

Yendé Grell '16 (Molecular Biology)

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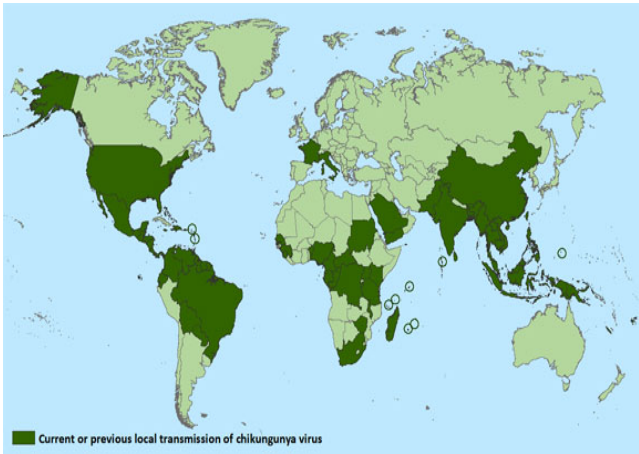
Research Objective:

to create a Chikungunya virus (CHIKV) expression construct that could be used for live-imaging and as a tool for the further characterization of CHIKV.



Bust of Louis Pasteur in front of the Pasteur Institute, Paris, France

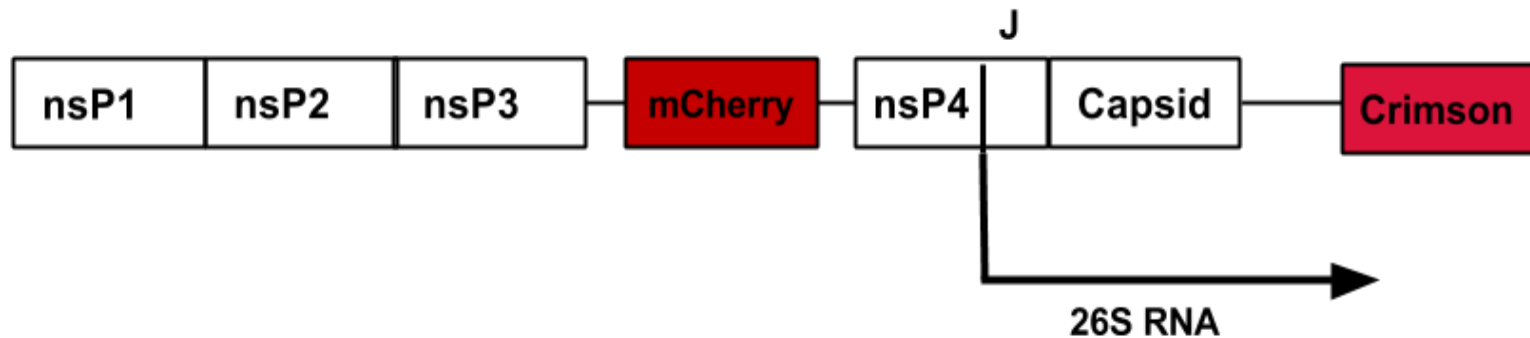
Chikungunya Virus (CHIKV)



- Chikungunya (CHIKV) is a 12kb mosquito transmitted alphavirus whose symptoms include sudden fever, arthralgia, polyarthrititis and rash.
- An outbreak beginning in 2013 affected half a million persons in the Caribbean and Latin America.
- Treatment and prophylaxis development for CHIKV have been stalled due to limited knowledge of host-cell response, replication mechanisms and host cell receptors. These viral characteristics can be further explored with techniques like live imaging using expression constructs.

My Impact

- The CHIKV-Crimson expression construct can be used as a safe and feasible tool for characterizing the spatio-temporal dynamic of CHIKV Capsid expression and localization in combination with other fluorescently tagged cellular markers of interest.



Schematic of CHIKV-Crimson expression construct.

Rewarding Experience

- Worked with a Post-doctoral Fellow for 2 months
- Received guidance and advice from graduate students and senior researchers
- Attended seminars and group meetings



Other members of UBI and I

- Learned a number of laboratory techniques such as
 - Sub cloning
 - Real Time PCR
 - Cell splitting
 - Transfecting
 - Site-directed mutagenesis
 - Staining for Immunofluorescence
- Became more comfortable reading scientific literature



My internship laboratory and work space

Impact on Academics and Career Goals

- As a molecular Biology major also pursuing a certificate in global health and health policy, I will hopefully be able to use some of my internship results in my senior thesis. The skills and knowledge I gained will also be assets when conducting further thesis research and writing.
- As an aspiring physician this internship allowed me to experience a different side of the scientific world and has influenced me to consider MD/PHD programs.



Scenes from the Pasteur Institute

Overall Experience

- I got to practice my French and learn about a rich and fascinating culture through food, art, friends and science!



Acknowledgements

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Merci beaucoup à tous!