



WASHINGTON D.C.
USA

JULY 8-10, 2027

CALL FOR PAPERS

The **Global Youth AI & STEM Foundation (GYST-AI)** is excited to announce the **inaugural International NextGen Conference on AI in Biomedical Sciences (inCABS 2027)**. inCABS is a forum **created by and for high school students** interested in AI, medicine, biology, and the future of science. It brings together students from around the world to share their research, exchange ideas, and connect with peers who are exploring these rapidly evolving fields. What makes inCABS different is that you're not just learning from professors or professionals; you're learning alongside other high school students who are exploring the same questions. Whether you have experience conducting research or are just beginning, the conference is designed to help you gain new perspectives, engage with different approaches, and explore the many possibilities at the intersection of AI and biomedical science.

The official working language of the conference is English. All papers, presentations, and conference communications shall be conducted in English.

CONFERENCE THEME: Artificial Intelligence in Biomedical Sciences

Artificial intelligence has emerged as one of the most influential technologies in modern biomedical sciences. From accelerating genomic research and drug discovery to improving clinical diagnosis and healthcare delivery, AI is redefining how scientific discoveries are made and translated into real-world applications. The conference welcomes research spanning computational, experimental, ethical, engineering, and interdisciplinary perspectives related to AI in biomedical sciences.

Research will be organized around four primary conference tracks, while remaining open to other relevant topics:

- **AI for Healthcare, Diagnostics, and Clinical Decision Support**
- **AI in Biomedical Research, Genomics, and Drug Discovery**
- **Responsible AI, Ethics, and Policy in Biomedicine**
- **Emerging AI Technologies and Future Biomedical Innovation**

DEADLINES

January 24, 2027

Abstract Submissions

February 1, 2027

Full Paper Submissions

April 2, 2027

**Acceptance
Announcement**

April 30, 2027

**Camera-Ready
Submissions**

April 30, 2027

**Author Registration
Deadline**

May 14, 2027

Early Registration Deadline

May 15, 2027

**Regular Registration Opens
(open until conference days)**

July 8-10, 2027

Conference Days

MORE INFORMATION AT [INCABS-2027.GITHUB.IO](https://incabs-2027.github.io)

We invite original research papers addressing the following topics and related areas:

AI for Healthcare, Diagnostics, and Clinical Decision Support

Artificial intelligence is increasingly supporting clinicians and healthcare systems through improved diagnostics, predictive analytics, personalized medicine, and intelligent clinical decision-making. Research in this track focuses on the development or evaluation of AI technologies that improve patient care, healthcare accessibility, and medical decision support.

Topics of interest include, but are not limited to:

- Medical image analysis
- Computer vision for healthcare
- AI-assisted diagnosis
- Clinical decision support systems
- Disease prediction and risk assessment
- Precision and personalized medicine
- Electronic health record analytics
- Wearable health technologies
- Remote patient monitoring
- Telemedicine and digital healthcare
- Healthcare workflow optimization

AI in Biomedical Research, Genomics, and Drug Discovery

Artificial intelligence has become an essential tool for accelerating biomedical discovery. This track welcomes research applying AI to biological sciences, pharmaceutical research, computational biology, and laboratory science. Students are encouraged to explore how AI can improve our understanding of biological systems, identify therapeutic targets, discover new medicines, and analyze complex biomedical datasets.

Topics of interest include, but are not limited to:

- Drug discovery
- Drug repurposing
- Protein structure prediction
- Computational biology
- Bioinformatics
- Genomics
- Transcriptomics
- Systems biology
- Biomarker discovery
- Molecular modeling
- AI-assisted laboratory automation
- Biomedical data analysis

Responsible AI, Ethics, and Policy in Biomedicine

As AI becomes increasingly integrated into healthcare and biomedical research, ethical, legal, and societal considerations are becoming equally important. This track focuses on developing trustworthy, transparent, fair, and responsible AI systems while considering their broader impacts on individuals and society. Research addressing governance, explainability, privacy, bias, and regulatory frameworks is especially encouraged.

Topics of interest include, but are not limited to:

- Ethical AI in medicine
- Algorithmic bias and fairness
- Explainable and interpretable AI
- Responsible AI development
- Biomedical data privacy
- Cybersecurity for medical AI
- Regulatory frameworks
- AI governance
- Health equity
- Patient trust and transparency
- Societal implications of AI in healthcare





Emerging AI Technologies and Future Biomedical Innovation

The future of biomedical sciences will be driven by interdisciplinary innovation. This track highlights emerging technologies that combine AI with engineering, robotics, neuroscience, biotechnology, and digital health to address future biomedical challenges. Submissions may present novel research, conceptual frameworks, prototype systems, or forward-looking analyses that demonstrate innovative applications of AI.

Topics of interest include, but are not limited to:

- Medical robotics
- AI-assisted surgery
- Brain-computer interfaces
- Biomedical engineering
- Smart prosthetics
- Digital twins in healthcare
- Internet of Medical Things (IoMT)
- Multi-modal AI
- Digital health ecosystems
- AI for biotechnology
- Future biomedical technologies

Submission Guidelines

Authors are invited to submit original research papers relevant to the conference theme or one of the conference tracks.

Paper Requirements:

- Papers must be written in **English**.
- Papers are **limited to six (6) pages**, including figures, tables, references, and appendices.
- Submissions must present **original work** that hasn't been previously published and is not under review elsewhere.
- **Papers must be submitted as a PDF**
 - Submit papers (Abstract, final, and camera-ready) at:
<https://cmt3.research.microsoft.com/inCABS2027/Submission/Index>
- Authors should clearly describe the research motivation, methodology, results (where applicable), discussion, limitations, and conclusions.
- **Formatting** instructions and the official conference template can be found at:
<https://www.acm.org/publications/proceedings-template>

Both individual and team submissions are welcome!

Review Process

All submitted manuscripts will undergo a rigorous peer-review process administered by the **Technical Program Committee (TPC)**. Each submission will be evaluated by approximately three independent reviewers with expertise relevant to the selected conference track.

Evaluation criteria include:

- Originality and innovation
- Scientific and technical merit
- Methodological rigor
- Significance and impact
- Relevance to the conference theme
- Quality of writing and organization

The Technical Program Committee will make final acceptance decisions based on reviewer recommendations and the overall quality and balance of the conference program.

Eligibility

The conference welcomes submissions from high school students worldwide, either individually or as a team.

There are no geographic restrictions on participation.

All high schools (including homeschools) need to be **recognized by their respective country's Ministry of Education or equivalent government organization.**

Presentation and Publication

Accepted papers will be invited for presentation in person as either:

- Oral Presentations
- Poster Presentations

Authors of accepted papers will be required to submit a final camera-ready version incorporating reviewer feedback, where applicable. **At least one author of every accepted paper must register for the conference by the Author Registration Deadline and present the paper during the conference.** Papers without a registered presenting author may be removed from the conference program and may not be included in the official conference proceedings. Accepted and presented papers that satisfy all submission and registration requirements may be **published in the official Proceedings of the International NextGen Conference on AI in Biomedical Sciences (inCABS 2027).**

Awards

To recognize outstanding student research, inCABS is expected to set up the following awards:

- Best Paper Award
- Best Oral Presentation Award
- Best Poster Presentation Award
- Outstanding Innovation Award
- Outstanding Interdisciplinary Research Award

The Organizing Committee may announce additional awards.

Academic Integrity

Authors certify that submitted work represents their **own original research and that all sources, data, software, and collaborative contributions have been appropriately acknowledged.** The conference maintains a strict policy regarding plagiarism, fabrication, falsification, duplicate submission, and other forms of academic misconduct. Violations may result in rejection or withdrawal of submissions.

Contact

The International NextGen Conference on AI in Biomedical Sciences (inCABS 2027)

Website: <https://incabs-2027.github.io/>
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Join us at the inaugural inCABS 2027!

The International NextGen Conference on AI in Biomedical Sciences seeks to empower the next generation of researchers by providing an international forum for scientific exchange, collaboration, and innovation. Whether your work advances AI-driven healthcare, accelerates biomedical discovery, explores the ethical dimensions of intelligent systems, or imagines the future of medicine, we invite you to share your research with a global community of young scholars. We look forward to welcoming you to inCABS 2027 as we begin building an international tradition of excellence in student-led biomedical AI research.

