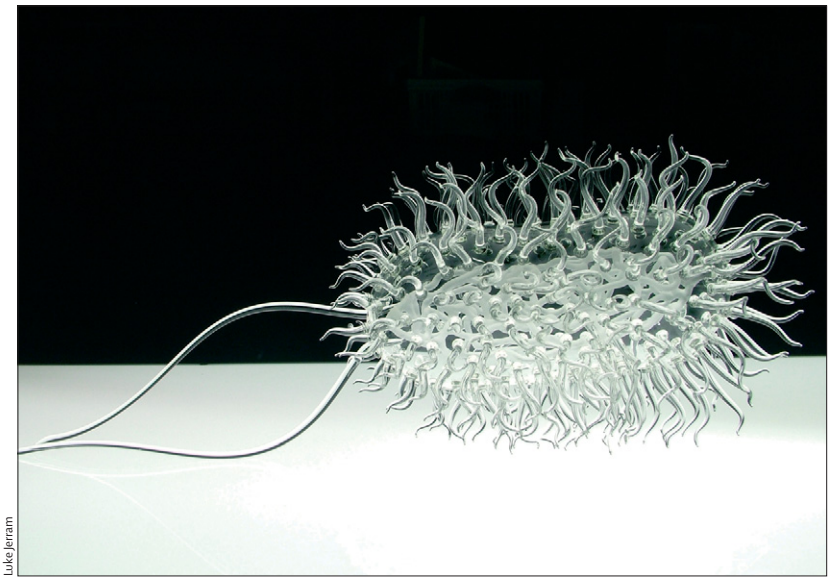
Exhibition

Microbiology's might on display



Luke Jerram

Luke Jerram's sculpture of *Escherichia coli*

Viral Sculptures
Smithfield gallery, 16 West Smithfield, London, EC1A 9JR, UK. Shown between Sept 22 and Oct 9, 2009. For more see http://www.lukejerram.com/projects/glass_microbiology

Colourful images of the pandemic influenza H1N1 virus have recently abounded in the media. However, none have quite looked like the translucent glass sculpture that has been on display at the Smithfield Gallery in London, UK. The exhibition has showcased a cluster of clear-glass sculptures of different viruses and the bacterium *Escherichia coli*.

Artist Luke Jerram from Bristol, UK, spent 5 years developing this collection with the help of virologists and glassblowers. Every sculpture took 2 months of dialogue between these individuals, using scientific photographs and models. The collaborative result is a captivating array of jewel-like figures that glisten in front of onlookers and potential hosts.

Jerram is interested in visual perception and science. He hopes people will "come away with questions about the tension between what something looks like versus what it represents". Jerram is challenging the popular portrayal of coloured pictures in microbiology by presenting structures in a translucent state, enabling viewers to see the deceptively beautiful yet menacing features.

Some sculptures (smallpox, avian influenza, and HIV) are displayed on plinths with a black surface, showing microbiology's might in monochrome. Larger sculptures are placed on a lightbox; illuminating them from underneath highlights the genetic material in the sculptures' centres, coiled haphazardly in frosted glass that contrasts with the clear appearance of the remaining virion.

A palm-sized avian influenza virus is presented on a plinth with a magnifying glass for closer inspection. Like a unique paperweight, its intricate antigenic spikes extend like soft peaks. Nearby, the 10 cm HIV bubble-like structure encases a Christmas-tree-shaped capsid. Like a snow globe, you almost want to hold it in your hand and shake it.

Central on the lightbox is a pandemic influenza sculpture—like a large egg, the surface tree-like clusters protect the loosely coiled frosted RNA. This H1N1 sculpture is Jerram's favourite: "it's the most detailed and visually stunning". He adds, "I also like the tension in the work between each sculpture's beauty and what they represent, their effect on humanity". Adjacent is *Untitled Future Mutation*—a fictitious virus with spiral surface icicles that give it the appearance of a devastating weapon.

Another highlight of the exhibition is the metre-long *E coli*. Half its length is taken up by elegant antennae-like flagella. Like a majestic sea creature, its full menace is on display.

Virologist Andrew Davidson (University of Bristol, UK) worked with Jerram on the sculptures. "In the past few years, we have been able to view viruses with a high level of accuracy through cryoelectromicroscopy and mathematical modeling", he explains. "For a long time, submicroscopic agents were known to cause disease, but couldn't be visualised", he says. "Jerram is able to translate what we see in the lab to the general public."

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Erratum

Bartlett JA, Shao JF. Success, challenges, and limitations of current antiretroviral therapy in low-income and middle-income countries. Lancet Infect Dis *2009;* **9:** *637–49.* Page 640, reference 31 should cite Zhou J, Li PC, Kumarasamy N, Boyd MA, Pujari S, on behalf of The TREAT Asia HIV Observational Database. Deferred modification of antiretroviral regimen following treatment failure in Asia: results from the TREAT Asia HIV Observational Database (TAHOD). 17th International AIDS Conference; Mexico City, Mexico; Aug 3–8, 2008. Abstract TUPE0116. Page 641, reference 84 should cite Losina E, Chang Y, Campbell E, Walensky R, Freedberg KA, Wood R. Immunologic benefits of complete vs partial virologic suppression in patients initiating ART in Gugulethu, South Africa. 15th Conference on Retroviruses and Opportunistic Infections; Boston, MA, USA; Feb 3–6, 2008. Abstract 823. Page 644, the first three instances of reference 44 should cite Ive P, Malope-Kgokong B, Fox M, Maskew M, MacPhail P, Sanne I. Time from virologic failure to switching to second-line therapy in patients receiving ART in Johannesburg, South Africa. 16th Conference on Retroviruses and Opportunistic Infections; Montreal, QC, Canada; Feb 8–11, 2009. Abstract 607. Page 644, the fourth instance of reference 44 should cite Hoffmann C, Charalambous S, Ledwaba J, et al. The rate of developing ART resistance during HIV viremia on HAART in South Africa. 16th Conference on Retroviruses and Opportunistic Infections; Montreal, QC, Canada; February 8–11, 2009. Abstract 607. Page 645, reference 44 should cite Ratsela A, Polis M, The Phidisa II Study Group. Phidisa II: a randomized 2x2 factorial trial comparing initial therapy of efavirenz with lopinavir/ritonavir and zidovudine + didanosine with stavudine + lamivudine in treatment-naive HIV-infected persons with <200 CD4+ cells/mm^3 or a prior AIDS diagnosis. 16th Conference on Retroviruses and Opportunistic Infections; Montreal, QC, Canada; Feb 8–11, 2009. Abstract 594.