
Subject: Herpes Simplex Virus

Posted by [DavidBhella](#) on Fri, 09 Apr 2010 09:04:42 GMT

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Here is my 5cm diameter model of a Herpes Simplex Virus, printed in alumide.

After struggling for a very long time with the shapeways software for uploading, the arrival of the new `mesh medic` software finally ironed out my problems.

This model is calculated rather than designed... Virus was imaged in the electron microscope, computational image processing was used to extract the 3D structure which was rendered and converted to STL format using a very cool piece of software called UCSF chimera, I had to reduce the polygon count using meshlab before it was suitable for printing.

I previously had this printed as a gift for a retiring professor at 9cm diameter in metal through pro-metal. Unfortunately some of the finer features were broken off during manufacturing (only one or two, it was still very cool). I gather that the model is very brittle before it is infused with bronze.... Some of the metal models in this forum have some very fine features however. I would be interested to know if these models are likely to be problematic if printed in metal by shapeways.

Many thanks to Bathsheba for helping me through this process!

File Attachments

1) [HSV_5cm.jpg](#), downloaded 847 times

Subject: Re: Herpes Simplex Virus

Posted by [dadrummond](#) on Sat, 10 Apr 2010 04:11:06 GMT

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That is both awesome and inspiring. Thus: awe-inspiring?

Congrats. As a biologist, I'm thrilled to see this kind of stuff being printed. Though I do not envy you the conversation you'll have when people ask, "What's that you have there?"

Subject: Re: Herpes Simplex Virus

Posted by [DavidBhella](#) on Mon, 12 Apr 2010 07:54:18 GMT

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Thanks!

Thought I would post this image of the same model printed at around 9cm diameter in metal. (Sorry Shapeways, this was printed by pro-metal)...

A couple of the spikes at the 5-fold axes were not complete, which was a little bit disappointing although I still think that it is fascinating..... I think this image shows the structure a bit more clearly than the alumide model....

D.

File Attachments

1) [PrometalHSV.jpg](#), downloaded 686 times

Subject: Re: Herpes Simplex Virus

Posted by [tones3-d](#) on Mon, 12 Apr 2010 10:09:21 GMT

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Wonderful!

I'll be forwarding a link to a friend who teaches chemistry, who told me that she's always on the lookout for new ways of demonstrating molecular structure.

Thanks for sharing.
