EDITORIAL

# Editorial: Launching a New Era in Computational Bioscience & Engineering

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It is with great enthusiasm and responsibility that we jointly address you, our inaugural readership and contributors, as the Editor-in-Chief and Co-Editor-in-Chief of *Computers in Engineering and Biosciences* (*CEB*)—a pioneering open-access platform launching in 2025 at the intersection of computational methods, engineering innovations, and the biosciences.

## A Journal Born for Convergence

The rapid evolution of computational approaches and engineering technologies has catalyzed breakthroughs across biomedical research, biotechnology, and bioengineering. The *CEB* has been conceived specifically to foster synergy, offering a peer-reviewed forum for research that seamlessly blends quantitative, computational, and biological engineering insights. Here, we transcend traditional academic boundaries to present a cohesive forum for research that intertwines mathematical modeling, engineered systems, and experimental biosciences.

Our scope welcomes research spanning:

- Computational modelling of biomolecular systems and cellular networks,
- Engineering biology: biomaterials, biofabrication, tissue engineering,
- Machine-learning-driven discovery in genomics, proteomics, metabolomics,
- Bioinstrumentation, sensors, and devices for diagnostics or environmental monitoring,
- Systems biology and biomolecular simulations,
- Computational design in synthetic biology and metabolic engineering,
- Integration of simulations or models with laboratory or clinical testing,
- AI-based diagnostics, biosensors, and biomedical instrumentation.

Our ambition is to accelerate research that delivers both conceptual advances and tangible biological or engineering outcomes. Our goal is to elevate work that moves beyond discipline-specific silos to unlock real-world impact—from lab to clinic, industry to ecology.

## Editorial Vision, Strategy & Priorities

As stewards of the *CEB*, we are committed to:

- **Rigorous, relevant scholarship:** Prioritizing high-quality methodological innovation tied to experimental or engineering validation.

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- **Scientific integrity and impact:** Rigorous peer-review to ensure significance and reproducibility.
- **Inclusive excellence:** Diversifying our editorial board and author base—particularly elevating early-career scientists and underrepresented groups globally.
- **Open science:** Advocating data/code sharing, reproducibility, and FAIR principles to foster transparency and reuse.
- **Operational fairness and speed:** Efficient workflows that respect authors' time and effort.
- **Community-driven growth:** Encouraging contributions from diverse geographic regions, career stages, and disciplinary backgrounds.
- **Timely, constructive peer review:** Balancing speed with thorough feedback and integrity.

The *CEB* will publish original research articles, comprehensive reviews, technical and methods papers, and thematic special issues that respond to emergent scientific and societal needs. Special issues will spotlight high-impact themes such as synthetic bio-platforms, AI in biotechnology, or biomaterials for sustainability.

## Ethical Science, Challenges & Responsibilities

With great opportunity comes great responsibility. As computational and engineering capabilities scale, so do concerns involving model interpretability, biosafety, ethical oversight, and translational relevance. The *CEB* will welcome critical perspectives addressing:

- Benchmarking and validation of computational-experimental methodologies,
- Ethical and safe design in engineering biology,
- Transparency in AI-driven biological research,
- Policy, regulation, and public engagement relevant to applied bioscience and biotechnology,
- Regulatory, policy, and public communication surrounding biotech innovations.

In a world facing health, environmental, and sustainability crises, the *CEB* aims to be a platform not only for innovation—but for responsible innovation.

## Call to the Global Community

The *CEB* is yours to build. Its success depends on active participation. We warmly invite researchers worldwide to:

- Submit high-impact multidisciplinary work at the nexus of computation and engineering bioscience,
- Serve as peer reviewers and mentors to junior scientists—your expertise defines our scholarly standards,
- Propose and guest-edit special issues on transformative topics,
- Engage with us—share feedback, suggest improvements, and help shape the journal's future.

We thank the ICCK Publishing Team and the founding editorial board for their trust and support. Together, we are establishing a vibrant, inclusive, and impactful scholarly home for interdisciplinary biotechnology and engineering research.

We look forward to receiving your contributions and working with the community to elevate both the science and outreach of the *CEB*. Together, we are building the *CEB* into an international hub for convergent innovation in computational biology and engineering.

**Dr. Ghulam Rasool**
Editor-in-Chief

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Co-Editor-in-Chief

*Computers in Engineering and Biosciences* (*CEB*)

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Ethical Approval and Consent to Participate

Not applicable.

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