

Postdoc Fellow

Location: Institute of Chemistry - Unicamp - Campinas/SP

Posting Date: June 10th 2022

Supervisor: Prof. Watson Loh

Co-Supervisor: Prof. Fernando Carlos Giacomelli

Electrostatic Complexes for Gene Therapy

Job Description: Full-time postdoctoral position funded by FAPESP and lasting two years is available to conduct investigations within the framework of polymeric vectors (polycations and ionic-neutral block copolymers) towards the formation of DNA- and RNA-based polyelectrolyte complexes (PEC) and complex coacervates core micelles (C3Ms). The investigations aim to (i) comprehend the influence of different polymer architectures and chemical nature of complexing agents with respect to the strength of nucleic acid binding and mechanism of polymer-DNA binding, (ii) determine complex nanoparticle composition and probe their structural features, and (iii) correlate dynamics, thermodynamics and structural parameters of the supramolecular assemblies with biological outputs (cellular uptake and gene transfection).

Qualifications: PhD. in Chemistry, Physics, Materials Science or related area (received in the last 6 years), ideally with a proven track record in polymer colloids, scattering and calorimetric measurements. We look for a highly motivated member with interpersonal skills who can contribute to the lab community, and with disposition for international internship. Proficiency in spoken and written English is required.