

SPECIAL TRACK: Generative AI in Healthcare: Models, Agents, and Clinical Decision Support (IAGAM)





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Generative artificial intelligence (Generative AI) is rapidly transforming the healthcare sector, offering new opportunities for clinical knowledge generation, medical task automation, and improved decision support. This special session aims to bring together recent research and innovative applications that explore the role of generative models and intelligent agents in clinical settings, with a particular focus on their ability to provide reliable, ethical, and effective support in medical practice.

This special session aims to **explore the state of the art in the use of generative models in the clinical setting, share experiences on the implementation of agents in healthcare systems, and analyse evaluation and validation frameworks for generative AI in clinical decision-making**. In addition, it aims to foster interdisciplinary collaboration between AI, medicine, bioethics and healthcare policy.



Topics of interest for this special session include (but are not limited to) the following:

- Generative models applied to structured and unstructured clinical data.
- Conversational agents in clinical contexts (e.g., automated medical history, triage).
- Automatic generation of medical texts (medical record summaries, discharge notes, etc.).
- Evaluation of generative models in real or simulated healthcare settings.
- Ethical and regulatory considerations in the use of generative AI in healthcare.
- Integration of generative AI into medical record systems.



- Dra. Cristina Rubio-Escudero, Universidad de Sevilla (US), Spain.
- **Dr. Miguel Ángel Armengol de la Hoz**, Head of the Data Science Laboratory at the Fundación Progreso y Salud, Spain.
- Dra. Belén Vega Márquez, Universidad de Sevilla (US), Spain.
- Dr. David Gutiérrez Avilés, Universidad de Sevilla (US), Spain.
- Dra. Laura Melgar García, Universidad Politécnica de Madrid (UPM), Spain.
- **Isabel Amaya Rodríguez**, Data Science Laboratory at the Fundación Progreso y Salud, Spain.



For further information, please visit the CIABiomed 2025 website at <u>https://2025.iabiomed.org/</u> or contact the organisers of this special session at <u>crubioescudero@us.es</u>.



Type of submissions:

Each paper should be prepared following the <u>Lecture Notes in</u> <u>Bioinformatics</u> (LNBI) format from Springer, the template for which is available at <u>https://www.springer.com/gp/computer-science/lncs/conference-</u> <u>proceedings-guidelines</u>. The template can also be found on the Overleaf platform: <u>https://www.overleaf.com/latex/templates/springer-lecture-notes-in-</u> computer-science/kzwwpvhwnvfj#.WuA4JS5uZpi.

CIABioMed 2025 accepts four types of submissions:

- <u>Regular papers</u>: This type of paper is limited to a range of 12-15 pages.
- <u>Short papers</u>: These papers are limited to a range of 6-11 pages.
- <u>Posters papers</u>: This contribution is limited to a total of between 4-6 pages, and it is not possible to extend the length of the document. This type of document will not include an oral presentation during the conference. Authors of this type of document should prepare a real poster to be displayed during the conference. For presentation purposes at the conference, authors should prepare the poster in portrait format. Accepted dimensions are 60 (width) x 80 (length).
- <u>Breakthroughs papers</u>: This modality aims to give visibility to recent research and bring these advances closer to the scientific community, fostering interdisciplinary knowledge and connections between researchers from different areas such as computer science, biology, medicine and bioengineering. Breakthroughs papers may refer to work that has already been published, although the content of the document must be completely original. The contribution is limited to 2-4 pages, and it is not possible to extend the length of the document. The duration of the oral presentation of this type of document will be shorter than the regular one.

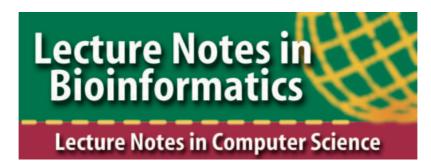
Regular and short papers accepted will be included with their own DOI in <u>Lecture Notes in Bioinformatics (LNBI)</u> from Springer. Poster papers accepted will also be published in Lecture Notes in Bioinformatics (LNBI) grouped under the same DOI. In order to encourage more developed contributions, authors are encouraged to expand their papers whenever possible, so that they can be considered as regular papers. The accepted breakthrough papers will be published in the society's own proceedings which will be available on the official IABiomed website.



Submission guidelines:

Papers should be submitted electronically via the following website: https://meteor.springer.com/CIABiomed2025

All submitted papers **must be written in English** and will be **reviewed by single-blind peer review** by at least three members of the Program Committee. Papers must be original and must not have been published previously. In addition, submitted documents must comply with Springer's code of conduct: <u>https://www.springernature.com/gp/authors/book-authors-code-of-</u> <u>conduct</u>



Regular and short papers accepted will be included with their own DOI in <u>Lecture Notes in Bioinformatics (LNBI)</u> from Springer. Poster papers accepted will also be published in Lecture Notes in Bioinformatics (LNBI) grouped under the same DOI. In order to encourage more developed contributions, authors are encouraged to expand their papers whenever possible, so that they can be considered as regular papers. The accepted breakthrough papers will be published in the society's own proceedings which will be available on the <u>official IABiomed website</u>.

Publication is conditional on the registration and presentation of the paper at the conference by one of the authors. Accepted oral presentations and posters **may be presented at the conference in Spanish**.

Once the conference is over, the accepted contributions will be published in the corresponding proceedings depending on the type of submission made.