



A/Professor Fasseli Coulibaly

ARC Future Fellow

Head, Structural Virology Laboratory



Monash Biomedicine Discovery Institute
Infection and Immunity Program

EMAIL fasseli.coulibaly@monash.edu

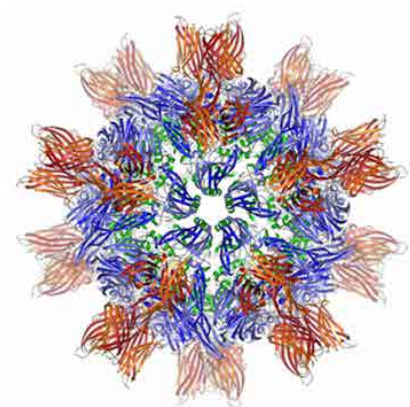
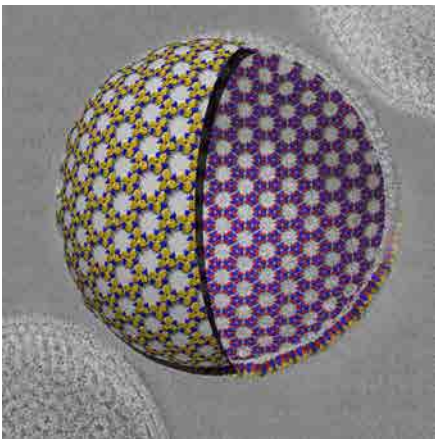
TELEPHONE +61 3 9902 9225

WEB med.monash.edu/biochem/staff/coulibaly.html

Our laboratory aims at understanding the assembly and replication of viruses combining molecular virology and structural biology approaches. Our research produces 3-D molecular models of viruses and viral proteins to provide functional insights and design novel antiviral therapeutics.

Research Projects

1. Understanding the replication of Hendra virus
2. How do the largest human viruses assemble their infectious particles?
3. Development of MicroCubes, a novel vaccination platform



Selected significant publications:

1. Chiu E, Hijnen M, Bunker RD, Boudes M, Rajendran C, Aizel K, Oliéric V, Schulze-Briese C, Mitsuhashi W, Young V, Ward VK, Bergoin M, Metcalf P, **Coulibaly F**. 2015. Structural basis for the enhancement of virulence by viral spindles and their in vivo crystallization. *Proc Natl Acad Sci USA*. 112 (13):3973-78.
2. Hyun JK, Accurso C, Hijnen M, Schult P, Pettikiriachchi A, Mitra AK and **Coulibaly F**. 2011. Membrane remodelling by the double-barrel scaffolding protein of poxvirus. *PLoS Pathogens* 7:e1002239.
3. **Coulibaly F**, Chiu E, Ikeda K, Gutmann S, Haebel PW, Schulze-Briese C, Mori H and Metcalf, P. 2007. The Molecular Organization of Cypovirus Polyhedra. *Nature* 446:97-101.
4. Kang H, **Coulibaly F**, Clow F, Proft T and Baker EN. 2007. Isopeptide Bonds Stabilize Gram-positive Bacterial Pilus Structure and Assembly. *Science* 318:1625-8.
5. **Coulibaly F**, Chevalier C, Gutsche I, Pous J, Navaza J, Bressanelli S, Delmas B and Rey FA. 2005. The Birnavirus Crystal Structure Reveals Structural Relationships among Icosahedral Viruses. *Cell* 120:761-772.