



Executive Summary
SCIENTIFIC REPORT
2021



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2021



Instituto de Investigación Sanitaria
Gregorio Marañón



**Hospital General Universitario
Gregorio Marañón**



**FUNDACIÓN INVESTIGACIÓN BIOMÉDICA
HOSPITAL GREGORIO MARAÑÓN**



CONSEJERÍA DE SANIDAD

Comunidad de Madrid
Dirección General de Investigación,
Formación e Infraestructuras Sanitarias



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

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PRESENTATION

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PRESENTATION

We present, full of pride, the 2021 Scientific Report of the Institute for **Health Research of the Hospital General Universitario Gregorio Marañón (IiSGM)**, with the objective of disseminating the research and innovative activity carried out before institutions and social agents but, moreover, of recognizing **the extraordinary effort made by the researchers** of each Research Group. We wish to highlight and acknowledge the dedication and extraordinary work carried out by all members of the Institute in the complex circumstances derived from the COVID pandemic.

The extraordinary research activity carried out has undergone an outstanding growth (greater than 20% with respect to the previous year) in the scientific production of the Institute, which has meant in 2021 reaching **9,539 impact factor points**. It is important to mention the extreme rigor with which the award of publications to the IiSGM is analyzed, which clearly determines the robustness of the indicator. Additionally, it is worth mentioning the significant number of publications (48%) led by IiSGM researchers, the degree of international collaboration in the different publications, and the proportion of originals in first decile and quartile journals (45%).

The innovation activity of the IiSGM also stands out, with an extensive portfolio of innovation assets, including three "spin-offs", adapted to the current needs of the health system (c.a. 50% of our patents are licensed to the market) and, above all, with great potential for future growth and highly attractive for the productive and industrial sectors.

This research and innovative activity is possible thanks to the excellent capacity of researchers to **successfully attend competitive calls**, both for projects and human resources, the latter being of especial value, as it is the basis for ensuring the generational renewal of the center's researchers. Within this scenario, it is important to highlight the commitment of the IiSGM groups with the **training of researchers**, the result of which highlights the significant number of doctoral theses defended throughout 2021 and the ambitious **Training Plan** (with up to

13 courses accredited) developed under the coordination of the liSGM **Training Commission**.

The managing body of the liSGM, the **Foundation for Biomedical Research Hospital Gregorio Marañón (FIBHGM)**, makes a continuous effort to improve its **internal management processes and continuous quality improvement**. Among the various results, the European Excellence Award in human resources management **Human Resources Strategy For Researchers (HRS4R)** or the fact that liSGM is the first and only Institute for Health Research to be **fully certified under the ISO9001:2015 quality standard**, are worth mentioning.

All these achievements are the result of huge efforts maintained by all liSGM professionals, to which we wish to express our sincere gratitude, in an environment as sensitive as that represented by scientific research in hospitals. Only a coordinated collective effort, aligned with a strategy around improving the health of patients, provides the excellent results that are collected in this report. Interestingly, 3 new groups joined the structure of the liSGM in 2021; Group 1.05. Structural and functional medical image, directed by Jesús de la Torre Fernández y Juan A. Guzmán de Villoria joined Research Area 1 Biomedical Engineering, while Group 7.33. Pathological Anatomy, initially directed by M. Jesús Fernández Aceñero and later by Javier Menárguez Palanca and Group 7.34 Multimorbidity, chronic diseases and health services (Primary Care), directed by Isabel del Cura González and Jesús Martín Fernández joined Research Area 7 Systemic Diseases and Organ Transplantation Research Area. Finally, it is important to express gratitude to all the **Area Coordinators, Group Heads, Research Groups, Research Support Services (SAs), Clinical Services and especially young researchers**, who constitute the basis of the development and activity of the liSGM.

For yet another year, the results presented in this report supports the fact that our Institution maintains its evolution and growth, generating excellent expectations for the future and placing it in an advantageous position to face the enormous future challenges to come and to shed light on the foundations of biomedical research: observation, for generating questions in the clinical practice and multidisciplinary cooperative research to allow answering them.

Thank you very much.

Dr. Ismael Buño Borde
Scientific Director (liSGM)

Dr. Joseba Barroeta Urquiza
Managing Director (Hospital General Universitario Gregorio Marañón)

INTRODUCTION

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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 National Health System 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

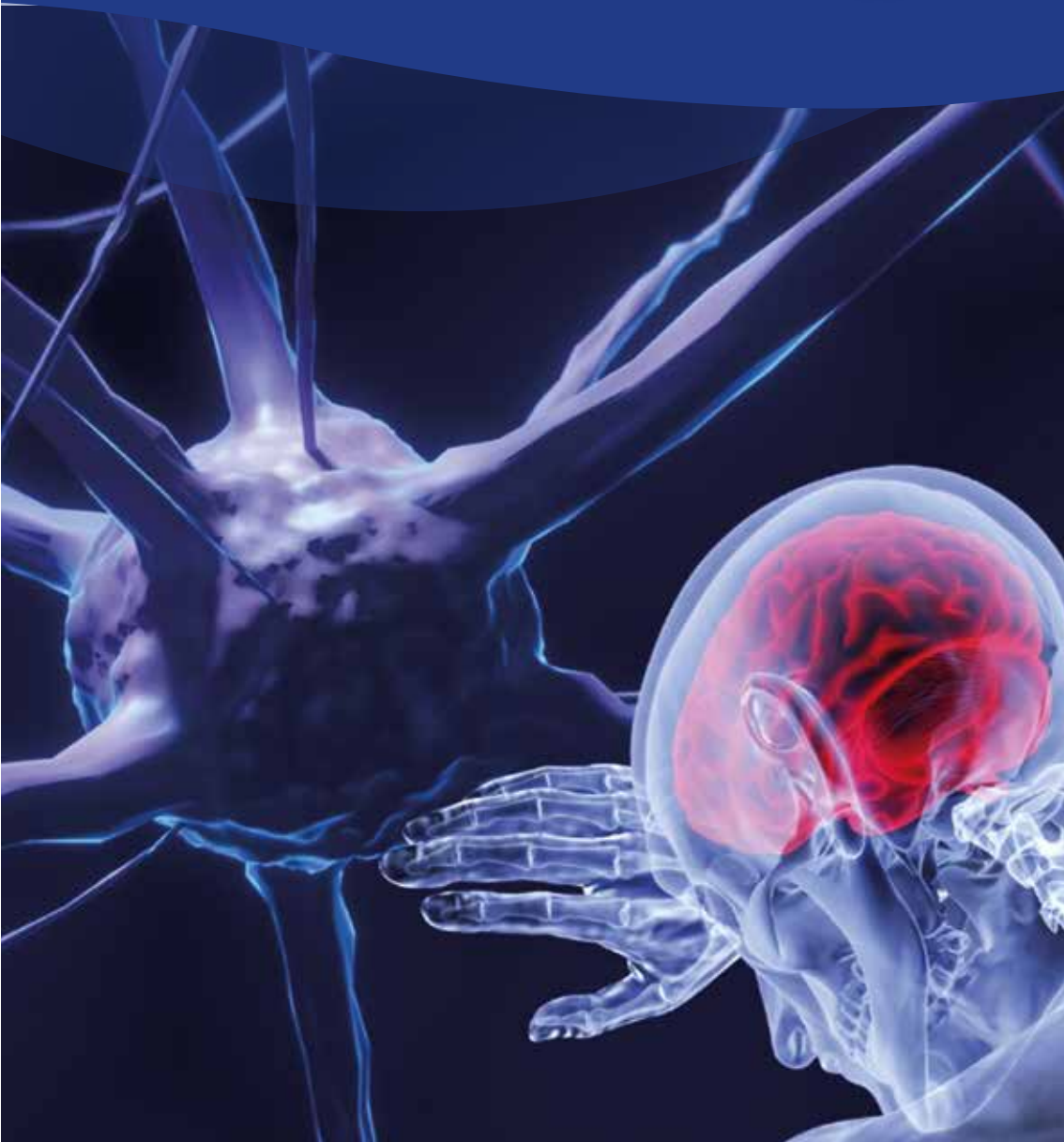
- Excellence and leadership.
- Competitiveness and innovation.
- Internationalization.
- Commitment.
- Ethics and social responsibility.
- Accessibility and transparency.
- Equality.

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



HIGHLIGHTS

3



Highlights



1345

Researchers
at the IISGM



142

Active competitive
R&D projects



1145

Active Clinical
Studies and Trials



9539

Total Impact
Factor Points



83

PI with an active
project



78

Projects awarded through
competitive calls



34

Agreements



1265

Publications



327

Employees
of the FIBHGM



21

Intramural grants
awarded



59

Contracts



45%

Publications in first-quartile
journals



19

Research Support
Services



26

Groups in cooperative
structures



36

Donations



45%

Lead author IISGM



176

Active innovation
projects



45

Copyrights portfolio



70

Patents portfolio



7.54

Mean impact factor

EXECUTIVE
SUMMARY

4



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, as a somewhat novel aspect of this new edition and thanks to the implementation of the scientific management tool Fund@net, 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.

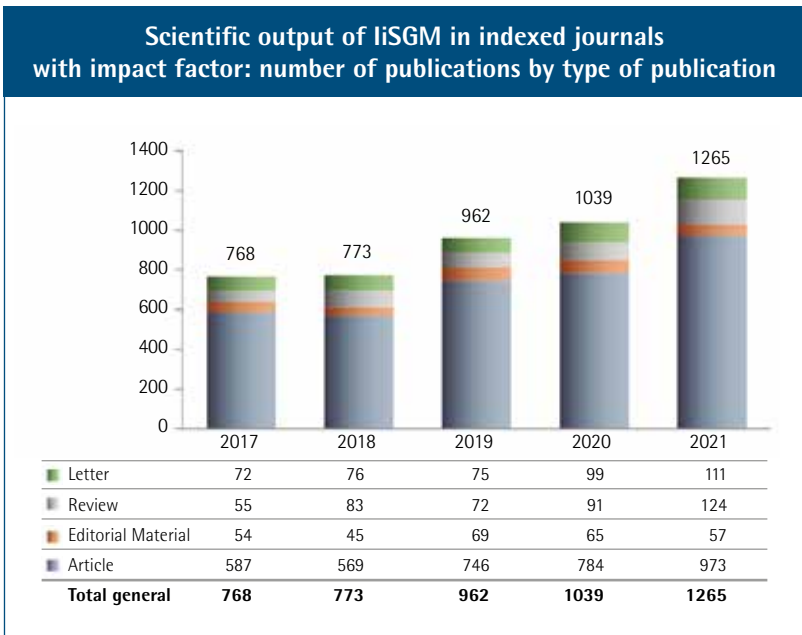
The objective of the methodology used is none other than to apply internationally validated bibliometric tools for the analysis of scientific production, thus ensuring the robustness of the data contained in this Research Report.

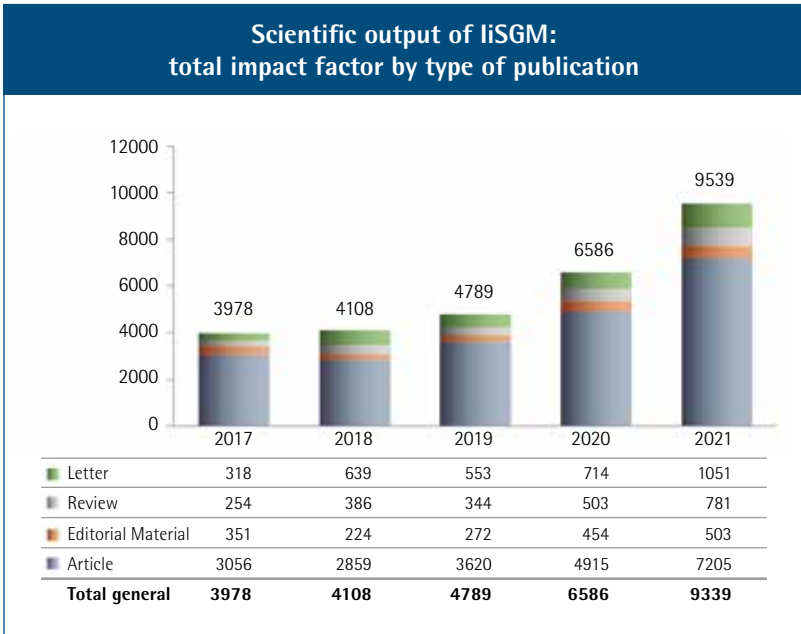
The following graphs provide a quantitative representation of the scientific output of IISGM during the year 2021.

The graphs show strong consolidation of the growth trend observed in recent years, with a total of **1265 indexed publications** (1154 excluding letters), which represent a **global impact factor over 9539,5 points** [8518 excluding letters].

The change in the methodology for calculating the impact factor and the COVID effect have boosted the figures. All areas have risen sharply, especially Neurosciences and, above all, Infectious Diseases.

Although these changes make comparison with previous years very difficult, it is an unquestionable fact that the number of publications has increased from 1039 to 1265, an increase of more than 20%.

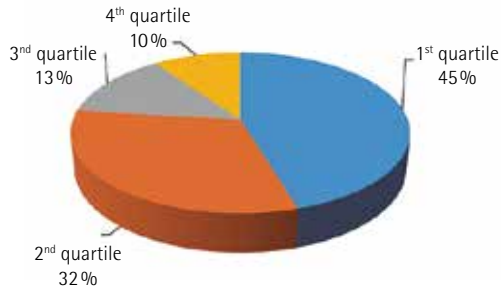




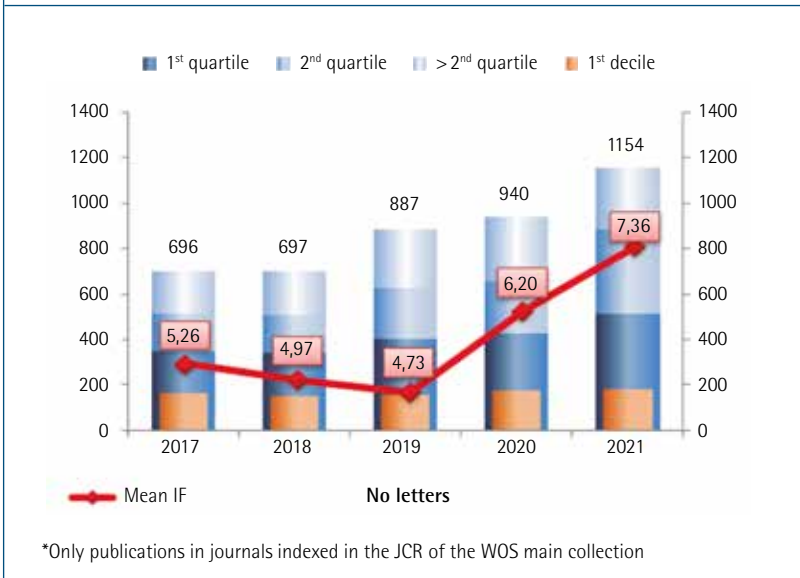
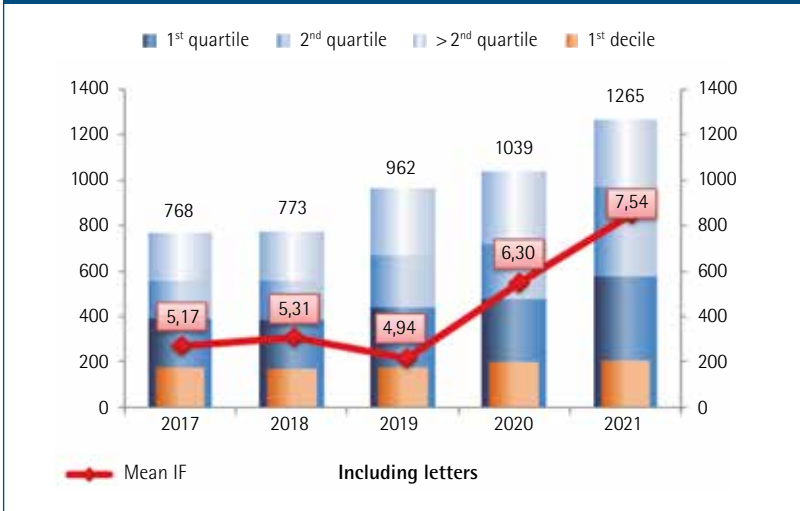
The previous figures summarize the total impact factor corresponding to the scientific production of the liSGM for each of the last 5 years and its distribution according to the different types of publication

As can be observed, in this year 2021 the highest impact factor corresponds (in order) to: original articles, letters, reviews and editorials. It is important to note that, once again this year and as in the two previous years, the increase in the overall impact factor was mainly due to the significant increase in the number of original articles.

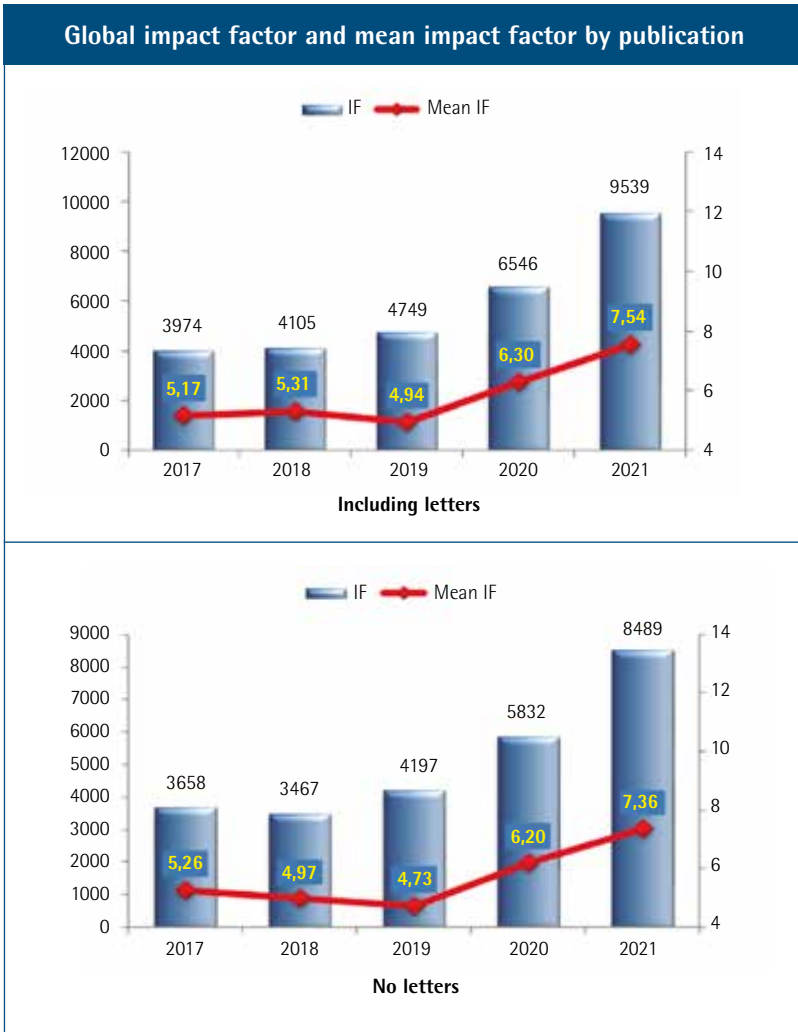
Scientific output of liSGM in indexed journals with impact factor: distribution by quartiles (relative to 2021)



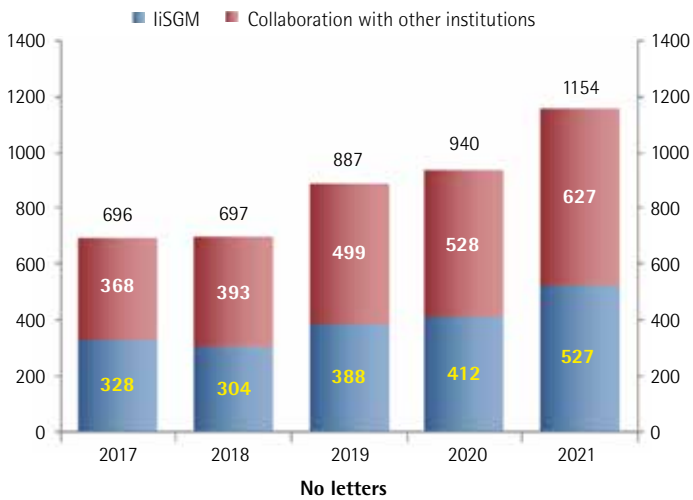
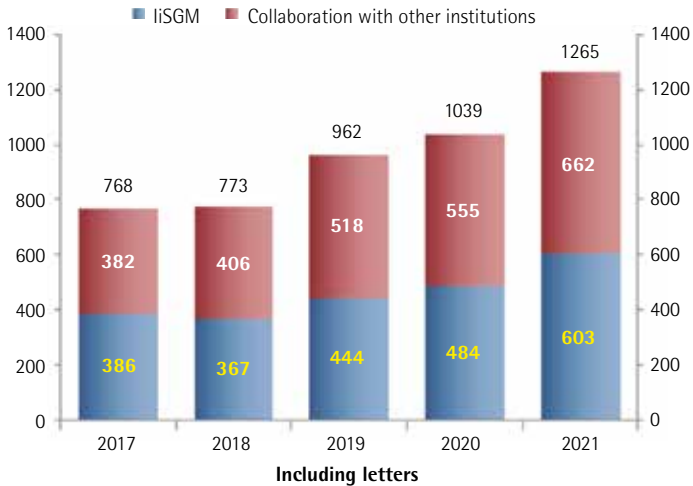
Scientific output of IISGM in indexed journals with impact factor: distribution of publications by deciles and quartiles (absolute values)



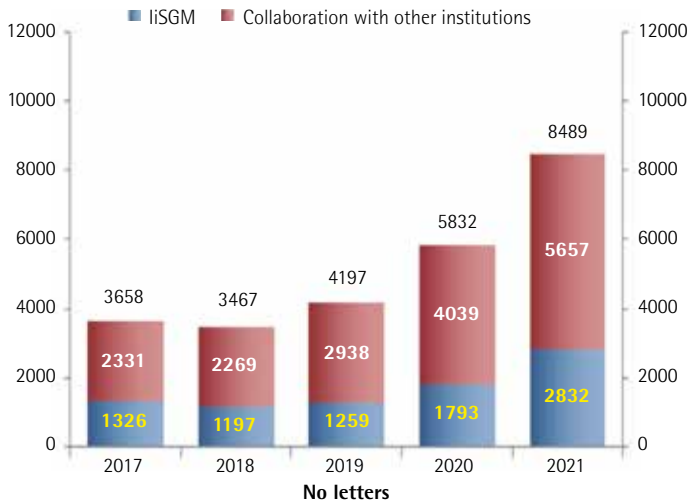
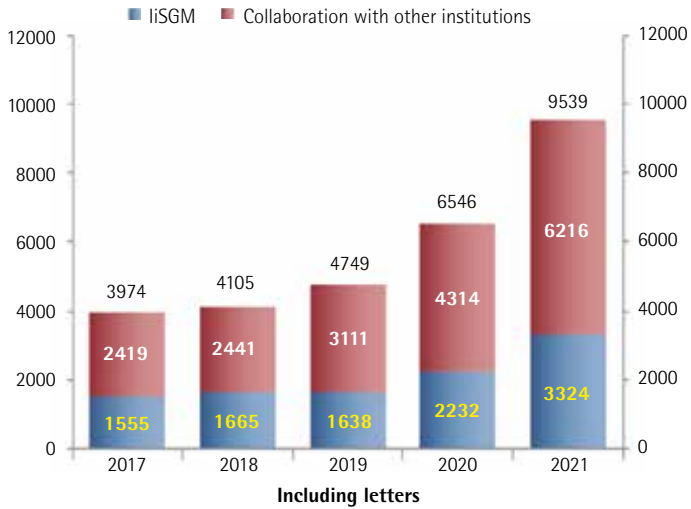
The distribution of IISGM publications according to quartile and decile is shown in the in the two previous graphs. The absolute number of publications in the first decile and first quartile has increased significantly compared to last year.

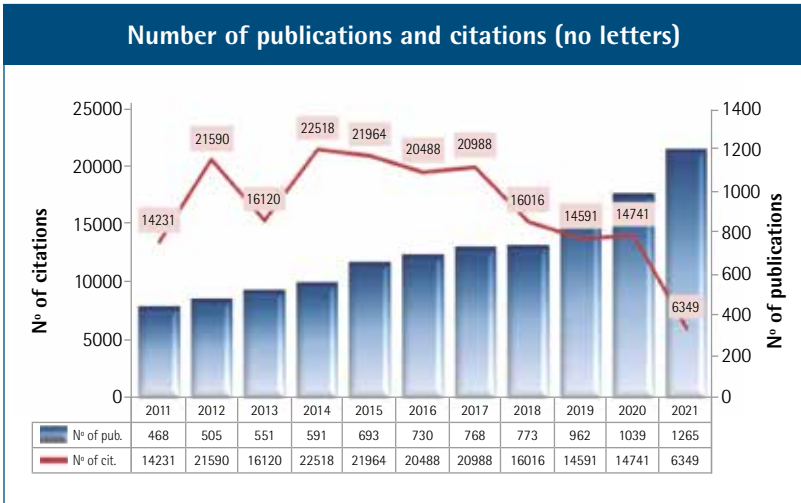


Scientific output of IISGM in indexed journals with impact factor: total number of publications

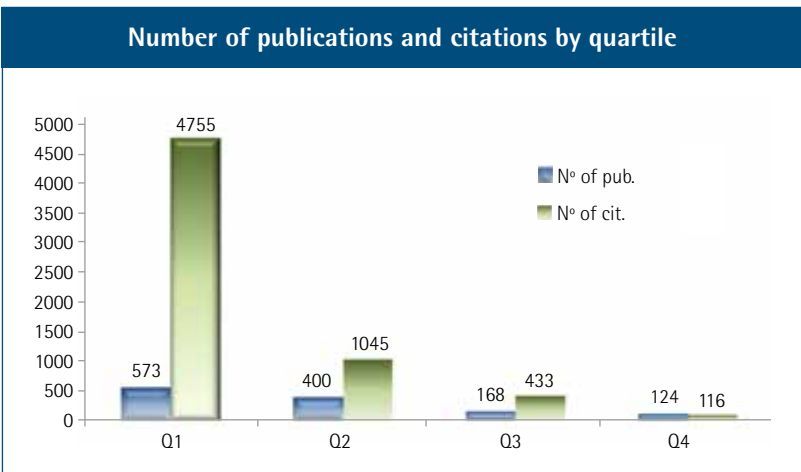


Scientific output of IISGM in indexed journals with impact factor: impact factor

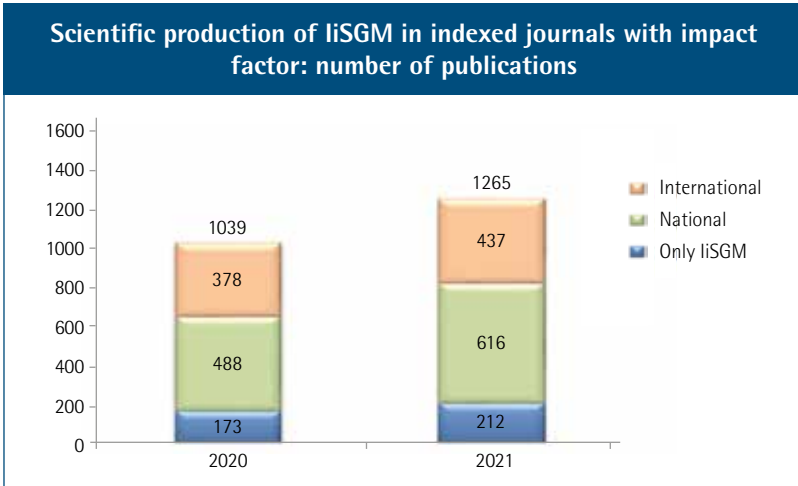




The number of citations for Institute publications over time is logically greater in elder publications, although the number of citations in relatively recent publications (2017-2021) is noteworthy, as is the number of first-quartile citations.



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.

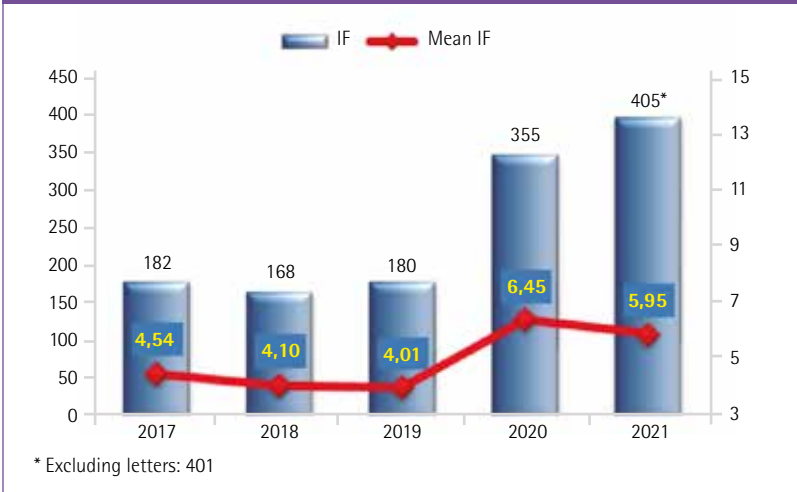
liSGM has **seven priority research areas** whose scientific activity is set out in detail below in 2 figures per Research Area:

- **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.**

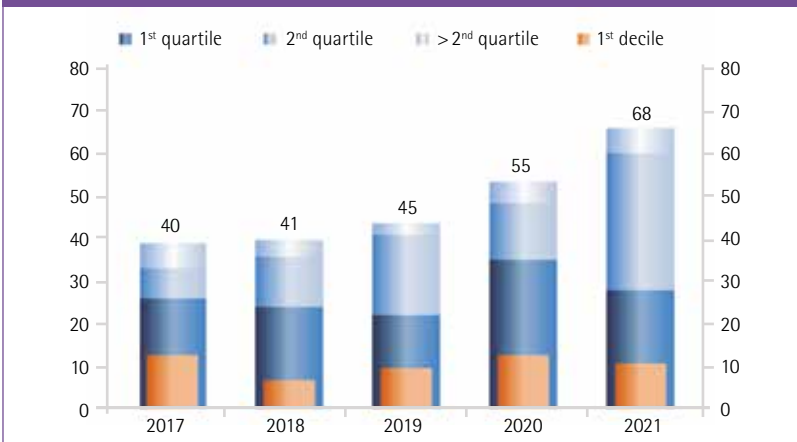
Both figures show the scientific output for the last 5 years.

AREA 1: BIOMEDICAL ENGINEERING

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

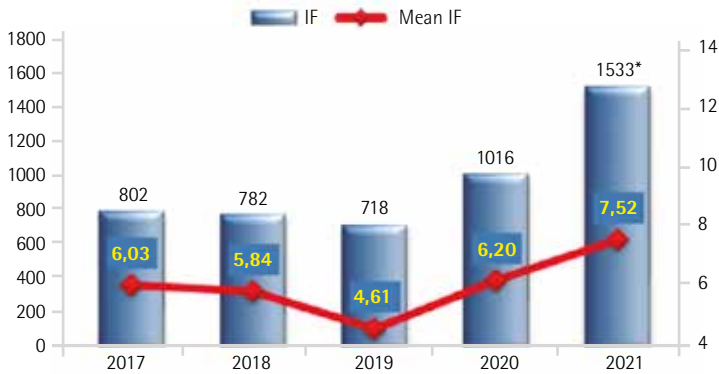


Scientific output of Area 1 in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



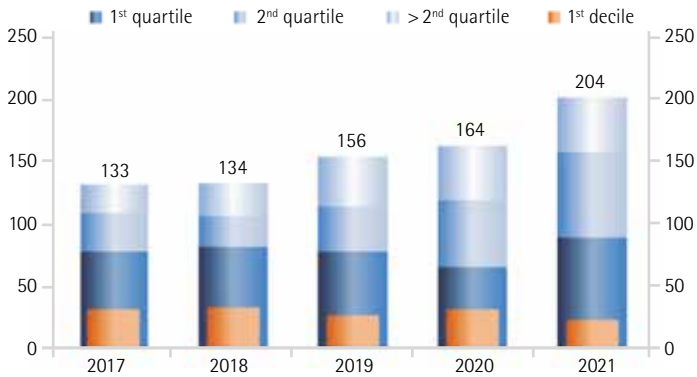
AREA 2: CARDIOVASCULAR DISEASES

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



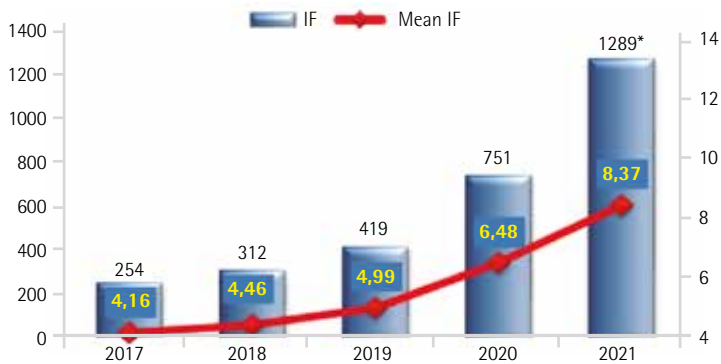
* Excluding letters: 1420

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



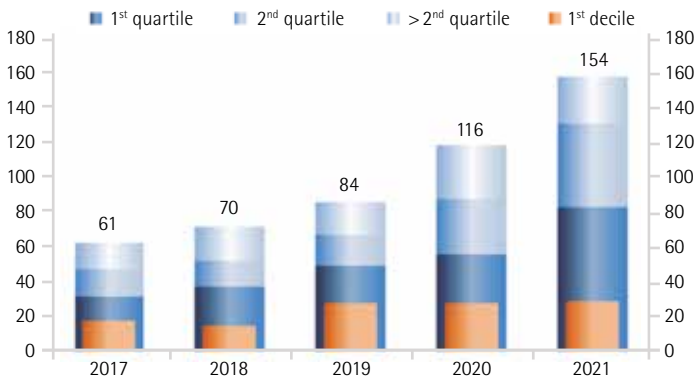
AREA 3: NEUROSCIENCE AND MENTAL HEALTH

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



* Excluding letters: 1141

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



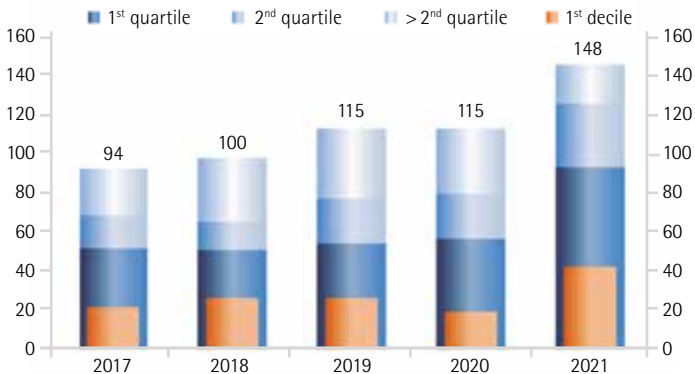
AREA 4: CLINICAL MICROBIOLOGY, INFECTIOUS DISEASES AND AIDS

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



* Excluding letters: 1343

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



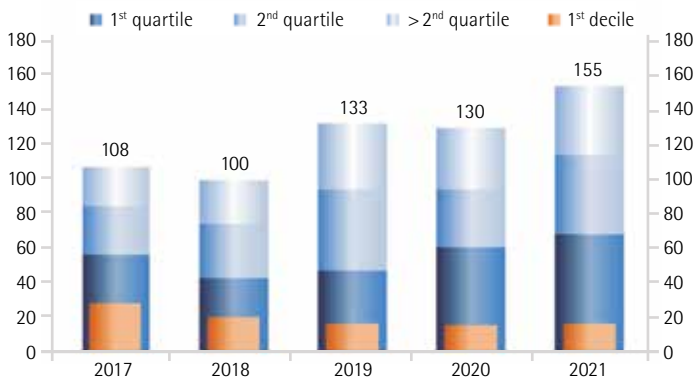
AREA 5: DISEASES OF THE IMMUNE SYSTEM

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



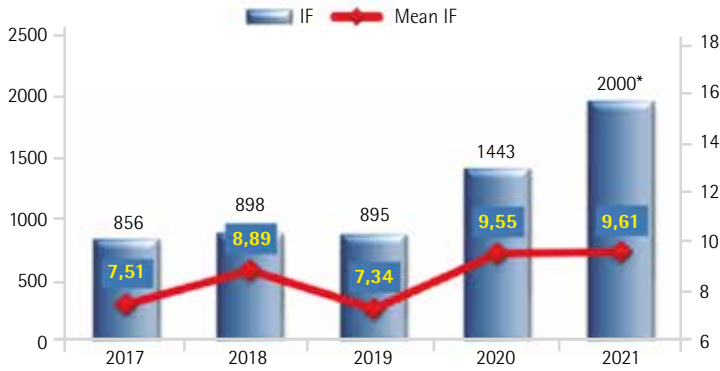
* Excluding letters: 719

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



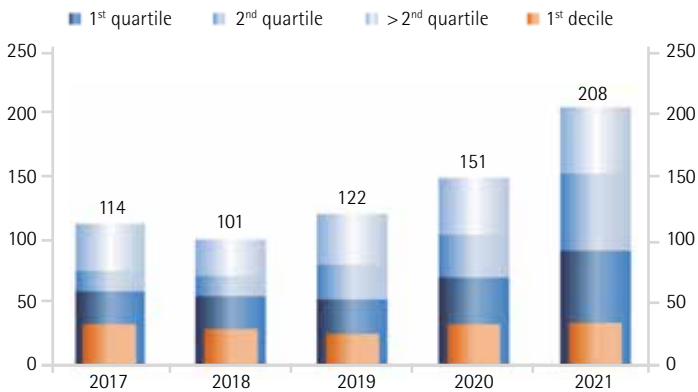
AREA 6: TRANSLATIONAL ONCOLOGY

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



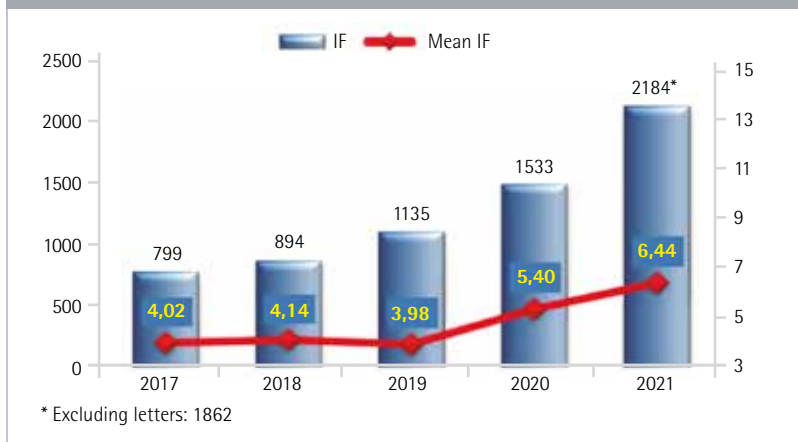
* Excluding letters: 1842

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

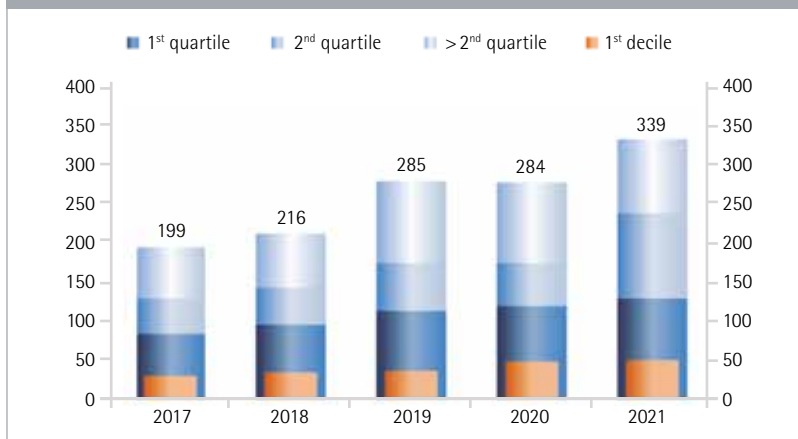


AREA 7: SYSTEMIC DISEASES AND ORGAN TRANSPLANTATION

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)

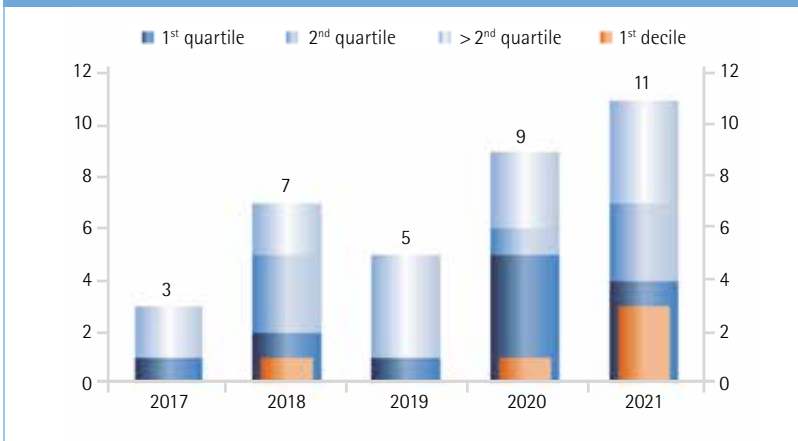


NURSING RESEARCH GROUP

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

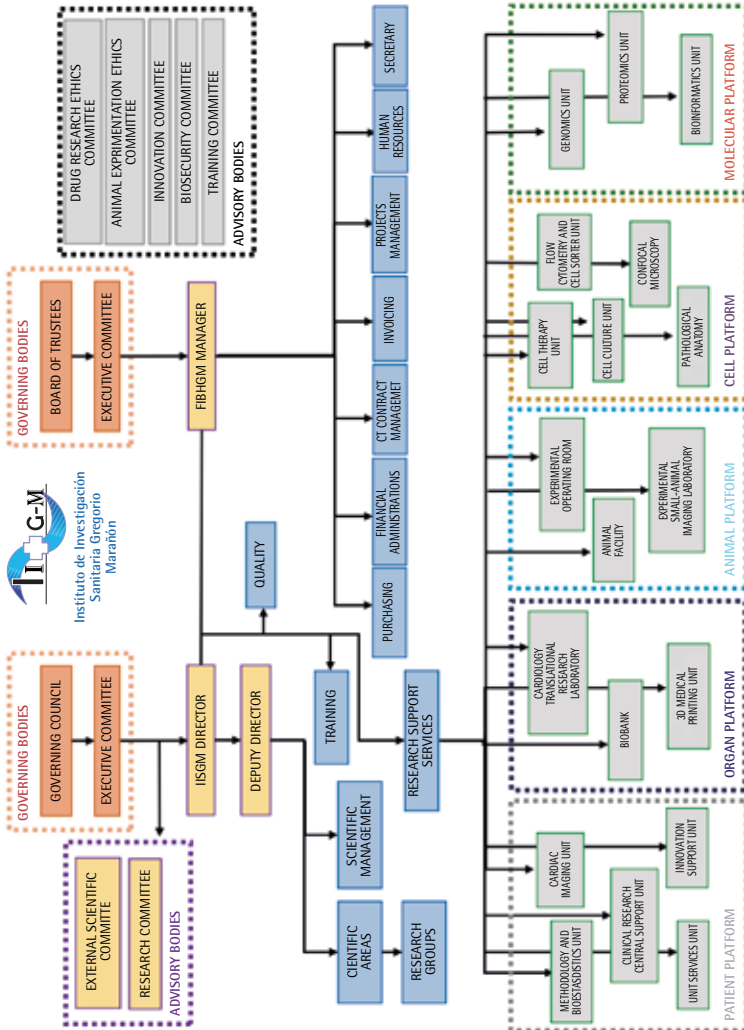


Scientific output of Nursing Group in indexed journals with impact factor: distribution of publications by decile and quartile (absolute values)



Organizational Structure of IISGM

1. ORGANIZATION CHART



Structure of research areas and groups

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 (in the process of integration)	UC3M
1.03 Computer architecture, communications, and systems: ARCOS	Jesús Carretero Pérez	CONSOLIDATED (in the process of integration)	UC3M
1.04 Nonparametric statistics and intensive computing	Juan Romo Urróz	ASOCIATED CONSOLIDATED (in the process of integration)	UC3M
1.05 Structural and Functional Medical Imaging	Jesús de la Torre Fernández Juan A. Guzmán de Villoria	EMERGING	HGUGM

AREA 2: Cardiovascular diseases

Coordinator: *Francisco Fernández-Avilés Díaz*

Group	Group leader	Type of Group	Organization
2.01 Natural history of heart disease	Francisco Fernández-Avilés Díaz	CONSOLIDATED	HGUGM-UCM
2.02 Cardiovascular pathophysiology	Victoria Cachofeiro Ramos	CONSOLIDATED	UCM
2.03 Cardiac cellular 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	EMERGING	HGUGM

AREA 4: Clinical Microbiology, Infectious Diseases and AIDS

Coordinator: *Patricia Muñoz García de Paredes*

Group	Group leader	Type of Group	Organization
4.01 Infectious diseases	Patricia Muñoz García de Paredes	CONSOLIDATED	HGUGM-UCM
4.02 Clinical and epidemiological aspects of HIV infection and associated conditions	Juan Berenguer Berenguer	CONSOLIDATED	HGUGM

AREA 5: Diseases of the Immune System

Coordinator: *Eduardo Fernández-Cruz Pérez*

Group	Group leader	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 ^a 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.

AREA 6: Translational Oncology**Coordinator:** *Miguel Martín Jiménez*

Group	Group leader	Type of Group	Organization
6.01 Interdisciplinary oncology and biotechnology	Ana Álvarez González Mercedes Muñoz Fernandez	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	Maria de los Ángeles Goicoechea Diezhandino	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 Pathophysiology, outcome, and therapeutic strategies in chronic respiratory insufficiency and respiratory disorders of sleep	Luis Puente Maestu Ignacio Garutti Martínez	CONSOLIDATED	HGUGM
7.06 Regenerative medicine in plastic surgery	José M ^a Lasso	EMERGING	HGUGM
7.07 Experimental kidney transplantation	Enrique Lledó García	EMERGING	HGUGM
7.08 Pediatric endocrinology	Maria Dolores Rodríguez Arnao	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	ASOCIATED	HGUGM-UCM
7.12 Emergency medicine	Javier Muñoz González	ASOCIATED	HGUGM
7.16 Regenerative medicine and system development: cardiovascular and osteochondral	M ^a Begoña Quintana Villamandos	EMERGING	HGUGM
7.18 Peritransplant evaluation (liver)	José María Pérez Peña	ASOCIADO	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 Pathophysiology of the neonate and developing child	Manuel Sánchez Luna	EMERGING	HGUGM
7.25 Artificial circulation laboratory	Juan Francisco del Cañizo López	EMERGING	HGUGM-UCM
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 ^a 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 Juan Antonio deLeón	EMERGING	HGUGM
7.32 Physical medicine and rehabilitation	Pilar Crespo Cobo Marta Supervía Pola	EMERGING	HGUGM
7.33 Pathological Anatomy	Javier Menarguez Palanca	EMERGING	HGUGM
7.34 Multimorbidity, chronic diseases and health services. Primary Care	Isabel del Cura González Jesús Martín Fernández	CONSOLIDATED (in the process of integration)	HGUGM

GROUP 8: Nursing Research Group

Coordinator: Ana García Pozo

Group	Group leader	Organization
Research in nursing	Ana María García Pozo	HGUGM

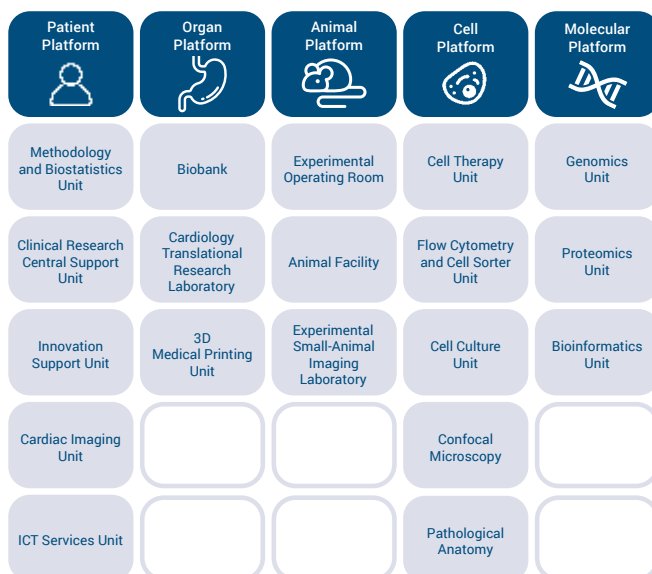
UCM: Universidad Complutense de Madrid. HGUGM: Hospital General Universitario Gregorio Marañón. UC3M: Universidad Carlos III.

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	6	
	Cardiac Imaging Unit	34	2
Organ Platform	Biobank	14	
	Cardiology Translational Research Laboratory	33	2
Animal Platform	Experimental Operating Room	1	1
	Animal Facility	1	
	Experimental Small-Animal Imaging Laboratory	32	5
Cell Platform	Cell Therapy Unit	4	
	Flow Cytometry and Cell Sorter Unit	14	
	Cell Culture Unit	2	
	Confocal Microscopy	3	
Molecular Platform	Genomics Unit	15	
	Bioinformatics Unit	2	

Innovation, knowledge transfer, and translation to practice

INNOVATION SUPPORT UNIT

Intellectual Property KPIs

ISI&M activity in innovation during 2021 is summarized in the following:

- a) **Copyright** (computer software, database, scientific publications, etc)
 - 6 copyright applications filed in 2021.
 - 8 copyright registered in 2021.
 - Portfolio of 45 copyrights at 31th December 2021.
- b) **Patents (it includes utility models)**
 - 7 patents applications.
 - 8 patents granted.
 - Portfolio of 70 patents (41 granted and 29 applications) at 31th December 2021.
 - 39 patents licensed (29 granted y 10 applications) at 31th December 2021.

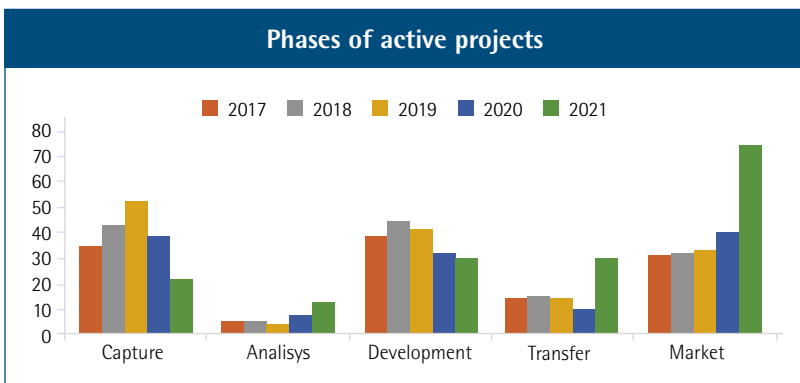
Technology Transfer KPIs

- a) **Technology transfer agreements**
 - 2 license agreements signed in 2021.
 - 1 assignment agreement.
- b) **Others research & innovation agreements (NDAs, collaboration agreement, etc)**
 - 17 agreements.
- c) **Research-based spin-off creation**
 - 1 company incorporated (ThyTech SL).

Innovation projects KPIs

During 2021, 17 new innovation projects were supported in the unit. The UAI managed a portfolio of 176 innovation projects at 31st December 2021. The following figures show the distribution of projects classified by development phase over the last 5 years.

liSGM has received € 2.372.535,6 from innovation funding programmes.



Other initiatives and achievements of the Unit during 2021:

- Re-accreditation of R&D&I management system according to UNE 166002: 2014 standard.
- Formalization of the first service contract.
- One project granted from FIPSE call proposal. 131 meetings have been held with companies, collaborators and internal researchers.
176 innovation projects managed at 31th December 2021.

INNOVATION PORTFOLIO

Below, we show the project portfolio, or «innovation funnel». The UAI managed a portfolio of 176 innovation projects at 31th December 2021.

	ICTs Health	Material and devices	Medicines and pharmaceutical products	Biotechnology and molecular diagnosis	Imaging	Care organization
Ideas proposed (not developed)	1	10	1	4	2	6
Ideas under assessment	1	7	1	3	0	2
Ideas under development	7	7	1	8	6	2
Ideas under transfer	5	8	3	9	5	1
Ideas in the market	19	10	5	5	13	24

Commercialization status at 31 December 2021 (Licenced/Available for licensing).

Patent family (it included utility models) **A patent family is "a set of patents taken in various countries to protect a single invention.

Interventional and non interventional clinica studies

During the year **2021**, a total of **1045** clinical trials were active in our hospital. A total of 223 studies were implemented.

Approximately 95% of the clinical trials with medicines started during **2021** were Phase I, II, and III studies.

As for the distribution by research areas, almost **54%** of the clinical trials were led by the Translational Oncology Area (Area 6).

ACTIVE CLINICAL STUDIES	
2017	1226
2018	1190
2019	1115
2020	1038
2021	1145

NEW CLINICAL STUDIES			
	Clinical Trials	Observational studies	Total
2017	148	83	231
2018	136	74	210
2019	140	68	208
2020	162	81	251
2021	176	47	223

DISTRIBUTION OF CLINICAL TRIALS SIGNED BY PHASE (%)					
	2017	2018	2019	2020	2021
Phase I	6.8	11.7	7.28	5.29	20.7
Phase II	30.8	34.5	37.1	40.00	33.9
Phase III	52.5	48	43.7	45.88	42.5
Phase IV	6.3	3.6	4.6	4.11	2.3
Others (Medical device, etc.)	3.6	2.2	7.29	4.70	0,57

DISTRIBUTION OF CLINICAL STUDIES SIGNED IN 2021 (National/International)		
	Nº	%
National	66	29.6
International	157	70.4

DISTRIBUTION OF CLINICAL STUDIES SIGNED IN 2021 BY RESEARCH AREA OF IISGM		
	Nº	%
Area 1	0	0
Area 2	12	5.38
Area 3	11	4.9
Area 4	14	6.2
Area 5	18	8.08
Area 6	119	53.43
Area 7	41	18.4
Nursing group	1	0.44
Associated clinicians	7	3.1

Fundings of liSGM

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 liSGM groups to generate income.

The total income generated by liSGM researchers own activity in 2021 came to 17.699.418 €. To these revenues we must add, for the 4th year in a row, the nominative subsidy of 622.220 € granted to this foundation by the Consejería of Health of the Community of Madrid, which would raise total revenues of the Foundation to **18.321.638 €**.

The revenues generated by researchers in 2021 is 8% less than in 2020, due to various funding received in 2020, specifically, 850.000 € received from the Comunidad de Madrid, for the support of Covid-19 research activities.

	2016	2017	2018	2019	2020	2021
Total income generated by researchers	14,219,400€	14,431,258€	15,503,687€	16,476,182€	19,183,609€	17,699,418 €
Nominative subsidy Madrid Community	–	–	612,220€	622,220€	622,220€ + 850,000 €	622,220€

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



Non competitive projects

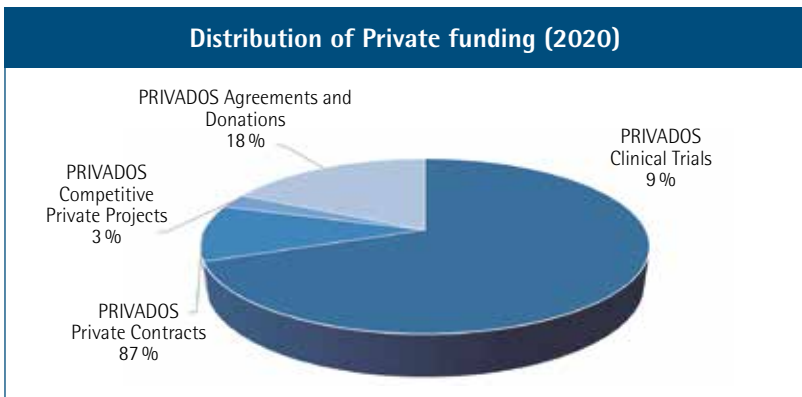
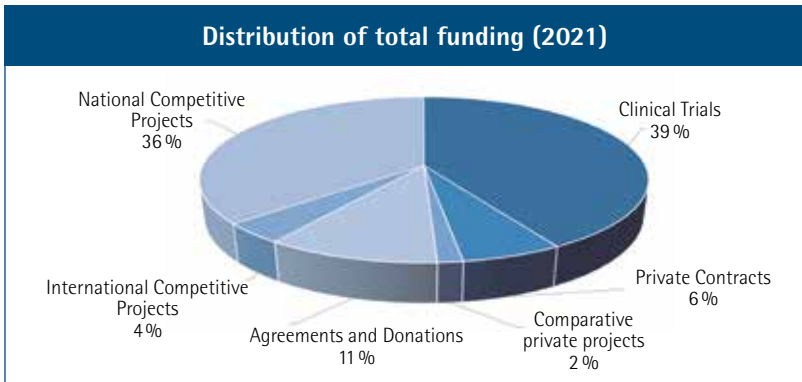


Private competitive projects



DISTRIBUTION OF INCOME GENERATED BY RESEARCHERS

As far as the distribution of income is concerned, in 2021, the income from Clinical Studies exceeded, for the first time the income generated by national competitive projects:



As in previous years, in the case of individual information provided by each group in this report, only projects obtained by groups in **competitive calls (public and private)** where the principal investigator was a group researcher are reported.

Therefore, other sources of funding have not been taken into account.

The objective of this premise is to provide information on the capacity of each of the groups to obtain funding in a competitive environment.

List of active projects in 2021 by area of research

		Research projects	Human resources
AREA 1: BIOMEDICAL ENGINEERING	1.01 Advanced technological applications and human health	15	12
AREA 2: CARDIOVASCULAR DISEASE	2.01 Natural history of heart disease	19	7
AREA 3: NEUROSCIENCE AND MENTAL HEALTH	3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment	20	20
	3.03B Neurological diseases	7	
AREA 4: INFECTIOUS DISEASES AND AIDS	4.01 Infectious diseases	19	22
	4.02 Clinical and epidemiological aspects of HIV infection and associated conditions	3	2
AREA 5: DISEASES OF THE IMMUNE SYSTEM	5.01 Pathophysiology and clinical research into chronic inflammatory and immunological diseases	5	7
	5.02 Molecular biology of HIV	4	4
	5.03 Systemic autoimmune diseases	1	
	5.06 Immune regulation and homeostasis in diseases of the immune system	6	5
	5.07 Infections in pediatric patients	5	5
AREA 6: TRANSLATIONAL ONCOLOGY	6.01 Interdisciplinary oncology and biotechnology		1

(Continued)

LIST OF ACTIVE PROJECTS IN 2021 BY AREA OF RESEARCH

(Cont.)

		Research projects	Human resources
AREA 6: TRANSLATIONAL ONCOLOGY	6.02 Translational medical oncology and personalized cancer therapy	3	
	6.03 Genetics and clinical aspects of hematologic malignancies and hematopoietic stem cell transplantation	3	2
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	4	1
	7.02 Pathophysiology and natural history of liver and digestive diseases	7	5
	7.04 Diseases of the critically ill child	9	2
	7.05B Pathophysiology, outcome, and therapeutic strategies in chronic respiratory insufficiency and respiratory disorders of sleep	2	
	7.16 Regenerative medicine and system development: cardiovascular and osteochondral	3	1
	7.21 Biopathology of aging	1	
	7.22 Pathophysiology of the neonate and developing child	2	
	7.27 Hospital pharmacy and pharmacogenomics	1	
	7.28 Clinical nutrition	1	
	7.29 Vascular pathophysiology and pharmacology	1	2
7.31 Pathophysiology in women, pregnancy, labor, and puerperium	2	1	

Scientific publications

The list presented below shows all the referenced publications in which investigators from the IISGM participated in during 2021.

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	IF	Nº	Amount IF
ACS Infectious Diseases	1	5,578	5,578
ACTA DERMATO-VENEREOLOGICA	2	3,875	7,75
ACTA OPHTHALMOLOGICA	1	3,988	3,988
Acta Orthopaedica et Traumatologica Turcica	1	1,557	1,557
ACTA PAEDIATRICA	2	4,056	8,112
ACTA PSYCHIATRICA SCANDINAVICA	2	7,734	15,468
ACTAS ESPAÑOLAS DE PSIQUIATRIA	3	1,667	5,001
Actas Urológicas Españolas	12	0,887	10,644
Adicciones	1	4,102	4,102
ADVANCED MATERIALS	1	32,086	32,086
ADVANCES IN THERAPY	1	4,07	4,07
AGING & MENTAL HEALTH	1	3,514	3,514
Aging and Disease	1	9,968	9,968
AGRONOMY-BASEL	1	3,949	3,949
AIDS	3	4,632	13,896
ALIMENTARY PHARMACOLOGY & THERAPEUTICS	1	9,524	9,524
ALLERGOLOGIA ET IMMUNOPATHOLOGIA	2	2,094	4,188
Allergy Asthma and Clinical Immunology	1	3,373	3,373

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Journal	IF	Nº	Amount IF
AMERICAN HEART JOURNAL	2	5,099	10,198
AMERICAN JOURNAL OF CLINICAL ONCOLOGY-CANCER CLINICAL TRIALS	1	2,787	2,787
AMERICAN JOURNAL OF EMERGENCY MEDICINE	1	4,093	4,093
AMERICAN JOURNAL OF GASTROENTEROLOGY	1	12,045	12,045
AMERICAN JOURNAL OF HEMATOLOGY	1	13,265	13,265
AMERICAN JOURNAL OF KIDNEY DISEASES	1	11,072	11,072
AMERICAN JOURNAL OF PHYSIOLOGY-GASTROINTESTINAL AND LIVER PHYSIOLOGY	1	4,871	4,871
AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY	1	5,125	5,125
AMERICAN JOURNAL OF TRANSPLANTATION	4	9,369	37,476
ANAIS BRASILEIROS DE DERMATOLOGIA	3	2,113	6,339
ANALES DE PEDIATRIA	16	2,377	38,032
ANESTHESIOLOGY	1	8,986	8,986
ANNALS OF ALLERGY ASTHMA & IMMUNOLOGY	5	6,248	31,24
ANNALS OF DIAGNOSTIC PATHOLOGY	3	2,134	6,402
ANNALS OF HEMATOLOGY	4	4,03	16,12
Annals of Intensive Care	1	10,318	10,318
ANNALS OF ONCOLOGY	3	51,769	155,307
ANNALS OF PLASTIC SURGERY	2	1,763	3,526
ANNALS OF TRANSPLANTATION	1	1,479	1,479
Antibiotics-Basel	3	5,222	15,666
ANTIMICROBIAL AGENTS AND CHEMOTHERAPY	7	5,938	41,566
Antioxidants	5	7,675	38,375
Apl Bioengineering	1	6,586	6,586
Applied Sciences-Basel	2	2,838	5,676
ARCHIVES OF DISEASE IN CHILDHOOD	3	4,92	14,76
ARCHIVES OF GYNECOLOGY AND OBSTETRICS	1	2,493	2,493

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Journal	IF	Nº	Amount IF
ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION	1	4,06	4,06
ARCHIVOS DE BRONCONEUMOLOGIA	10	6,333	63,33
ARCHIVOS ESPAÑOLES DE UROLOGIA	2	0,43	0,86
ARTHRITIS CARE & RESEARCH	1	5,178	5,178
ARTHRITIS RESEARCH & THERAPY	1	5,606	5,606
ASAIO JOURNAL	3	3,826	11,478
ATENCION PRIMARIA	3	2,206	6,618
AUSTRALASIAN JOURNAL OF DERMATOLOGY	2	2,481	4,962
AUTISM	1	6,684	6,684
BASIC RESEARCH IN CARDIOLOGY	1	12,416	12,416
Behavioral Sleep Medicine	1	3,492	3,492
Best Practice & Research-Clinical Anaesthesiology	1	3,813	3,813
BIOCHEMICAL PHARMACOLOGY	1	6,1	6,1
BIOLOGICAL PSYCHIATRY	1	12,81	12,81
BIOLOGY-BASEL	3	5,168	15,504
Biomed Research International	1	3,246	3,246
BIOMEDICAL SIGNAL PROCESSING AND CONTROL	1	5,076	5,076
BIOMEDICINE & PHARMACOTHERAPY	1	7,419	7,419
Biomedicines	4	4,757	19,028
Biomolecules	1	6,064	6,064
BJPsych Open	1	5,165	5,165
BJS Open	2	3,875	7,75
BJU INTERNATIONAL	1	5,969	5,969
BLOOD	1	25,476	25,476
Blood Cancer Journal	3	9,812	29,436
BLOOD COAGULATION & FIBRINOLYSIS	2	1,061	2,122

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Journal	IF	N°	Amount IF
Blood Transfusion	1	5,752	5,752
BMC Cardiovascular Disorders	1	2,174	2,174
BMC FAMILY PRACTICE	1	2,634	2,634
BMC GASTROENTEROLOGY	1	2,847	2,847
BMC INFECTIOUS DISEASES	3	3,667	11,001
BMC MEDICAL EDUCATION	1	3,263	3,263
BMC MEDICAL GENOMICS	1	3,622	3,622
BMC MEDICAL RESEARCH METHODOLOGY	1	4,612	4,612
BMC MUSCULOSKELETAL DISORDERS	1	2,562	2,562
BMC Nephrology	2	2,585	5,17
BMC Pediatrics	1	2,567	2,567
BMC Pulmonary Medicine	1	3,32	3,32
BMC Womens Health	1	2,742	2,742
BMJ Open	5	3,006	15,03
BONE MARROW TRANSPLANTATION	9	5,174	46,566
BRAIN	1	15,255	15,255
Brain and Behavior	1	3,405	3,405
Brain Sciences	4	3,333	13,332
BRAIN STRUCTURE & FUNCTION	1	3,748	3,748
BREAST CANCER RESEARCH AND TREATMENT	3	4,624	13,872
Breast Care	1	2,268	2,268
BRIEFINGS IN BIOINFORMATICS	1	13,994	13,994
BRITISH JOURNAL OF CANCER	1	9,075	9,075
BRITISH JOURNAL OF CLINICAL PHARMACOLOGY	1	3,716	3,716
BRITISH JOURNAL OF DEVELOPMENTAL PSYCHOLOGY	1	2,148	2,148
BRITISH JOURNAL OF HAEMATOLOGY	1	8,615	8,615
BRITISH JOURNAL OF PHARMACOLOGY	1	9,473	9,473

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Journal	IF	N°	Amount IF
BRITISH JOURNAL OF SURGERY	3	11,122	33,366
CANADIAN JOURNAL OF PSYCHIATRY-REVUE CANADIENNE DE PSYCHIATRIE	1	5,321	5,321
CANCER	1	6,921	6,921
Cancer Medicine	4	4,711	18,844
CANCER RADIOTHERAPIE	1	1,217	1,217
CANCER TREATMENT REVIEWS	2	13,608	27,216
Cancers	16	6,575	105,2
CARDIOLOGY	1	2,342	2,342
CARDIOLOGY IN THE YOUNG	1	1,023	1,023
CARDIOVASCULAR DIABETOLOGY	2	8,949	17,898
CARDIOVASCULAR DRUGS AND THERAPY	1	3,947	3,947
Cardiovascular Journal of Africa	1	0,802	0,802
CARDIOVASCULAR RESEARCH	2	13,081	26,162
Cell Reports	1	9,995	9,995
Cells	4	7,666	30,664
CEREBRAL CORTEX	1	4,861	4,861
CEREBROVASCULAR DISEASES	1	3,104	3,104
ChemMedChem	1	3,54	3,54
CHEST	1	10,262	10,262
Children-Basel	1	2,835	2,835
CIN-COMPUTERS INFORMATICS NURSING	1	2,146	2,146
CIRCULATION	1	39,918	39,918
CIRCULATION-ARRHYTHMIA AND ELECTROPHYSIOLOGY	1	7,718	7,718
Circulation-Cardiovascular Interventions	1	7,514	7,514
CIRUGIA ESPANOLA	2	2,242	4,484
CIRUGIA Y CIRUJANOS	2	0,416	0,832
CLINICAL & TRANSLATIONAL ONCOLOGY	15	3,34	50,1

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Journal	IF	N°	Amount IF
CLINICAL AND EXPERIMENTAL ALLERGY	1	5,401	5,401
CLINICAL AND EXPERIMENTAL DERMATOLOGY	1	4,481	4,481
CLINICAL AND EXPERIMENTAL IMMUNOLOGY	1	5,732	5,732
CLINICAL AND EXPERIMENTAL OBSTETRICS & GYNECOLOGY	1	0,192	0,192
CLINICAL AND EXPERIMENTAL RHEUMATOLOGY	3	4,862	14,586
Clinical and Translational Allergy	1	5,657	5,657
CLINICAL BREAST CANCER	2	3,078	6,156
CLINICAL CANCER RESEARCH	1	13,801	13,801
CLINICAL CARDIOLOGY	1	3,287	3,287
CLINICAL COLORECTAL CANCER	1	4,035	4,035
CLINICAL GENETICS	3	4,296	12,888
CLINICAL IMPLANT DENTISTRY AND RELATED RESEARCH	1	4,259	4,259
CLINICAL INFECTIOUS DISEASES	7	20,999	146,993
CLINICAL KIDNEY JOURNAL	5	5,86	29,3
CLINICAL LUNG CANCER	2	4,84	9,68
Clinical Lymphoma Myeloma & Leukemia	3	2,822	8,466
CLINICAL MICROBIOLOGY AND INFECTION	14	13,31	186,34
CLINICAL NUTRITION	5	7,643	38,215
CLINICAL PHARMACOLOGY & THERAPEUTICS	1	6,903	6,903
CLINICAL RESEARCH IN CARDIOLOGY	1	6,138	6,138
CLINICAL RHEUMATOLOGY	2	3,65	7,3
CLINICAL SCIENCE	1	6,876	6,876
CLINICAL TRANSPLANTATION	3	3,456	10,368
CLINICS IN PERINATOLOGY	2	2,642	5,284
CLUSTER COMPUTING-THE JOURNAL OF NETWORKS SOFTWARE TOOLS AND APPLICATIONS	1	2,303	2,303
COLORECTAL DISEASE	2	3,917	7,834
COMPOSITES PART B-ENGINEERING	1	11,322	11,322

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Journal	IF	Nº	Amount IF
COMPUTERS IN BIOLOGY AND MEDICINE	1	6,698	6,698
CORONARY ARTERY DISEASE	1	1,717	1,717
Cost Effectiveness and Resource Allocation	1	2,803	2,803
CRITICAL CARE	1	19,334	19,334
CURRENT OPINION IN INFECTIOUS DISEASES	2	4,968	9,936
CURRENT PROBLEMS IN CARDIOLOGY	1	16,464	16,464
CYTOKINE	1	3,926	3,926
DEPRESSION AND ANXIETY	1	8,128	8,128
DERMATOLOGIC THERAPY	1	3,858	3,858
Dermatology and Therapy	1	3,661	3,661
Dermatology Practical & Conceptual	1	2,753	2,753
DIABETES RESEARCH AND CLINICAL PRACTICE	1	8,18	8,18
DIAGNOSTIC MICROBIOLOGY AND INFECTIOUS DISEASE	3	2,983	8,949
Diagnostics	4	3,992	15,968
DIGESTIVE DISEASES AND SCIENCES	1	3,487	3,487
DRUGS & AGING	1	4,271	4,271
DRUGS IN R&D	1	3,203	3,203
EARLY HUMAN DEVELOPMENT	1	2,699	2,699
Eclinicalmedicine	2	17,033	34,066
Emergencias	3	5,345	16,035
EMERGING INFECTIOUS DISEASES	2	16,126	32,252
ENDOCRINE	1	3,925	3,925
ENDOCRINE-RELATED CANCER	1	5,9	5,9
Endocrinología Diabetes Y Nutrición	6	1,833	10,998
ENDOSCOPY	1	9,776	9,776
ENFERMEDADES INFECCIOSAS Y MICROBIOLOGIA CLINICA	8	1,994	15,952
Entropy	1	2,738	2,738
EPILEPSY & BEHAVIOR	1	3,337	3,337

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Journal	IF	N°	Amount IF
ERJ Open Research	1	4,239	4,239
ESC heart failure	3	3,612	10,836
Esmo Open	5	6,883	34,415
EUROPACE	1	5,486	5,486
EUROPEAN ARCHIVES OF PSYCHIATRY AND CLINICAL NEUROSCIENCE	1	5,76	5,76
EUROPEAN CHILD & ADOLESCENT PSYCHIATRY	3	5,349	16,047
European Geriatric Medicine	1	3,269	3,269
EUROPEAN HEART JOURNAL	2	35,855	71,71
EUROPEAN HEART JOURNAL-ACUTE CARDIOVASCULAR CARE	2	4,766	9,532
EUROPEAN HEART JOURNAL-QUALITY OF CARE AND CLINICAL OUTCOMES	1	7,064	7,064
EUROPEAN JOURNAL OF ANAESTHESIOLOGY	1	4,183	4,183
EUROPEAN JOURNAL OF CANCER	4	10,002	40,008
EUROPEAN JOURNAL OF CLINICAL INVESTIGATION	2	5,722	11,444
EUROPEAN JOURNAL OF CLINICAL MICROBIOLOGY & INFECTIOUS DISEASES	1	5,103	5,103
EUROPEAN JOURNAL OF CLINICAL NUTRITION	1	4,884	4,884
EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY	1	3,064	3,064
EUROPEAN JOURNAL OF DERMATOLOGY	9	2,805	25,245
EUROPEAN JOURNAL OF GASTROENTEROLOGY & HEPATOLOGY	2	2,586	5,172
European Journal of General Practice	1	3,636	3,636
EUROPEAN JOURNAL OF HAEMATOLOGY	3	3,674	11,022
EUROPEAN JOURNAL OF HOSPITAL PHARMACY	1	2,537	2,537
EUROPEAN JOURNAL OF IMMUNOLOGY	1	6,688	6,688
EUROPEAN JOURNAL OF INTERNAL MEDICINE	4	7,749	30,996
EUROPEAN JOURNAL OF NEUROLOGY	4	6,288	25,152
EUROPEAN JOURNAL OF PEDIATRICS	4	3,86	15,44

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Journal	IF	N°	Amount IF
EUROPEAN JOURNAL OF PLASTIC SURGERY	2	0,24	0,48
European Journal of Preventive Cardiology	1	8,526	8,526
EUROPEAN JOURNAL OF PSYCHIATRY	1	1,288	1,288
EUROPEAN JOURNAL OF RADIOLOGY	1	4,531	4,531
EUROPEAN JOURNAL OF TRAUMA AND EMERGENCY SURGERY	2	2,374	4,748
EUROPEAN NEUROLOGY	1	2,292	2,292
EUROPEAN NEUROPSYCHOPHARMACOLOGY	10	5,415	54,15
EUROPEAN PSYCHIATRY	8	7,156	57,248
EUROPEAN RESPIRATORY JOURNAL	2	33,795	67,59
EUROPEAN UROLOGY	1	24,267	24,267
European Urology Oncology	1	8,208	8,208
Eurosurveillance	1	21,286	21,286
EXPERIMENTAL DERMATOLOGY	2	4,511	9,022
EXPERT OPINION ON PHARMACOTHERAPY	1	4,103	4,103
EXPERT REVIEW OF ANTICANCER THERAPY	1	3,627	3,627
Expert Review of Clinical Immunology	1	5,124	5,124
Expert Review of Clinical Pharmacology	1	4,108	4,108
Expert Review of Hematology	1	2,819	2,819
EXPERT REVIEW OF MOLECULAR DIAGNOSTICS	1	5,67	5,67
FERTILITY AND STERILITY	1	7,49	7,49
FETAL DIAGNOSIS AND THERAPY	1	2,208	2,208
Foods	1	5,561	5,561
Foot and Ankle Surgery	1	2,84	2,84
Frontiers In Bioscience-Landmark	1	3,115	3,115
Frontiers in Cardiovascular Medicine	4	5,846	23,384
Frontiers in Cellular and Infection Microbiology	1	6,073	6,073
Frontiers in Immunology	9	8,786	79,074

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Journal	IF	Nº	Amount IF
Frontiers In Medicine	4	5,058	20,232
Frontiers in Microbiology	3	6,064	18,192
Frontiers in Neurology	2	4,086	8,172
Frontiers in Oncology	3	5,738	17,214
Frontiers In Pediatrics	7	3,569	24,983
Frontiers in Pharmacology	2	5,988	11,976
Frontiers in Physiology	7	4,755	33,285
Frontiers in Psychiatry	6	5,435	32,61
FRONTIERS IN PSYCHOLOGY	1	4,232	4,232
Frontiers in Public Health	1	6,461	6,461
GACETA SANITARIA	1	2,479	2,479
Gastric Cancer	2	7,701	15,402
Gastroenterologia y Hepatologia	3	5,867	17,601
GASTROENTEROLOGY	2	33,883	67,766
GENETICS	1	4,402	4,402
Genome Medicine	1	15,266	15,266
GUT	2	31,793	63,586
HARVARD REVIEW OF PSYCHIATRY	1	3,868	3,868
HEAD AND NECK-JOURNAL FOR THE SCIENCES AND SPECIALTIES OF THE HEAD AND NECK	1	3,821	3,821
HEALTH & PLACE	1	4,931	4,931
HEALTH EXPECTATIONS	1	3,318	3,318
Healthcare	1	3,16	3,16
HEART	2	7,365	14,73
Heart Lung and Circulation	1	2,838	2,838
HEART RHYTHM	1	6,779	6,779
Hemasphere	2	8,3	16,6
HEMATOLOGICAL ONCOLOGY	2	4,85	9,7

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Journal	IF	N°	Amount IF
Hepatology Communications	2	5,701	11,402
HIP INTERNATIONAL	1	1,756	1,756
HISTOLOGY AND HISTOPATHOLOGY	1	2,13	2,13
HIV MEDICINE	1	3,094	3,094
HIV Research Et Clinical Practice	1	1,676	1,676
Hormone and Metabolic Research	1	2,788	2,788
Hormones-International Journal of Endocrinology and Metabolism	1	3,419	3,419
Human Vaccines Et Immunotherapeutics	2	4,526	9,052
IEEE Access	3	3,476	10,428
IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING	1	4,756	4,756
IEEE Transactions on Computational Imaging	1	4,708	4,708
IEEE TRANSACTIONS ON INFORMATION THEORY	1	2,978	2,978
Immunity Et Ageing	1	9,701	9,701
IMMUNOTHERAPY	1	4,04	4,04
INFECTION	2	7,455	14,91
Infectious Diseases and Therapy	4	6,119	24,476
Infectious Diseases of Poverty	1	10,485	10,485
INFLAMMATORY BOWEL DISEASES	1	7,29	7,29
INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED	1	2,687	2,687
INTERNAL MEDICINE JOURNAL	2	2,611	5,222
INTERNATIONAL JOURNAL OF ANTIMICROBIAL AGENTS	2	15,441	30,882
INTERNATIONAL JOURNAL OF ARTIFICIAL ORGANS	1	1,631	1,631
INTERNATIONAL JOURNAL OF CARDIOLOGY	3	4,039	12,117
International Journal of Chronic Obstructive Pulmonary Disease	3	2,893	8,679

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Journal	IF	Nº	Amount IF
International Journal of Clinical Pharmacy	1	2,305	2,305
INTERNATIONAL JOURNAL OF CLINICAL PRACTICE	4	3,149	12,596
International Journal of Computer Assisted Radiology and Surgery	2	3,421	6,842
INTERNATIONAL JOURNAL OF DERMATOLOGY	1	3,204	3,204
INTERNATIONAL JOURNAL OF DRUG POLICY	2	5,931	11,862
International Journal of Environmental Research and Public Health	11	4,614	50,754
INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY	1	3,85	3,85
International Journal of Immunogenetics	1	2,385	2,385
INTERNATIONAL JOURNAL OF INFECTIOUS DISEASES	2	12,074	24,148
INTERNATIONAL JOURNAL OF LABORATORY HEMATOLOGY	1	3,45	3,45
International Journal of Medical Sciences	1	3,642	3,642
INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES	11	6,208	68,288
INTERNATIONAL JOURNAL OF NEUROPSYCHOPHARMACOLOGY	1	5,678	5,678
INTERNATIONAL JOURNAL OF NURSING PRACTICE	1	2,226	2,226
INTERNATIONAL JOURNAL OF NURSING STUDIES	1	6,612	6,612
INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS	1	3,221	3,221
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY	2	3,352	6,704
International Journal of Rheumatic Diseases	1	2,558	2,558
International Journal of Surgery	1	13,4	13,4
INTERNATIONAL JOURNAL OF TUBERCULOSIS AND LUNG DISEASE	1	3,427	3,427
INTERNATIONAL NURSING REVIEW	1	3,384	3,384
JACC-Cardiovascular Interventions	3	11,075	33,225
JAIDS-JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES	1	3,771	3,771
Jama Cardiology	1	30,154	30,154

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Journal	IF	N°	Amount IF
JAMA Pediatrics	3	26,796	80,388
JAMA PSYCHIATRY	3	25,911	77,733
JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	2	157,335	314,67
JCR-JOURNAL OF CLINICAL RHEUMATOLOGY	1	3,902	3,902
Jhep Reports	1	9,917	9,917
JMIR Mental Health	2	6,332	12,664
JMIR mHealth and uHealth	1	4,947	4,947
JOINT BONE SPINE	2	5,263	10,526
Journal for ImmunoTherapy of Cancer	3	12,469	37,407
Journal of Affective Disorders	3	6,533	19,599
JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY	1	14,29	14,29
Journal of Allergy and Clinical Immunology-In Practice	5	11,022	55,11
JOURNAL OF ALZHEIMERS DISEASE	1	4,16	4,16
JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY	7	5,758	40,306
JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS	1	4,345	4,345
JOURNAL OF BIOMEDICAL SCIENCE	1	12,771	12,771
JOURNAL OF CARDIOPULMONARY REHABILITATION AND PREVENTION	2	3,646	7,292
Journal of Cardiovascular Translational Research	1	3,216	3,216
JOURNAL OF CATARACT AND REFRACTIVE SURGERY	1	3,528	3,528
JOURNAL OF CELL SCIENCE	1	5,235	5,235
JOURNAL OF CELLULAR AND MOLECULAR MEDICINE	1	5,295	5,295
JOURNAL OF CHILD PSYCHOLOGY AND PSYCHIATRY	2	8,265	16,53
JOURNAL OF CLASSIFICATION	1	1,333	1,333
JOURNAL OF CLINICAL ANESTHESIA	1	9,375	9,375
JOURNAL OF CLINICAL APHERESIS	2	2,605	5,21
JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM	1	6,134	6,134
JOURNAL OF CLINICAL INVESTIGATION	1	19,456	19,456

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Journal	IF	N°	Amount IF
Journal of Clinical Medicine	50	4,964	248,2
JOURNAL OF CLINICAL MICROBIOLOGY	3	11,677	35,031
JOURNAL OF CLINICAL MONITORING AND COMPUTING	1	1,977	1,977
JOURNAL OF CLINICAL ONCOLOGY	5	50,717	253,585
JOURNAL OF CLINICAL PERIODONTOLOGY	1	7,478	7,478
JOURNAL OF CLINICAL PSYCHIATRY	1	5,906	5,906
JOURNAL OF CRANIOFACIAL SURGERY	2	1,172	2,344
JOURNAL OF DERMATOLOGICAL TREATMENT	1	3,23	3,23
JOURNAL OF DUAL DIAGNOSIS	1	2,324	2,324
JOURNAL OF ELECTROCARDIOLOGY	3	1,38	4,14
JOURNAL OF ENDOCRINOLOGICAL INVESTIGATION	1	5,467	5,467
Journal of Foot & Ankle Surgery	1	1,345	1,345
Journal of Fungi	3	5,724	17,172
JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY	1	4,369	4,369
JOURNAL OF GASTROINTESTINAL SURGERY	1	3,267	3,267
JOURNAL OF GENERAL INTERNAL MEDICINE	3	6,473	19,419
Journal of Global Antimicrobial Resistance	1	4,349	4,349
JOURNAL OF HEART AND LUNG TRANSPLANTATION	1	13,569	13,569
JOURNAL OF HEMATOLOGY & ONCOLOGY	3	23,168	69,504
JOURNAL OF HEPATOLOGY	10	30,083	300,83
JOURNAL OF INFECTION	4	38,637	154,548
JOURNAL OF INFECTIOUS DISEASES	2	7,759	15,518
JOURNAL OF INHERITED METABOLIC DISEASE	1	4,75	4,75
JOURNAL OF INVESTIGATIONAL ALLERGOLOGY AND CLINICAL IMMUNOLOGY	6	8,185	49,11
JOURNAL OF INVESTIGATIVE DERMATOLOGY	1	7,59	7,59
JOURNAL OF LEUKOCYTE BIOLOGY	1	6,011	6,011
JOURNAL OF MATERNAL-FETAL & NEONATAL MEDICINE	1	2,323	2,323

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Journal	IF	N°	Amount IF
JOURNAL OF MEDICAL INTERNET RESEARCH	1	7,076	7,076
Journal of Multidisciplinary Healthcare	1	2,919	2,919
JOURNAL OF NANOBIO TECHNOLOGY	2	9,429	18,858
JOURNAL OF NEPHROLOGY	1	4,393	4,393
JOURNAL OF NEURODEVELOPMENTAL DISORDERS	1	4,074	4,074
Journal of Neurological Surgery Part A-Central European Neurosurgery	1	0,984	0,984
JOURNAL OF NEUROLOGY	2	6,682	13,364
JOURNAL OF NUCLEAR MEDICINE	1	11,082	11,082
JOURNAL OF ONCOLOGY PHARMACY PRACTICE	4	1,416	5,664
JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY	1	2,136	2,136
JOURNAL OF ORTHOPAEDIC RESEARCH	1	3,102	3,102
Journal of Orthopaedic Surgery and Research	2	2,677	5,354
JOURNAL OF PEDIATRIC HEMATOLOGY ONCOLOGY	2	1,17	2,34
JOURNAL OF PEDIATRIC SURGERY	1	2,549	2,549
Journal of Pediatric Urology	1	1,921	1,921
JOURNAL OF PEDIATRICS	1	6,314	6,314
JOURNAL OF PERINATAL MEDICINE	1	2,716	2,716
Journal Of Personalized Medicine	5	3,508	17,54
JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS	1	3,571	3,571
JOURNAL OF PLASTIC RECONSTRUCTIVE AND AESTHETIC SURGERY	2	3,022	6,044
JOURNAL OF PSYCHIATRIC RESEARCH	1	5,25	5,25
JOURNAL OF PSYCHIATRY & NEUROSCIENCE	1	5,699	5,699
JOURNAL OF PSYCHOSOMATIC RESEARCH	1	4,62	4,62
JOURNAL OF RENAL NUTRITION	1	4,354	4,354
JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY	2	15,487	30,974
JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY	5	27,203	136,015

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Journal	IF	Nº	Amount IF
Journal of the American Heart Association	4	6,106	24,424
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	1	7,802	7,802
JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY	2	9,228	18,456
JOURNAL OF THE HISTORY OF THE NEUROSCIENCES	1	0,644	0,644
Journal of the International AIDS Society	2	6,707	13,414
JOURNAL OF THE NEUROLOGICAL SCIENCES	1	4,553	4,553
Journal of the Pediatric Infectious Diseases Society	1	5,235	5,235
JOURNAL OF THROMBOSIS AND HAEMOSTASIS	3	16,036	48,108
JOURNAL OF TRAVEL MEDICINE	2	39,194	78,388
JOURNAL OF VIRAL HEPATITIS	1	3,517	3,517
JOURNALS OF GERONTOLOGY SERIES A-BIOLOGICAL SCIENCES AND MEDICAL SCIENCES	2	6,591	13,182
Jove-Journal of Visualized Experiments	1	1,424	1,424
KIDNEY INTERNATIONAL	2	18,998	37,996
Kidney International Reports	1	6,234	6,234
Kidney Research and Clinical Practice	1	4,172	4,172
KNEE	1	2,423	2,423
LANCET CHILD & ADOLESCENT HEALTH	1	37,746	37,746
LANCET INFECTIOUS DISEASES	2	71,421	142,842
LANCET ONCOLOGY	1	54,433	54,433
Lancet Psychiatry	1	77,056	77,056
Lancet Respiratory Medicine	1	102,642	102,642
Lancet Rheumatology	1	35,482	35,482
LEUKEMIA	6	12,883	77,298
LEUKEMIA & LYMPHOMA	2	2,996	5,992
LEUKEMIA RESEARCH	2	3,715	7,43
LIFE-BASEL	1	3,251	3,251

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Journal	IF	Nº	Amount IF
Linguistic Approaches to Bilingualism	1	1,815	1,815
LIVER INTERNATIONAL	1	8,754	8,754
LIVER TRANSPLANTATION	1	6,112	6,112
LUNG	1	3,777	3,777
LUNG CANCER	1	6,081	6,081
LUPUS	1	2,858	2,858
Materials	1	3,748	3,748
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS	1	8,457	8,457
Mathematics	2	2,592	5,184
MAYO CLINIC PROCEEDINGS	2	11,104	22,208
MEDICAL MYCOLOGY	2	3,747	7,494
MEDICAL PHYSICS	2	4,506	9,012
MEDICINA CLINICA	12	3,2	38,4
Medicina Intensiva	3	2,799	8,397
MEDICINA-BUENOS AIRES	1	0,96	0,96
MEDICINA-LITHUANIA	2	2,948	5,896
MEDICINE	3	1,817	5,451
Metabolites	1	5,581	5,581
Microbiology spectrum	3	9,043	27,129
MINERVA ANESTESIOLOGICA	1	3,396	3,396
Molecular Autism	1	6,476	6,476
MOLECULAR MEDICINE REPORTS	1	3,423	3,423
MOLECULAR ONCOLOGY	2	7,449	14,898
MOLECULAR PSYCHIATRY	3	13,437	40,311
MOLECULES	1	4,927	4,927
mSphere	3	5,029	15,087
Multiple Sclerosis and Related Disorders	2	4,808	9,616

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Journal	IF	Nº	Amount IF
MYCOSES	2	4,931	9,862
Nanotechnology Reviews	1	6,739	6,739
Nature Communications	2	17,694	35,388
NATURE GENETICS	1	41,307	41,307
NATURE METHODS	1	47,99	47,99
Nature Reviews Drug Discovery	1	112,288	112,288
NEFROLOGIA	4	3,084	12,336
NEUROBIOLOGY OF AGING	1	5,133	5,133
NEUROCIROLOGIA	2	0,817	1,634
NEUROLOGIA	11	5,486	60,346
NEUROLOGICAL SCIENCES	1	3,83	3,83
Neurology-Neuroimmunology & Neuroinflammation	1	11,36	11,36
NEUROPSYCHOPHARMACOLOGY	1	8,294	8,294
NEURORADIOLOGY	1	2,995	2,995
NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS	1	9,052	9,052
NEW ENGLAND JOURNAL OF MEDICINE	1	176,079	176,079
Npj Breast Cancer	2	7,519	15,038
NURSE EDUCATION TODAY	1	3,906	3,906
NUTRICION HOSPITALARIA	5	1,169	5,845
Nutrients	3	6,706	20,118
NUTRITION	1	4,893	4,893
NUTRITION IN CLINICAL PRACTICE	1	3,204	3,204
OBESITY RESEARCH & CLINICAL PRACTICE	1	5,214	5,214
OCCUPATIONAL THERAPY INTERNATIONAL	1	1,565	1,565
ONCOLOGIST	1	5,837	5,837
Open Forum Infectious Diseases	5	4,423	22,115
ORPHANET JOURNAL OF RARE DISEASES	1	4,303	4,303
OTOLOGY & NEUROTOLOGY	1	2,619	2,619

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Journal	IF	N°	Amount IF
PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY	2	1,912	3,824
PAIN MEDICINE	1	3,637	3,637
Parkinsons Disease	1	3,17	3,17
Patient Preference and Adherence	1	2,314	2,314
PATTERN RECOGNITION	1	8,518	8,518
PEDIATRIC ALLERGY AND IMMUNOLOGY	2	5,464	10,928
PEDIATRIC AND DEVELOPMENTAL PATHOLOGY	1	2,266	2,266
PEDIATRIC ANESTHESIA	1	2,129	2,129
PEDIATRIC BLOOD & CANCER	1	3,838	3,838
PEDIATRIC CRITICAL CARE MEDICINE	1	3,971	3,971
PEDIATRIC DERMATOLOGY	1	1,997	1,997
PEDIATRIC EMERGENCY CARE	2	1,602	3,204
PEDIATRIC INFECTIOUS DISEASE JOURNAL	7	3,806	26,642
PEDIATRIC NEPHROLOGY	1	3,651	3,651
PEDIATRIC PULMONOLOGY	3	4,09	12,27
Pediatric Rheumatology	1	3,413	3,413
PEDIATRICS	1	9,703	9,703
PERITONEAL DIALYSIS INTERNATIONAL	2	2,879	5,758
Pharmaceutics	4	6,525	26,1
PHARMACOLOGY & THERAPEUTICS	1	13,4	13,4
PLOS COMPUTATIONAL BIOLOGY	1	4,779	4,779
PLoS One	11	3,752	41,272
Polymers	2	4,967	9,934
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA	1	12,779	12,779
PROGRESS IN NEURO-PSYCHOPHARMACOLOGY & BIOLOGICAL PSYCHIATRY	1	5,201	5,201
PSYCHIATRY RESEARCH	2	11,225	22,45

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Journal	IF	Nº	Amount IF
PSYCHOLOGICAL MEDICINE	5	10,592	52,96
PSYCHOLOGY AND AGING	1	4,201	4,201
PSYCHOPHARMACOLOGY	1	4,415	4,415
RADIOTHERAPY AND ONCOLOGY	3	6,901	20,703
RESPIRATORY MEDICINE	1	4,582	4,582
RESUSCITATION	2	6,251	12,502
REVIEWS IN CARDIOVASCULAR MEDICINE	1	4,43	4,43
REVISTA CLINICA ESPANOLA	2	3,064	6,128
REVISTA DE NEUROLOGIA	8	1,235	9,88
REVISTA DE PSIQUIATRIA Y SALUD MENTAL	3	6,795	20,385
REVISTA ESPANOLA DE CARDIOLOGIA	22	6,975	153,45
REVISTA ESPANOLA DE ENFERMEDADES DIGESTIVAS	6	2,389	14,334
Revista Espanola de Medicina Nuclear e Imagen Molecular	2	1,247	2,494
REVISTA ESPANOLA DE QUIMIOTERAPIA	7	2,515	17,605
REVISTA ESPANOLA DE SALUD PUBLICA	3	1,333	3,999
REVISTA IBEROAMERICANA DE MICOLOGIA	1	1,385	1,385
REVISTA LATINO-AMERICANA DE ENFERMAGEM	1	1,725	1,725
REVISTA LATINOAMERICANA DE HIPERTENSION	2	0,03	0,06
Revista Portuguesa de Cardiologia	2	1,651	3,302
REVUE NEUROLOGIQUE	1	4,313	4,313
RHEUMATOLOGY	4	7,046	28,184
Rheumatology and Therapy	1	4,081	4,081
RHEUMATOLOGY INTERNATIONAL	1	3,58	3,58
Rmd Open	1	5,806	5,806
Saudi Journal of Gastroenterology	1	3,214	3,214
SCHIZOPHRENIA BULLETIN	6	7,348	44,088
SCHIZOPHRENIA RESEARCH	7	4,662	32,634
Science Translational Medicine	1	19,319	19,319
Scientific Reports	24	4,996	119,904

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Journal	IF	N°	Amount IF
SEMINARS IN DIALYSIS	1	2,886	2,886
SEMINARS IN THROMBOSIS AND HEMOSTASIS	1	6,398	6,398
SENSORS	2	3,847	7,694
SEXUALLY TRANSMITTED INFECTIONS	1	4,199	4,199
SIGNAL PROCESSING	1	4,729	4,729
SLEEP	1	6,313	6,313
SLEEP MEDICINE	1	4,842	4,842
STATISTICS AND COMPUTING	2	2,324	4,648
STATISTICS IN MEDICINE	1	2,497	2,497
Stem Cell Reviews and Reports	1	6,692	6,692
STROKE	1	10,17	10,17
SUPPORTIVE CARE IN CANCER	2	3,359	6,718
SURFACE & COATINGS TECHNOLOGY	1	4,865	4,865
SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES	2	3,453	6,906
SURGICAL ONCOLOGY-OXFORD	1	2,388	2,388
Theranostics	1	11,6	11,6
Therapeutic Advances in Gastroenterology	1	4,802	4,802
Therapeutic Advances in Medical Oncology	4	5,485	21,94
Therapeutic Advances in Musculoskeletal Disease	1	3,625	3,625
Therapeutic Innovation & Regulatory Science	1	1,337	1,337
THORAX	1	9,102	9,102
THROMBOSIS RESEARCH	1	10,407	10,407
TRANSBOUNDARY AND EMERGING DISEASES	2	4,521	9,042
TRANSFUSION AND APHERESIS SCIENCE	2	2,596	5,192
TRANSFUSION MEDICINE REVIEWS	1	6,969	6,969
Translational Lung Cancer Research	1	4,726	4,726
Translational Psychiatry	3	7,989	23,967

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Journal	IF	Nº	Amount IF
TRANSLATIONAL RESEARCH	1	10,171	10,171
TRANSPLANT INTERNATIONAL	2	3,842	7,684
TRANSPLANTATION	1	5,385	5,385
TRANSPLANTATION PROCEEDINGS	2	1,014	2,028
Travel Medicine and Infectious Disease	1	20,441	20,441
Trials	3	2,728	8,184
ULTRASOUND IN OBSTETRICS & GYNECOLOGY	1	8,678	8,678
United European Gastroenterology Journal	1	6,866	6,866
Updates in Surgery	2	2,692	5,384
UROLOGIC ONCOLOGY-SEMINARS AND ORIGINAL INVESTIGATIONS	1	2,954	2,954
UROLOGY	2	2,633	5,266
VACCINE	2	4,169	8,338
Vaccines	2	4,961	9,922
VALUE IN HEALTH	1	5,101	5,101
Viruses-Basel	5	5,818	29,09
VOX SANGUINIS	1	2,996	2,996
WOMEN AND BIRTH	1	3,349	3,349
World Journal of Emergency Surgery	1	8,165	8,165
WORLD JOURNAL OF GASTROENTEROLOGY	1	5,374	5,374
World Psychiatry	2	79,683	159,366
WOUND REPAIR AND REGENERATION	1	3,401	3,401
Total general	1265	176,079	9539,5

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
467	88

Training: courses, seminars, and meetings

Since the advent of the pandemic, training activities have been restricted and some of them underwent a process of transformation to online or hybrid formats. For example, weekly seminars were resumed as early as May 2020 and have been held online ever since.

During 2021, the IISGM Training Committee continued working along the same lines as in previous years to detect specific needs in training.

After requesting information from IISGM 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 2021 (<http://www.iisgm.com/actualidad/convocatorias-y-formacion/>).

The training activities offered by IISGM are certified by the Continuing Training Committee of the Health Care Professions of the Autonomous Community of Madrid.

As stated in the Training Plan, during the year 2021, the IISGM 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.

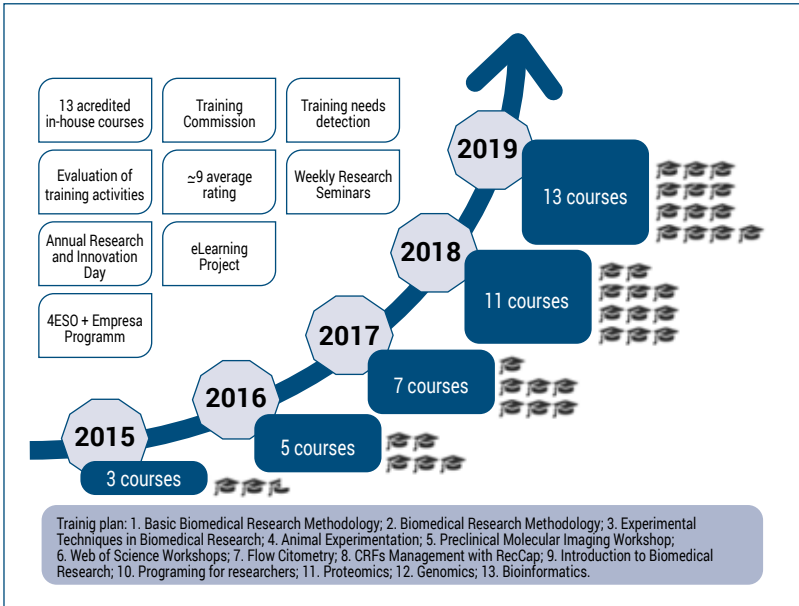
The IISGM has the ideal facilities, equipment, and staff for organizing training activities at the highest level. Therefore, its human and material resources can be appropriately managed to design competitive and high-quality training. The course has very specific elements that set it apart from the 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 Research Seminars Program is continuing, with weekly sessions 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



Clinical Practice Guidelines

Clinical Practice Guidelines		
AREA 2: CARDIOVASCULAR DISEASE	2.01 Natural history of heart disease	3
	2.07 Acute cerebral ischemia. Stroke	4
AREA 3: NEUROSCIENCE AND MENTAL HEALTH	3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment	7
AREA 4: INFECTIOUS DISEASES AND AIDS	4.02 Clinical and epidemiological aspects of HIV infection and associated conditions	1
AREA 5: DISEASES OF THE IMMUNE SYSTEM	5.01 Pathophysiology and clinical research into chronic inflammatory and immunological diseases	2
	5.07 Infections in pediatric patients	28
AREA 6: TRANSLATIONAL ONCOLOGY	6.02 Translational medical oncology and personalized cancer therapy	14
AREA 7: SYSTEMIC DISEASES AND ORGAN TRANSPLANTATION	7.04 Diseases of the critically ill child	8
	7.06 Regenerative medicine in plastic surgery	1
	7.16 Regenerative medicine and system development: cardiovascular and osteochondral	2
	7.20 Anesthesia, toxins, and arrhythmias	1
	7.27 Hospital pharmacy and pharmacogenomics	5
	7.28 Clinical nutrition	4
NURSING CARE GROUP	8.00 Research in nursing	3

Doctoral theses defended

Doctoral theses defended		
AREA 1: BIOMEDICAL ENGINEERING	1.02 Signal processing	1
AREA 2: CARDIOVASCULAR DISEASE	2.01 Natural history of heart disease	5
	2.03 Cardiac cellular electrophysiology	1
AREA 3: NEUROSCIENCE AND MENTAL HEALTH	3.01 Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment	1
AREA 6: TRANSLATIONAL ONCOLOGY	6.02 Translational medical oncology and personalized cancer therapy	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	4
	7.04 Diseases of the critically ill child	1
	7.16 Regenerative medicine and system development: cardiovascular and osteochondral	4
	7.18 Peritransplant evaluation (liver)	1
	7.22 Pathophysiology of the neonate and developing child	1
	7.27 Hospital pharmacy and pharmacogenomics	1
NURSING CARE GROUP	8.00 Research in nursing	2

Cooperative research structures

Cooperative research structures				
		Ciber	Retics	Others
AREA 1: BIOMEDICAL ENGINEERING	Group 1.01: Advanced technology applications and human health	1		1
	GROUP 1.02: Signal processing	1		
AREA 2: CARDIOVASCULAR DISEASE	GROUP 2.01: Natural history of heart disease	1	1	4
	GROUP 2.02: Cardiovascular pathophysiology	1		1
	GROUP 2.03: Cardiac cellular electrophysiology	1		
	GROUP 2.05: Cardiology and heart transplant in children	1		1
AREA 3: NEUROSCIENCE AND MENTAL HEALTH	GROUP 3.01: Neurobiological and psychological bases of mental disorders. Disorders of neurodevelopment	1		1
AREA 4: INFECTIOUS DISEASES AND AIDS	GROUP 4.01: Infectious diseases	1	1	2
	GROUP 4.02: Clinical and epidemiological aspects of HIV infection and associated conditions		1	
AREA 5: DISEASES OF THE IMMUNE SYSTEM	GROUP 5.01: Pathophysiology and clinical research into chronic inflammatory and immunological diseases		1	1
	GROUP 5.02: Molecular biology of HIV	1	1	2
	GROUP 5.05: Pathogenesis of the immunoallergic response	1		

(Continued)

(Continued)

Cooperative research structures				
		Ciber	Retics	Others
AREA 5: DISEASES OF THE IMMUNE SYSTEM	5.06 Immune regulation and homeostasis in diseases of the immune system			1
	5.07 Infections in pediatric patients		1	20
AREA 6: TRANSLATIONAL ONCOLOGY	6.01 Interdisciplinary oncology and biotechnology	1		
	6.02 Translational medical oncology and personalized cancer therapy	1	1	16
	6.03 Genetics and clinical aspects of hematologic malignancies and hematopoietic stem cell transplantation	1		2
	6.04 Surgical oncology			3
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		1	1
	7.02 Pathophysiology and natural history of liver and digestive diseases	1		
	7.04 Diseases of the critically ill child		1	2
	7.05B Pathophysiology, outcome, and therapeutic strategies in chronic respiratory insufficiency and respiratory disorders of sleep		1	5
	7.10 Regeneration and biomaterials in musculoskeletal disease	1		1
	7.18 Peritransplant evaluation (liver)			1
	7.22 Pathophysiology of the neonate and developing child	1		4
	7.25 Artificial circulation laboratory			1
	7.27 Hospital pharmacy and pharmacogenomics			1
7.29 Vascular pathophysiology and pharmacology	1			
NURSING CARE GROUP	8.00 Research in nursing			1

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ESTEVE	SALUD EN ESPAÑA	NOVARTIS
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