAL OF CLINICAL PATHOLOGY                            | 1  | 2,5         | 2,5          |
| JOURNAL OF CLINICAL PSYCHIATRY                           | 1  | 4,5         | 4,5          |
| JOURNAL OF CLINICAL VIROLOGY                             | 3  | 4           | 12           |
| JOURNAL OF ELECTROCARDIOLOGY                             | 1  | 1,3         | 1,3          |
| JOURNAL OF ENDOCRINOLOGICAL INVESTIGATION                | 2  | 3,9         | 7,8          |
| JOURNAL OF ENDOVASCULAR THERAPY                          | 1  | 1,7         | 1,7          |

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(Cont.)

| Journal                                                        | Nº | IF          | Amount IF   |
|----------------------------------------------------------------|----|-------------|-------------|
| JOURNAL OF EXPERIMENTAL MEDICINE                               | 1  | <b>12,6</b> | <b>12,6</b> |
| Journal of Fungi                                               | 4  | 4,2         | <b>16,8</b> |
| JOURNAL OF GENERAL PHYSIOLOGY                                  | 1  | 3,3         | 3,3         |
| Journal of Geriatric Oncology                                  | 2  | 3           | 6           |
| Journal Of Healthcare Quality Research                         | 1  | 1,1         | 1,1         |
| JOURNAL OF HEART AND LUNG TRANSPLANTATION                      | 2  | 6,4         | <b>12,8</b> |
| JOURNAL OF HEMATOLOGY & ONCOLOGY                               | 1  | <b>29,5</b> | <b>29,5</b> |
| JOURNAL OF HEPATOLOGY                                          | 1  | <b>26,8</b> | <b>26,8</b> |
| JOURNAL OF HOSPITAL INFECTION                                  | 1  | 3,9         | 3,9         |
| JOURNAL OF INFECTION                                           | 1  | <b>14,3</b> | <b>14,3</b> |
| Journal of Infection and Public Health                         | 1  | 4,7         | 4,7         |
| JOURNAL OF INFECTIOUS DISEASES                                 | 2  | 5           | <b>10</b>   |
| JOURNAL OF INTERVENTIONAL CARDIAC ELECTROPHYSIOLOGY            | 2  | 2,1         | 4,2         |
| JOURNAL OF INVESTIGATIONAL ALLERGOLOGY AND CLINICAL IMMUNOLOGY | 5  | 6,1         | <b>30,5</b> |
| Journal of Medical Economics                                   | 3  | 2,9         | 8,7         |
| JOURNAL OF MEDICAL VIROLOGY                                    | 3  | 6,8         | <b>20,4</b> |
| JOURNAL OF MICROBIOLOGY IMMUNOLOGY AND INFECTION               | 2  | 4,5         | 9           |
| JOURNAL OF MINIMALLY INVASIVE GYNECOLOGY                       | 1  | 3,5         | 3,5         |
| JOURNAL OF NEUROLOGY                                           | 1  | 4,8         | 4,8         |
| Journal of Neuromuscular Diseases                              | 1  | 3,2         | 3,2         |
| JOURNAL OF NUTRITION HEALTH & AGING                            | 1  | 4,3         | 4,3         |
| JOURNAL OF ONCOLOGY PHARMACY PRACTICE                          | 1  | 1           | 1           |
| Journal of patient safety                                      | 1  | 1,7         | 1,7         |
| JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION            | 1  | 2,4         | 2,4         |

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## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

| Journal                                                            | Nº | IF          | Amount IF   |
|--------------------------------------------------------------------|----|-------------|-------------|
| JOURNAL OF PERINATOLOGY                                            | 1  | 2,4         | 2,4         |
| Journal Of Personalized Medicine                                   | 4  | 3           | 12          |
| Journal of Pharmaceutical Policy and Practice                      | 1  | 3,3         | 3,3         |
| Journal of Pharmacy Practice                                       | 1  | 1           | 1           |
| JOURNAL OF PHYSIOLOGY-LONDON                                       | 2  | 4,7         | 9,4         |
| JOURNAL OF PLASTIC RECONSTRUCTIVE AND AESTHETIC SURGERY            | 2  | 2           | 4           |
| JOURNAL OF PSYCHOPHARMACOLOGY                                      | 1  | 4,5         | 4,5         |
| Journal of Research in Medical Sciences                            | 1  | 1,5         | 1,5         |
| JOURNAL OF RHEUMATOLOGY                                            | 1  | 3,6         | 3,6         |
| JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY | 2  | 9,2         | <b>18,4</b> |
| JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY                      | 1  | <b>21,7</b> | <b>21,7</b> |
| JOURNAL OF THE AMERICAN GERIATRICS SOCIETY                         | 1  | 4,3         | 4,3         |
| Journal of the American Heart Association                          | 2  | 5           | <b>10</b>   |
| JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY     | 3  | 8,4         | <b>25,2</b> |
| JOURNAL OF THE HISTORY OF THE NEUROSCIENCES                        | 1  | 0,3         | 0,3         |
| Journal of the Pediatric Infectious Diseases Society               | 1  | 2,5         | 2,5         |
| JOURNAL OF THORACIC ONCOLOGY                                       | 2  | <b>21</b>   | <b>42</b>   |
| Journal of Tissue Engineering                                      | 1  | 6,7         | 6,7         |
| JOURNAL OF TRACE ELEMENTS IN MEDICINE AND BIOLOGY                  | 1  | 3,6         | 3,6         |
| JOURNAL OF TRANSLATIONAL MEDICINE                                  | 1  | 6,1         | 6,1         |
| JOURNAL OF VIRAL HEPATITIS                                         | 1  | 2,5         | 2,5         |
| JOURNAL OF WOMENS HEALTH                                           | 1  | 3           | 3           |
| Jove-Journal of Visualized Experiments                             | 1  | 1,2         | 1,2         |

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| Journal                                      | Nº | IF          | Amount IF    |
|----------------------------------------------|----|-------------|--------------|
| Jto Clinical And Research Reports            | 1  | 3           | 3            |
| Kidney International Reports                 | 1  | 5,7         | 5,7          |
| Kidney Medicine                              | 1  | 3,2         | 3,2          |
| Kidney360                                    | 1  | 3,2         | 3,2          |
| LABORATORY ANIMALS                           | 1  | 1,3         | 1,3          |
| LANCET                                       | 3  | <b>98,4</b> | <b>295,2</b> |
| Lancet Haematology                           | 1  | <b>15,4</b> | <b>15,4</b>  |
| Lancet Microbe                               | 1  | <b>20,9</b> | <b>20,9</b>  |
| LANCET ONCOLOGY                              | 2  | <b>41,6</b> | <b>83,2</b>  |
| LANCET PUBLIC HEALTH                         | 1  | <b>25,4</b> | <b>25,4</b>  |
| Lancet Regional Health-Europe                | 4  | <b>13,6</b> | <b>54,4</b>  |
| Lancet Respiratory Medicine                  | 1  | <b>38,7</b> | <b>38,7</b>  |
| LANGENBECKS ARCHIVES OF SURGERY              | 1  | 2,1         | 2,1          |
| LARYNGOSCOPE                                 | 1  | 2,2         | 2,2          |
| LEUKEMIA                                     | 2  | <b>12,8</b> | <b>25,6</b>  |
| LIFE-BASEL                                   | 1  | 3,2         | 3,2          |
| LIPIDS                                       | 1  | 1,8         | 1,8          |
| LIVER INTERNATIONAL                          | 4  | 6           | <b>24</b>    |
| LUNG                                         | 1  | 4,6         | 4,6          |
| MEDICAL MYCOLOGY                             | 3  | 2,7         | 8,1          |
| MEDICINA CLINICA                             | 7  | 2,6         | <b>18,2</b>  |
| Medicina Intensiva                           | 2  | 2,7         | 5,4          |
| MEDICINA ORAL PATOLOGIA ORAL Y CIRUGIA BUCAL | 1  | 1,8         | 1,8          |
| MEDICINA-LITHUANIA                           | 1  | 2,4         | 2,4          |
| Medwave                                      | 1  | 1,2         | 1,2          |
| Membranes                                    | 1  | 3,3         | 3,3          |

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## Executive Summary SCIENTIFIC REPORT 2023

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| Journal                              | N° | IF          | Amount IF    |
|--------------------------------------|----|-------------|--------------|
| Microbial Biotechnology              | 1  | 4,8         | 4,8          |
| Microbiology spectrum                | 6  | 3,7         | <b>22,2</b>  |
| Microorganisms                       | 2  | 4,1         | 8,2          |
| MICROSURGERY                         | 1  | 1,5         | 1,5          |
| MINERVA ANESTESIOLOGICA              | 1  | 2,9         | 2,9          |
| Minerva Urology and Nephrology       | 1  | 4,9         | 4,9          |
| Modern Rheumatology                  | 1  | 1,8         | 1,8          |
| Modern Rheumatology Case Reports     | 1  | 0,9         | 0,9          |
| MOLECULAR BIOLOGY REPORTS            | 1  | 2,6         | 2,6          |
| MOLECULAR PSYCHIATRY                 | 5  | 9,6         | <b>48</b>    |
| MOLECULES                            | 1  | 4,2         | 4,2          |
| Movement Disorders Clinical Practice | 1  | 2,6         | 2,6          |
| MULTIPLE SCLEROSIS JOURNAL           | 1  | 4,8         | 4,8          |
| Musculoskeletal care                 | 1  | 1,5         | 1,5          |
| MYCOSES                              | 2  | 4,1         | 8,2          |
| Nanomaterials                        | 1  | 4,4         | 4,4          |
| Nature Communications                | 3  | <b>14,7</b> | <b>44,1</b>  |
| NATURE GENETICS                      | 1  | <b>31,7</b> | <b>31,7</b>  |
| NATURE MEDICINE                      | 2  | <b>58,7</b> | <b>117,4</b> |
| NATURE METHODS                       | 1  | <b>36,1</b> | <b>36,1</b>  |
| NATURE REVIEWS NEUROLOGY             | 1  | <b>28,2</b> | <b>28,2</b>  |
| NATURE REVIEWS NEUROSCIENCE          | 1  | <b>28,7</b> | <b>28,7</b>  |
| NEFROLOGIA                           | 10 | 2           | 20           |
| Neonatology                          | 1  | 2,6         | 2,6          |
| NEPHROLOGY DIALYSIS TRANSPLANTATION  | 1  | 4,8         | 4,8          |
| NEUROCIRUGIA                         | 1  | 0,7         | 0,7          |
| NEUROENDOCRINOLOGY                   | 1  | 3,2         | 3,2          |

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| Journal                                                                                | Nº | IF  | Amount IF   |
|----------------------------------------------------------------------------------------|----|-----|-------------|
| NeuroImage-Clinical                                                                    | 1  | 3,4 | 3,4         |
| NEUROINFORMATICS                                                                       | 1  | 2,7 | 2,7         |
| NEUROLOGIA                                                                             | 7  | 2,9 | <b>20,3</b> |
| NEUROLOGICAL SCIENCES                                                                  | 1  | 2,7 | 2,7         |
| NEUROLOGY                                                                              | 1  | 7,7 | 7,7         |
| NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS                                                 | 1  | 7,5 | 7,5         |
| NURSE EDUCATION TODAY                                                                  | 1  | 3,6 | 3,6         |
| NURSING IN CRITICAL CARE                                                               | 1  | 3   | 3           |
| Nursing Open                                                                           | 4  | 2   | 8           |
| NUTRICION HOSPITALARIA                                                                 | 2  | 1,2 | 2,4         |
| Nutrients                                                                              | 4  | 4,8 | <b>19,2</b> |
| NUTRITION IN CLINICAL PRACTICE                                                         | 1  | 2,1 | 2,1         |
| OBESITY SURGERY                                                                        | 1  | 2,9 | 2,9         |
| Open Forum Infectious Diseases                                                         | 3  | 3,8 | <b>11,4</b> |
| OPHTHALMIC RESEARCH                                                                    | 1  | 2   | 2           |
| ORBIT-THE INTERNATIONAL JOURNAL ON ORBITAL DISORDERS-OCULOPLASTIC AND LACRIMAL SURGERY | 1  | 0,9 | 0,9         |
| OSTEOPOROSIS INTERNATIONAL                                                             | 1  | 4,2 | 4,2         |
| Papeles del Psicologo                                                                  | 1  | 1,1 | 1,1         |
| Pathogens                                                                              | 1  | 3,3 | 3,3         |
| PEDIATRIC BLOOD & CANCER                                                               | 1  | 2,4 | 2,4         |
| PEDIATRIC CRITICAL CARE MEDICINE                                                       | 1  | 4   | 4           |
| PEDIATRIC DERMATOLOGY                                                                  | 1  | 1,2 | 1,2         |
| PEDIATRIC EMERGENCY CARE                                                               | 3  | 1,2 | 3,6         |
| PEDIATRIC INFECTIOUS DISEASE JOURNAL                                                   | 4  | 2,9 | <b>11,6</b> |
| PEDIATRIC NEPHROLOGY                                                                   | 1  | 2,6 | 2,6         |
| PEDIATRIC PULMONOLOGY                                                                  | 2  | 2,7 | 5,4         |

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## Executive Summary SCIENTIFIC REPORT 2023

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| Journal                                                                         | Nº | IF  | Amount IF   |
|---------------------------------------------------------------------------------|----|-----|-------------|
| PEDIATRIC TRANSPLANTATION                                                       | 1  | 1,2 | 1,2         |
| PEDIATRICS                                                                      | 1  | 6,2 | 6,2         |
| Pharmaceutics                                                                   | 1  | 4,9 | 4,9         |
| PHARMACOLOGICAL REPORTS                                                         | 1  | 3,6 | 3,6         |
| PHARMACOLOGICAL RESEARCH                                                        | 4  | 9,1 | <b>36,4</b> |
| Physics & Imaging In Radiation Oncology                                         | 1  | 3,4 | 3,4         |
| PHYSIOTHERAPY RESEARCH INTERNATIONAL                                            | 1  | 1,5 | 1,5         |
| Plastic And Reconstructive Surgery-Global Open                                  | 1  | 1,5 | 1,5         |
| PLoS One                                                                        | 4  | 2,9 | 11,6        |
| PLOS PATHOGENS                                                                  | 2  | 5,5 | <b>11</b>   |
| Primary Health Care Research and Development                                    | 1  | 1,6 | <b>1,6</b>  |
| PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA | 3  | 9,4 | 28,2        |
| PROGRESS IN NEURO-PSYCHOPHARMACOLOGY & BIOLOGICAL PSYCHIATRY                    | 1  | 5,3 | 5,3         |
| PSYCHIATRY RESEARCH                                                             | 4  | 4,2 | <b>16,8</b> |
| PSYCHOLOGICAL MEDICINE                                                          | 11 | 5,9 | <b>64,9</b> |
| PSYCHONEUROENDOCRINOLOGY                                                        | 1  | 3,4 | 3,4         |
| PSYCHOSOMATIC MEDICINE                                                          | 1  | 2,9 | 2,9         |
| QUALITY OF LIFE RESEARCH                                                        | 1  | 3,3 | 3,3         |
| QUINTESSENCE INTERNATIONAL                                                      | 1  | 1,3 | 1,3         |
| RADIATION RESEARCH                                                              | 3  | 2,5 | 7,5         |
| Rec-Interventional Cardiology                                                   | 9  | 1,2 | <b>10,8</b> |
| Research and Practice in Thrombosis and Haemostasis                             | 1  | 3,4 | 3,4         |
| RESPIRATORY CARE                                                                | 1  | 2,4 | 2,4         |
| RESPIRATORY MEDICINE                                                            | 4  | 3,5 | <b>14</b>   |
| Respiratory Medicine and Research                                               | 1  | 2,2 | 2,2         |

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| Journal                                              | Nº | IF  | Amount IF   |
|------------------------------------------------------|----|-----|-------------|
| Reumatologia Clinica                                 | 7  | 1,2 | 8,4         |
| REVIEWS IN CARDIOVASCULAR MEDICINE                   | 1  | 1,9 | 1,9         |
| REVIEWS IN MEDICAL VIROLOGY                          | 1  | 9   | 9           |
| REVISTA CLINICA ESPANOLA                             | 3  | 2,3 | 6,9         |
| REVISTA DE NEUROLOGIA                                | 5  | 0,8 | 4           |
| Revista de Senologia y Patologia Mamaria             | 2  | 0,3 | 0,6         |
| Revista Espanola de Anestesiologia y Reanimacion     | 7  | 0,9 | 6,3         |
| REVISTA ESPANOLA DE CARDIOLOGIA                      | 9  | 7,2 | <b>64,8</b> |
| REVISTA ESPANOLA DE ENFERMEDADES DIGESTIVAS          | 6  | 2,7 | <b>16,2</b> |
| REVISTA ESPANOLA DE QUIMIOTERAPIA                    | 18 | 1,9 | <b>34,2</b> |
| REVISTA ESPANOLA DE SALUD PUBLICA                    | 2  | 0,9 | 1,8         |
| Revista Medica Clinica Las Condes                    | 1  | 0,2 | 0,2         |
| Revista Portuguesa de Cardiologia                    | 1  | 1,6 | 1,6         |
| RHEUMATOLOGY                                         | 2  | 4,7 | 9,4         |
| RHEUMATOLOGY INTERNATIONAL                           | 1  | 3,2 | 3,2         |
| Rmd Open                                             | 4  | 5,1 | <b>20,4</b> |
| SCANDINAVIAN JOURNAL OF MEDICINE & SCIENCE IN SPORTS | 1  | 3,5 | 3,5         |
| Schizophrenia                                        | 1  | 3   | 3           |
| SCHIZOPHRENIA BULLETIN                               | 2  | 5,3 | <b>10,6</b> |
| Scientific Reports                                   | 12 | 3,8 | <b>45,6</b> |
| SEMINARS IN ARTHRITIS AND RHEUMATISM                 | 2  | 4,6 | 9,2         |
| SEMINARS IN NEPHROLOGY                               | 1  | 2,8 | 2,8         |
| SEMINARS IN ONCOLOGY                                 | 1  | 3   | 3           |
| SENSORS                                              | 1  | 3,4 | 3,4         |
| SLEEP MEDICINE                                       | 1  | 3,8 | 3,8         |

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## Executive Summary SCIENTIFIC REPORT 2023

(Cont.)

| Journal                                                | Nº | IF          | Amount IF   |
|--------------------------------------------------------|----|-------------|-------------|
| SOCIAL PSYCHIATRY AND PSYCHIATRIC EPIDEMIOLOGY         | 1  | 3,6         | 3,6         |
| Strabismus                                             | 1  | 0,8         | 0,8         |
| SURGERY                                                | 1  | 3,2         | 3,2         |
| SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES | 1  | 2,4         | 2,4         |
| SURGICAL ONCOLOGY-OXFORD                               | 1  | 2,3         | 2,3         |
| Techniques in Coloproctology                           | 2  | 2,7         | 5,4         |
| TELEMEDICINE AND E-HEALTH                              | 1  | 2,8         | 2,8         |
| Therapeutic Advances in Gastroenterology               | 2  | 3,9         | 7,8         |
| Therapeutic Advances in Medical Oncology               | 4  | 4,3         | <b>17,2</b> |
| Thoracic Cancer                                        | 1  | 2,3         | 2,3         |
| Thrombosis Journal                                     | 1  | 2,6         | 2,6         |
| THROMBOSIS RESEARCH                                    | 3  | 3,7         | <b>11,1</b> |
| TRANSBOUNDARY AND EMERGING DISEASES                    | 1  | 3,5         | 3,5         |
| TRANSFUSION AND APHERESIS SCIENCE                      | 1  | 1,4         | 1,4         |
| TRANSFUSION MEDICINE AND HEMOTHERAPY                   | 1  | 1,9         | 1,9         |
| Translational Psychiatry                               | 4  | 5,8         | <b>23,2</b> |
| TRANSPLANT INFECTIOUS DISEASE                          | 2  | 2,6         | 5,2         |
| TRANSPLANT INTERNATIONAL                               | 1  | 2,7         | 2,7         |
| TRANSPLANTATION                                        | 2  | 5,3         | <b>10,6</b> |
| Transplantation And Cellular Therapy                   | 5  | 3,6         | <b>18</b>   |
| Transplantation Reviews                                | 1  | 3,6         | 3,6         |
| TRENDS IN FOOD SCIENCE & TECHNOLOGY                    | 1  | <b>15,1</b> | <b>15,1</b> |
| Trials                                                 | 1  | 2           | 2           |
| TROPICAL MEDICINE & INTERNATIONAL HEALTH               | 1  | 2,6         | 2,6         |

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(Cont.)

| Journal                                 | Nº          | IF          | Amount IF     |
|-----------------------------------------|-------------|-------------|---------------|
| Turkish Archives Of Otorhinolaryngology | 1           | 0,7         | 0,7           |
| ULTRASOUND IN OBSTETRICS & GYNECOLOGY   | 1           | 6,1         | 6,1           |
| Updates in Surgery                      | 2           | 2,4         | 4,8           |
| UROLOGIA JOURNAL                        | 1           | 0,8         | 0,8           |
| VACCINE                                 | 1           | 4,5         | 4,5           |
| Vascular and Endovascular Surgery       | 1           | 0,7         | 0,7           |
| VIRCHOWS ARCHIV                         | 1           | 3,4         | 3,4           |
| Viruses-Basel                           | 1           | 3,8         | 3,8           |
| VOX SANGUINIS                           | 1           | 1,8         | 1,8           |
| WORLD JOURNAL OF PEDIATRICS             | 1           | 6,1         | 6,1           |
| WORLD JOURNAL OF SURGERY                | 1           | 2,3         | 2,3           |
| WORLD JOURNAL OF UROLOGY                | 1           | 2,8         | 2,8           |
| World Psychiatry                        | 2           | <b>60,5</b> | <b>121</b>    |
| WORLDVIEWS ON EVIDENCE-BASED NURSING    | 1           | 3,4         | 3,4           |
| Total general                           | <b>1192</b> | <b>98,4</b> | <b>6354,6</b> |

| Publications generated by clinical researchers-associated with IiSGM                      |                                                                           |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Publications of the main WOS collection in journals indexed in the JCR with impact factor | Publications of the main WOS collection in journals without impact factor |
| 380                                                                                       | 28                                                                        |

## TRAINING: COURSES, SEMINARS AND MEETINGS

Following the pandemic, training activities have undergone a process of transformation to online or hybrid formats. For example, the weekly seminars have been held online since May 2020. Next year, the aim is to return to face-to-face format.

During 2023, the liSGM Training Committee continued working along the same lines as in previous years to detect specific needs in training.

After requesting information from liSGM researchers by means of a needs analysis, we assessed the results and decided on the areas that were most relevant for the Institute. These can be seen in the Training Plan 2023 (<http://www.iisgm.com/actualidad/convocatorias-y-formacion/>).

The Continuing Training Committee of the Health Care Professions of the Autonomous Community of Madrid mostly certifies the training activities offered by liSGM.

As stated in the Training Plan, during the year 2023, the liSGM intended to offer the following training opportunities among those periodically organized by the Institute (see Figure):

- Basic Course in Research Methodology, which tries to cover the needs detected for training in basic areas of methodology in the needs analysis. This essentially practical course lasts 20 hours and is aimed mainly at medical residents and staff members who are in the early stages of their research career. Based on a case study, the course addresses review of information sources, design of a research project and database, and basic concepts of statistical analysis, interpretation and representation of results, as well as the synthesis and reporting of the information obtained.
- Course in Biomedical Research Methodology, which is organized into 4 modules lasting 80 hours. The course provides advanced training in the basics of biomedical research methodology. The format of the course enables it to cover all areas from the initial research hypothesis to publication of results.

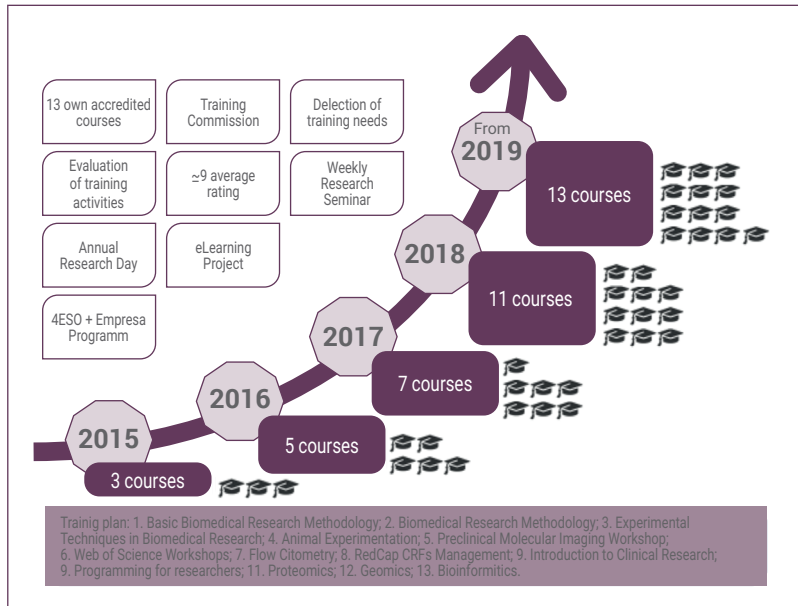
- Course on Biomedical Research Instrumental Techniques, which aims to provide researchers with data on the main instrumental techniques and the various research platforms of the IISGM. The course is practical in nature and addresses various surgical and microsurgical techniques. The IISGM has the ideal facilities, equipment, and staff for organizing training activities at the highest level. Therefore, its human and material resources can be appropriately managed to design competitive and high-quality training. The course has very specific elements that set it apart from the range of courses provided by health research institutes and could eventually become a reference in the field of postgraduate training for veterinarians.

Furthermore, the IISGM Weekly Research Seminars Program is continuing, with sessions every Wednesday of the year covering areas of basic research, clinical medicine, and practical aspects of research, as well as with the participation of guest researchers. This forum is considered by the Institute to be the perfect space for implementing cooperation and synergies between groups from the IISGM and researchers from other institutions who are invited to speak.

Other courses provided included the following:

- Seminars on research and lectures in the Medical Imaging Laboratory of the Experimental Medicine and Surgery Unit.
- A series of training activities were coordinated from the Nursing Research Support Unit, as follows:
  - Training courses in research methodology for resident nursing interns in gynecology and obstetrics, mental health, and pediatrics. First steps in bibliographic searches and information resources in health sciences and qualitative research.
  - Workshops: bibliographic searches and reference management. Creation of databases in access. Workshops: bibliographic searches and reference management. Creation of databases in access.

## Training 2023





## CLINICAL PRACTICE GUIDELINES

| Clinical Practice Guidelines                       |                                                                                                                                      |    |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----|
| AREA 2. Cardiovascular Diseases                    | 2.01 Natural history of heart disease                                                                                                | 1  |
|                                                    | 2.03 Cardiac cellular electrophysiology                                                                                              | 2  |
| AREA 3. Neuroscience and Mental Health             | 3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment                                      | 7  |
| AREA 5. Diseases of the Immune System              | 5.01 Pathophysiology and clinical research into chronic inflammatory and immunological diseases                                      | 1  |
|                                                    | 5.07 Infections in pediatric patients                                                                                                | 21 |
| AREA 6. Traslational Oncology                      | 6.02 Translational medical oncology and personalized cancer therapy                                                                  | 14 |
| AREA 7. Systemic Diseases and Organ Trasplantation | 7.01 Vascular damage and inflammation in chronic kidney disease, dialysis, and kidney transplantation. Pathophysiology of the kidney | 3  |
|                                                    | 7.04 Diseases of the critically ill child                                                                                            | 7  |
|                                                    | 7.05B Pathophysiology, outcome, and therapeutic strategies in chronic respiratory insufficiency and respiratory disorders of sleep   | 1  |
|                                                    | 7.16B Pathophysiology of the cardiovascular system and circulatory support                                                           | 1  |
|                                                    | 7.22 Pathophysiology of the neonate and developing child                                                                             | 2  |
|                                                    | 7.27 Hospital pharmacy and pharmacogenomics                                                                                          | 14 |
|                                                    | 7.28 Clinical nutrition                                                                                                              | 3  |
|                                                    | Research in nursing                                                                                                                  | 1  |



## DOCTORAL THESES DEFENDED

| Doctoral theses defended                                   |                                                                                                                                      |   |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---|
| AREA 1. Biomedical Engineering                             | 1.01 Advanced technological applications and human health                                                                            | 4 |
|                                                            | 1.02 Signal processing                                                                                                               | 4 |
|                                                            | 1.06 Biomedical engineering applications                                                                                             | 2 |
| AREA 2. Cardiovascular Diseases                            | 2.01 Natural history of heart disease                                                                                                | 2 |
|                                                            | 2.03 Cardiac cellular electrophysiology                                                                                              | 2 |
| AREA 3. Neuroscience and Mental Health                     | 3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment                                      | 6 |
| AREA 4. Clinical Microbiology Infectious Diseases and AIDS | 4.01 Infectious diseases                                                                                                             | 2 |
| AREA 5. Diseases of the Immune System                      | 5.01 Pathophysiology and clinical research into chronic inflammation and immunological diseases                                      | 1 |
|                                                            | 5.06 Immune regulation and homeostasis in diseases of the immune system                                                              | 3 |
| AREA 6. Translational Oncology                             | 6.03 Genetics and clinical aspects of hematologic malignancies and hematopoietic stem cell transplantation                           | 1 |
| AREA 7. Systemic Diseases and Organ Transplantation        | 7.01 Vascular damage and inflammation in chronic kidney disease, dialysis, and kidney transplantation. Pathophysiology of the kidney | 3 |
|                                                            | 7.04 Diseases of the critically ill child                                                                                            | 1 |
|                                                            | 7.05B Pathophysiology, outcome, and therapeutic strategies in chronic respiratory insufficiency and respiratory disorders of sleep   | 2 |
|                                                            | 7.16B Pathophysiology of the cardiovascular system and circulatory support                                                           | 5 |
|                                                            | 7.20 Anesthesia, toxins, and arrhythmias                                                                                             | 1 |
|                                                            | 7.22 Pathophysiology of the neonate and developing child                                                                             | 1 |
|                                                            | 7.27 Hospital pharmacy and pharmacogenomics                                                                                          | 2 |
|                                                            | 7.28 Clinical nutrition                                                                                                              | 1 |
|                                                            | 7.29 Vascular pathophysiology and pharmacology                                                                                       | 2 |



## COOPERATIVE RESEARCH STRUCTURES

| Cooperative Research Structures                                        |                                                                                                 |       |                   |           |        |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------|-------------------|-----------|--------|
|                                                                        |                                                                                                 | Ciber | RICORS/<br>RETICS | Platforms | Others |
| AREA 1.<br>Biomedical<br>Engineering                                   | 1.01 Advanced technological applications and human health                                       | 1     |                   | 1         | 1      |
|                                                                        | 1.02 Signal processing                                                                          | 1     |                   |           | 1      |
| AREA 2.<br>Cardiovascular<br>Diseases                                  | 2.01 Natural history of heart disease                                                           | 1     |                   |           | 4      |
|                                                                        | 2.02 Cardiovascular pathophysiology                                                             | 1     |                   |           |        |
|                                                                        | 2.03 Cardiac cellular electrophysiology                                                         | 1     |                   |           |        |
| AREA 3.<br>Neuroscience and<br>Mental Health                           | 3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment | 1     |                   |           | 4      |
| AREA 4. Clinical<br>Microbiology<br>Infectious<br>Diseases and<br>AIDS | 4.02 Clinical and epidemiological aspects of HIV infection and associated conditions            | 1     |                   |           |        |
| AREA 5. Diseases<br>of the Immune<br>System                            | 5.01 Pathophysiology and clinical research into chronic inflammatory and immunological diseases |       |                   |           | 3      |
|                                                                        | 5.02 Molecular biology of HIV                                                                   | 1     |                   |           | 2      |
|                                                                        | 5.06 Immune regulation and homeostasis in diseases of the immune system                         |       |                   |           | 2      |
|                                                                        | 5.07 Infections in pediatric patients                                                           | 1     |                   | 2         | 20     |

(Continued)

(Continued)

|                                                              |                                                                                                                                      | Ciber | RICORS/<br>RETICS | Platforms | Others |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------|-----------|--------|
| AREA 6.<br>Traslational<br>Oncology                          | 6.02 Translational medical oncology and personalized cancer therapy                                                                  | 1     |                   |           | 16     |
|                                                              | 6.03 Genetics and clinical aspects of hematologic malignancies and hematopoietic stem cell transplantation                           |       |                   | 1         |        |
| AREA 7. Systemic<br>Diseases<br>and Organ<br>Transplantation | 7.01 Vascular damage and inflammation in chronic kidney disease, dialysis, and kidney transplantation. Pathophysiology of the kidney |       | 1                 |           | 1      |
|                                                              | 7.02 Pathophysiology and natural history of liver and digestive diseases                                                             | 1     |                   |           |        |
|                                                              | 7.04 Diseases of the critically ill child                                                                                            |       | 1                 |           |        |
|                                                              | 7.21 Biopathology of aging                                                                                                           | 1     |                   |           | 1      |
|                                                              | 7.27 Hospital pharmacy and pharmacogenomics                                                                                          |       |                   | 1         |        |
|                                                              | 7.29 Vascular pathophysiology and pharmacology                                                                                       | 1     |                   |           |        |
|                                                              | 7.34 Multimorbidity, chronic diseases and health services. Primary Care                                                              |       | 1                 |           |        |
|                                                              | Clinical Trials Unit                                                                                                                 |       |                   | 1         |        |

## PARTNER COMPANIES

|                     |                        |                        |
|---------------------|------------------------|------------------------|
| ABBVIE SPAIN SLU    | FUNDACIÓN FAMILIA      | LABORATORIOS VIIV      |
| AGENCIA ESPAÑOLA    | ALONSO                 | HEALTHCARE SL          |
| DE MEDICAMENTOS     | FUNDACIÓN              | LILLY, S.A.U.          |
| Y PRODUCTOS         | INMUNOTEK (FITK)       | MERCK SHARP &          |
| SANITARIOS          | FUNDACIÓN MARI PAZ     | DOHME ESPAÑA,          |
| ALMIRALL, S.A.      | JIMÉNEZ CASADO         | S.A.                   |
| AMAZON MEDIA EU     | FUNDACIÓN NEMESIO      | NESTLE ESPAÑA S.A.     |
| S.A.R.L.            | DÍEZ PARA              | NOVARTIS               |
| ASTRAZÉNECA         | EL FOMENTO DE LA       | FARMACEUTICA,          |
| FARMACEÚTICA        | EDUCACIÓN              | S.A.                   |
| SPAIN, S.A.         | Y EL DEPORTE           | PFIZER, S.L.U.         |
| B. BRAUN MEDICAL,   | FUNDACIÓN              | PHARMA MAR, S.A.       |
| S.A.A               | PHARMAMAR              | ROCHE FARMA, S.A.      |
| CONSORCIO CENTO     | FUNDACIÓN SECOT        | SANOFI - AVENTIS, S.A. |
| DE INVESTIGACIÓN    | GALAPAGOS              | SOCIEDAD ESPAÑOLA      |
| BIOMÉDICA EN RED    | BIOPHARMA SPAIN        | DE DIRECTIVOS          |
| (CIBER)             | S.L.U.                 | DE LA SALUD            |
| EISAI FARMACEÚTICA, | GILEAD SCIENCE, S.L.U. | SWEDISH ORPHAN         |
| S.S.                | INTERNATIONAL          | BIOVITRUM S.L.         |
| ESPID               | HEALTH                 | TERUMO BCT ESPAÑA,     |
| FUNDACIÓN ALADINA   | MANAGEMENT             | S.L.U.                 |
| FUNDACIÓN BANCARIA  | ASSOCIATES, INC.       | UNIVERSITY MEDICAL     |
| «LA CAIXA»          | JANSSEN CILAG, S.A.    | CENTER UTRECHT         |

