

SBBf 2025



49th Annual Meeting of the Brazilian Biophysical Society

October 28 to 31 - UNICAMP, Campinas, SP



Welcome to the 49th Annual Meeting of the Brazilian Biophysical Society!

Dear Colleagues,

Welcome to the **49th Annual Meeting of the Brazilian Biophysical Society (SBBf)**, to be held at **Unicamp**, in Campinas, SP, from **October 28 to 31, 2025**.

The organizing committee has prepared an exciting program featuring **plenary lectures, symposia, and poster sessions**.

 **October 28, 2025 – Opening session and check-in**

Venue: **Faculty of Medical Sciences (FCM) – Unicamp**

 **Rua Albert Sabin, Cidade Universitária, Campinas – SP, ZIP code 13083-894**

 **Auditorium 5**

 **October 29–31, 2025 – Scientific activities and presentations**

Venue: **Unicamp Convention Center**

 **Avenida Érico Veríssimo, 1.255, Cidade Universitária, Campinas – SP, ZIP code 13083-851**

We look forward to seeing you at UNICAMP!

SBBf Organizing Committee

THE ROLE OF THE CHAPERONE CSGC IN REGULATING THE AGGREGATION OF THE AMYLOID PROTEIN CSGA FROM ESCHERICHIA COLI

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Abstract

Abstract

Biofilms are communities of microorganisms embedded in an extracellular matrix that provides protection against antimicrobial agents and facilitates the exchange of resistance genes, making them major contributors to the antimicrobial resistance crisis. A key component of this matrix is curli fibers—functional amyloids produced by bacteria such as *Escherichia coli*—which promote cell adhesion and ensure biofilm stability. The accessory protein CsgC plays a pivotal role in modulating curli fiber polymerization, contributing to the structural integrity of the biofilm. In this work, we present a robust protocol for the recombinant expression and purification of CsgC, aiming to further investigate its biophysical properties. Circular dichroism (CD) analyses allowed us to gain deeper insights into the secondary structure of CsgC, suggesting a β -sheet-rich conformation over time, consistent with predictions from the literature. CD assays were also performed in conjunction with a PhD research project, enabling us to investigate structural differences in CsgA polymerization (another curli protein) in the presence and absence of CsgC. This knowledge is fundamental for advancing the understanding of the molecular mechanisms underlying biofilm formation in *E. coli*, ultimately contributing to the development of new strategies to combat antimicrobial resistance. This work was supported by the Fundação de Amparo à Pesquisa do Estado de São Paulo - FAPESP (2022/06006-0)

Share your ideas or questions with the authors!



Did you know that the greatest stimulus in scientific and cultural development is curiosity? Leave your questions or suggestions to the author!

Programme

18:30 to 20:00 on 10/30/2025

UNICAMP Multidiscip...

Institutions

¹ Universidade de São Paulo

² Instituto de Física de São Carlos (IFSC), USP

Track

- 18. Protein Structure and Conformation

Keywords

CsgC

Biofilms

Functional Amyloid

Chaperone