Postdoctoral & Research Engineer Positions:

Computational Modeling & RNA Drug Delivery

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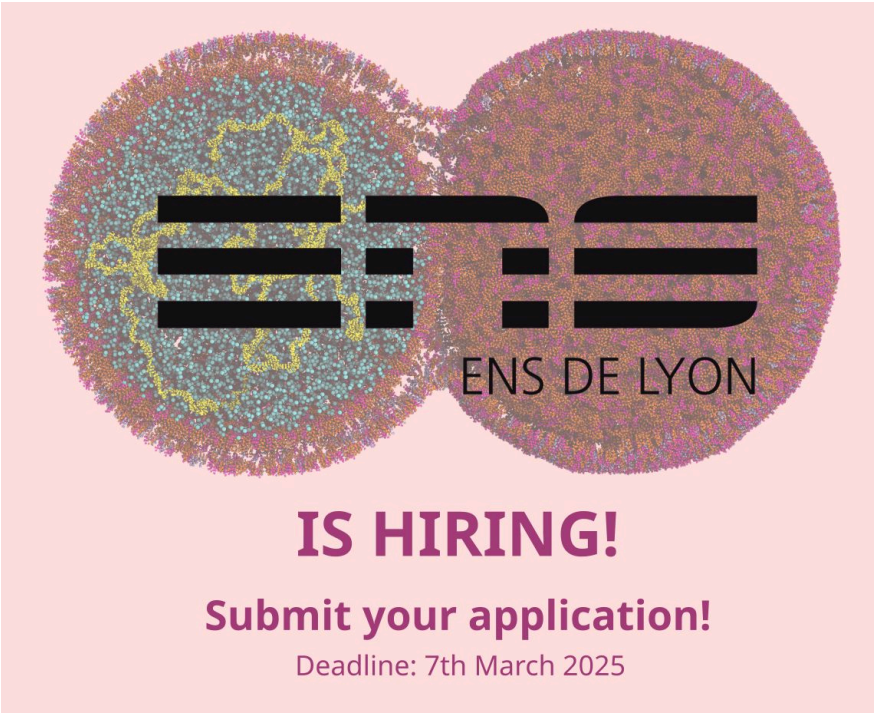
DAMM team - Dynamics and Control of Macromolecular Assemblies and Molecular Machineries

🔬 About the Project

Our research aims to advance **RNA delivery systems** by integrating **Coarse-Grained Molecular Dynamics (CG-MD) simulations**, **machine learning (ML)**, and **computational modeling**. Key areas include:

- **Lipid Nanoparticle (LNP) Characterization & Optimization** for mRNA therapeutics.
- **Molecular Interactions of LNPs & RNA**, including structural and dynamic insights.
- **Predicting RNA Delivery Efficiency** using ML & MD simulations.
- **Integrating Computational & Experimental Data** for enhanced drug design.



🔍 Open Positions & Candidate Requirements

1. Postdoctoral Fellow – Computational Modeling & AI for LNP-RNA Vaccine Delivery

Requirements:

- PhD in **Computational Biophysics, Molecular Modeling, Chemistry, Bioinformatics**, or a related field.
- Experience in **Molecular Dynamics (MD) Simulations**, preferably **Coarse-Grained models**.
- Knowledge of **Lipid Simulations, LNP Modeling, or RNA-Lipid Interactions**.
- Strong coding skills (**Python, Bash, GROMACS**, or similar).
- Experience with **Machine Learning** applied to molecular modeling (preferred).

2. Research Engineer – Computational Pipeline Development for LNP-RNA Vaccines

Requirements:

- MSc in **Computational Biophysics, Molecular Modeling, Chemistry, Bioinformatics**, or a related field.
- Strong **programming & automation skills** for developing computational pipelines.
- Familiarity with **MD simulations and/or computational modeling** (preferred).
- Experience with **Machine Learning for Molecular Modeling** (preferred).

💡 What We Offer

- **Cutting-Edge Research Environment**: Conduct high-impact simulations and ML-based modeling.
- **Interdisciplinary Collaboration**: Work with **computational chemists, biophysicists, and AI experts** in academia & industry.
- **High-Performance Computing (HPC) Resources**: Access to top-tier simulation infrastructure.
- **Opportunities for Publications & Innovation**: Contribute to **high-impact journals** and potential patents.
- **Competitive Salary & Benefits**: Based in **France**, in a dynamic and collaborative academic setting.

📧 How to Apply

Deadline: March 7, 2025
Email Subject: "ENS Postdoc/Engineer Application"
Submit applications to: paulo.telles_de_souza@ens-lyon.fr

Required Documents:

1. **Curriculum Vitae** (max. 3 pages)
2. **Motivation Letter** explaining your interest & experience
3. *(Optional for Postdocs)* **Short Research Proposal** aligned with the project

📢 Join us in shaping the future of **RNA therapeutics & computational modeling!**