SIGMA Research

The ultimate solution for the whole research lifecycle

As open as possible as closed as necessary
SIGMA helps higher education to optimise their academic and research management providing the best IT solutions and services.
Who we are?

We are a non-profit organization made up of 10 of the most important academic institutions in Spain. We strive to boost excellence in academic and research management.
Our mission is:

 ✓ To support higher education and research institutions
 ✓ To optimise their academic and research management processes using the best IT solutions
 ✓ To become the functional and technological model in Europe in order to boost excellency in research and higher education
5 distinguishing characteristics

1. Non-for-profit organisation
   Our only objective is to help you optimise your management whilst minimising costs.

2. Specialisation
   We are committed to providing the best solutions to optimise the research and academic management.

3. Excellency
   Not only do we build software, but we also help our clients carry out the best practices.

4. Leaders in the field
   We aim to be the leaders in the field in a national and European scale.

5. Cloud
   No licensing costs. All our solutions are 100% cloud so you can minimise and optimise your IT investment.
Benefits

1. Adaptability
Our partners take part in the product's roadmap definition.

2. Costs
The collaborative model between partner universities, implies costs reductions in the software development.

3. Best practices
We work together with experts in the field to guarantee a ‘State-of-the-art’ implementation.

4. Quick installation and integration
Installation experienced, our products can be integrated with all kinds of internal and external systems.
Our model

We work in a collaborative model which is recognised by all our partner universities. This unique model allows us to define the best solution for the minimum cost.

SIGMA Comités
- Roadmap definition
- Reporting and follow up of joined projects
- Decision-making body

Working Groups
- Requirements definition and project plan
- Follow up of joined projects (sponsors)
- Testing

Customized Projects
- Requirements definition and project plan
- Follow up of joined projects
- Testing
Focus on Corporate Social Responsibility

SIGMA Learning Center, our training program with which we contribute to the students’ formation and their integration in the workforce.

- 414 students
- 130,000 training hours
- 30% scholarships
- 16% part of our team
- 8.8 satisfaction rating

→ Internship of software programming
Recognised in the field

SIGMA has been included among the best Academic Management solutions in Spain in the Universo Penteo.

Recognition of our SaaS solution as well as our mobile communication Apps PIZARRA. Our Learning Center has been shown as a great example of CSR.
Our international projection

We actively collaborate with European higher education institutions to improve their interoperability, share best practices, and align processes following international regulations and standards.

- We ease the cooperation between European universities and IT managers of research centers in order to facilitate the development of high quality information systems. SIGMA is a board member of EUNIS, and member of euroCRIS, and EAIE.

- We boost the management and knowledge dissemination of European institutions’ scientific production using standards such as the CERIF model.

- We support the experience exchange among institutions worldwide to encourage their internationalisation.
Our service model

SIGMA offers you a differential maintenance service; it offers proximity, quality and constant improvement.

- ISO/IEC 20000-1 Certification
  Management system for SIGMA Academic's service
- Functional support
- Portal. Reference and project management
- “Bag of hours”. Own developments
- Maintenance, SLA, reporting, and follow up
- Implementation services on demand
- Coordination. Quarter reports
- Customer satisfaction surveys
SIGMA's solutions are flexible, agile, and adapted to new digital demands.

**Social**
We ease collaboration among student communities as well as teaching and research staff

**Mobile**
Access to applications and services addressed to students and teaching communities through the App Mobile

**Analytics**
Advanced analytics tools to ease the information visualisation and help the decision process

**Cloud**
Available as a service (SaaS), no licence or infrastructure investments needed
More than a product

Experience

Proximity

CSR

Open innovation

Data analytics

Semantics

Machine Learning

Service orientation

Client
Our products

Two solutions: one for academic management and the other for research management

SIGMA Academic
We support the optimisation of your academic management with best practises aligned with European standards

SIGMA Research
We support the optimisation of your research lifecycle; from the funding process to the results share based on European standards
SIGMA Research is a state-of-the-art 100% cloud platform that supports and enhances the whole research lifecycle; from the moment the demand is generated to the moment the demand is satisfied: it covers research funding, project management, evaluation and Benchmarking, scientific production management and knowledge dissemination.
Our solution for research

SIGMA Research. A 100% cloud solution supporting the whole research lifecycle.

Demand
Ideas and opportunities → institutional research fields and policies

Funding
Public funding management (calls, grants, sponsorships…) and private funding management (contracts and agreements)

Impact Management
Bibliometrics and research information analysis

Scientific Production
Reference, project, and CVs management (researchers, groups, departments…)

Knowledge Dissemination
Research information publishing, and share (research portals and expert guides)
An integral solution

Our solution provides all the functionalities for a state-of-the-art research support platform.

- Current research information system database
- Scientific data import at international level
- Open Access management
- Standards (CERIF, ORCID, Casrai…)
- References management
- Curricular management
- Public and private funding management
- Project management
- Bibliometrics, analytics and altmetrics
- Evaluation and reporting
- Scientific production web portals
- Expert directories
With a goal:

...collect data once assuring the quality and integrity of the research information, and then reuse it many times.
An integral solution

It is not only about software implementation, it is about accompanying the institution throughout the whole process.

- Institutional research main procedures analysis
- Analysis of preexisting data
- Information load and data depuration
- Co-designing pilot process
SIGMA Research

Scientific production

- Research activities management
- Automatic uploads, repository integration
- Project management
- Bibliometrics
- Portals and expert directories
- Reporting, and data analysis
- Visualisation

Management

- Public and private funding
- Project management
- Evaluation
- Reporting y data analysis
SIGMA Research

Scientific production
SIGMA Research scientific production

WEB OF SCIENCE™
Scopus®
Dialnet
ERPs (HR, Financial...)
Bibliometric indicators

CRIS CERIF

BIBTEX
Altmetric
Network medicine analysis of COPD multimorbidities

Solene Grosdidier1, Antoni Ferrer2, Rosa Fanas3, Janet Piñero1, Josep Roca4, Isora Cosío5, Aníbal Aguas6, Joaquim Gea7, Ferran Sanz1 and Laura I Furlong7

Abstract

Background: Patients with chronic obstructive pulmonary disease (COPD) often suffer concomitant disorders that worsen significantly their health status and vital prognosis. The pathogenic mechanisms underlying COPD multimorbidities are not completely understood, thus the exploration of potential molecular and biological linkages between COPD and their associated diseases is of great interest.

Methods: We developed a novel, unbiased, integrative network medicine approach for the analysis of the diseases, interactome, the biological pathways and tobacco smoke exposome, which has been applied to the study of 16 prevalent COPD multimorbidities identified by clinical experts.

Results: Our analyses indicate that all COPD multimorbidities studied here are related at the molecular and biological level sharing genes, proteins and biological pathways. By inspecting the connections of COPD with their associated diseases in more detail, we identified known biological pathways involved in COPD, such as inflammation, endothelial dysfunction or apoptosis, serving as a proof of concept of the methodology. More interestingly, we found previously overlooked biological pathways that might contribute to explain COPD multimorbidities, such as hemostasis in COPD multimorbidities other than cardiovascular disorders, and cell cycle pathways in the association of COPD with depression. Moreover, we also observed similarities between COPD multimorbidities at the pathway level, suggesting common biological mechanisms for different COPD multimorbidities. Finally, chemicals contained in the tobacco smoke target an average of 69% of the identified proteins participating in COPD multimorbidities.

Conclusions: The network medicine approach presented here allowed the identification of plausible molecular links between COPD and comorbid diseases, and showed that many of them are targets of the tobacco exposome, proposing new areas of research for understanding the molecular underpinning of COPD multimorbidities.

Keywords: Disease, Systems biology, Network medicine, Comorbidity, Multimorbidity, COPD, Tobacco chemicals
The Portal includes an Intranet for the researchers that let manage all their activities and profile in the same tool.
Once in the Intranet, researchers or other related staff can update, add or delete activities. Also, they can update their profile information.
Researchers or the institution can manage all kinds of activities. Also, the researchers can highlight the activities they want, appearing first.

### PUBLICATIONS

#### Journal articles (166)


Can access all the research group information in one click and access their members information.
Experts guide (UPF)

Enter a keyword or the name of a researcher to find:

Genomic
Advanced search

18 search results for: Genomic

If you do not reach an expert, you can call 93 542 21 00 / 616 10 75 18

ALBÀ SOLER, MARIA DEL MAR

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Areas of Research:
- Genomics
- Computational Genomics

Expert: Genomes and biological maladies. Senyals de transcriptió i regulació.

Publications
- Journal articles (69)
- Book chapters (5)
- Conferences (37)

Contracts & Grants
- Projects (12)
- Other grants (8)

Other
- Doctoral thesis (10)
- Awards (1)
- Research stays (5)
- Courses and seminars given (14)
- Experience of R+D management (3)
- Editorial collaborations (8)
- Participation on committees (5)
- Event organisation (7)
- Research lines (1)
- Other activities (7)

Also the institution can bring this information closer to the Media through the Experts directory.
SIGMA Research reports and analytics

Publications & Bibliometrics

- Num. of Articles: 5,5k
- Num. of Authors: 1,49k
- Num. of Journals: 2,28k
- Scopus Citations: 61,76k
- WOS Citations: 57,11k

Top Journals by Articles

1. PLoS ONE [1937-6783] 1,83
2. Gaceta sanitaria [8213-9111] 57
3. La Vanguardia: Culturas [16... 48
4. Inf. Genet. 2012 [18... 37
5. Proceedings of the National Academy of Sciences [10... 33
6. Lecture Notes in Computer Science / Art... 48
7. Nucleic Acids Research [20... 35
8. Archivos de Bronconeumol. 47
9. Ultrasound in Medicine & Biology [13... 35

Top Citations Articles

1. "If you are good, I get better": the role of social hierarchy in perceptual decision-making
   - Total Scopus Citations: 15
   - Total WOS Citations: 10

2. "Woe Be It To Us If They Win!": National Socialist Treatment of the Spanish 'Volunteer' Workers
   - Total Scopus Citations: 1
   - Total WOS Citations: 2

   - Total Scopus Citations: 0
   - Total WOS Citations: 0

4. "A Casual Ballad" (Mary Stuart Boyd)
   - Total Scopus Citations: 0
   - Total WOS Citations: 0

Top H-Index Authors

1. SERRA GUIJO, RODRIG
   - Max H-Index Scopus: 65
   - Max H-Index WOS: 49

2. MARTINEZ COMAS, DAVID
   - Max H-Index Scopus: 43
   - Max H-Index WOS: 46

3. DEU SUNYER, JORDI
   - Max H-Index Scopus: 72
   - Max H-Index WOS: 45

4. LOPEZ MALDONADO, RAFAEL
   - Max H-Index Scopus: 53
   - Max H-Index WOS: 44

5. BOGUE ANTO, JOSÉ MARIA
   - Max H-Index Scopus: 2
   - Max H-Index WOS: 3

6. BUSQUETS BERTRANPETIT, JAUME
   - Max H-Index Scopus: 52
   - Max H-Index WOS: 40

7. MAJO CALAFELL, FRANCESC D'ASSIS
   - Max H-Index Scopus: 48
   - Max H-Index WOS: 39
Finally, we are working with an implementation of the Open Source tool VIVO, to have the semantic version of the Scientific output Portal.

And working with the integration with an Open Data repository to make the data FAIR.
SIGMA Research

SIGMA Research Management
SIGMA Research management

Programs → Calls → Applications

Concession and project activation

Report and justification

Refusal and close of file

Transfer to scientific production
- Project
- Grants
- Agreement
- Congresses
- Overnight stay
- ....
SIGMA Research management

- Previous negotiation of contract
- Signature
- Contract/agreement activation
- State management
- Refusal and close of file
- Report and justification
- Transfer to scientific production
  - Agreements
Concession and project activation
Welcome to the Open World!

We work to boost your research!

Thank you for your attention.

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