Funding available immediately

Development and Application of a Virtual Reality Immersive Modelling Platform for Enabling Drug Discovery

Project description

We are seeking a highly motivated candidate to design and implement a **next generation immersive visualization platform**. The successful candidate will develop, evaluate and integrate innovative features from Virtual Reality and 3D user interaction into a drug discovery workflow. With a user-centered and iterative approach, each feature will be evaluated both in Paris and in Belgium, taking into account the experience and the feedback from UCB Biopharma collaborators. Project foundations were previously established (see e.g. UnityMol), providing a defined framework to get started. Using **virtual reality headsets**, you will implement readily usable next generation immersive design tools.

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Research facilities

This project is funded by **UCB a patient-centric biopharma leader** located near Brussels, Belgium in collaboration with the LIMSI and LBT CNRS research units located near Paris. These labs conduct research on Virtual Reality, Computational Biology & Chemistry. They participate in Equipex and Labex excellence in science programs. As part of the **CACSICE Equipex**, the candidate will have access to a **large high-resolution display wall** and a state-of-art VR CAVE with 2-user adaptive stereoscopy for immersion.

About the host institute

The "Institut de Biologie Physico-Chimique" was created in 1930 by the Foundation Edmond de Rothschild. It is associated with the **CNRS** (Centre National de la Recherche Scientifique), a leading international scientific institution offering an exceptional environment to scientists early in their career, with a dynamic international exposure animated by regular seminars and meetings.

Qualification and experience

A PhD or engineering degree in relevant fields (Computer Science, Structural Biology, Computational Chemistry,..) and at least one publication in a peer reviewed journal or at a leading conference are reguired. The successful applicant should have excellent developer skills and a strong background in software development (graphics, shader programming, real time applications) with significant experience either in 3D visualization and interaction, or in Virtual Reality. Experience in modelling, animation or game design software (Unity, Blender, Unreal), and a background in structural biology or structure-based drug design would be appreciated. The candidate should also be familiar with at least one modern programming language. Evidence of the ability to undertake advanced software development is essential, as are good communication and organisational skills. Expectations summary:

• Skills : Virtual Reality, Human Computer Interaction, 3D User Interaction, Molecular Visualisation

- Background : Molecular Science, Structural Biology, Computational Chemistry, Molecular Modelling and Simulation
- Software development frameworks : Unity, 3D/UnityMol
- Languages : C#, javascript or C++, Python,...

- Hardware : Head Mounted Displays, 3D user interaction devices
- Fluent in English

Closing date: 2nd November 2016

Inspired by patients. Driven by science.

Interested candidates should send a CV and a statement of research interests, including the names of three referees with contact information, as a PDF document to <u>baaden@ibpc.fr</u>.

Executive summary:

When?	12 months starting ASAP
Where?	Laboratoire de Biochimie Théorique, Paris, France with frequent trips from Paris to UCB Biopharma located near Brussels in Belgium, with transportation accommoda- tion costs fully supported by the contract.
Salary:	starting 2500 €/month for a basic level of experience; will be adjusted based on the candidate's CV (amount indicated is before tax)
Team Leader:	Marc Baaden
Websites:	
http://www.baaden.i	bpc.fr
http://unitymol.sourc	ceforge.net
https://www.youtube.com/watch?v=Y9Rha5-d9O4	