

## **Infinitesima's VideoAFM™ demonstrates real-time AFM imaging of collagen in liquid at 15 frames-per-second**

Infinitesima Ltd., manufacturer of the VideoAFM™, announces video-rate imaging of bio-molecules in liquid. The VideoAFM has been used to produce real-time images of collagen in water at 15 frames-per-second. Each image frame was acquired in less than 35 milliseconds, allowing real-time scanning of the collagen surface.

Dr. Andy Humphris, Chief Technical Officer of Infinitesima said, "Video rate imaging in liquid at nanometer resolution is very challenging. We are therefore very pleased to see the continuing development and use of the VideoAFM for the imaging of biological systems in liquid environments."

The real-time video images of collagen were produced with the assistance of Dr. Laurent Bozec at the London Centre for Nanotechnology. Dr. Bozec commented, "Collagen is an essential substance as it accounts for more than a quarter of the proteins in the human body. Being able to observe real-time processes at the nanometer scale in the physiological conditions of a liquid environment is an important step towards our understanding of how collagen forms the bones and ligaments in our bodies."

*The images and movies of collagen in liquid can be seen on the Infinitesima website.*

### **VideoAFM™:**

The VideoAFM™ is the first commercially available Atomic Force Microscope that is capable of delivering real-time images at video frame rates. Imaging 1000 times faster than conventional AFM's, the VideoAFM™ allows users to visualize and interact with chemical or biological processes, at the molecular level, in real time. The VideoAFM™ supplies up to 25 images per second with full resolution and is part of the High-speed AFM™ family of instruments from Infinitesima.

The VideoAFM is fast establishing an entirely new method of performing research in nanotechnology. The instrument allows researchers to operate an atomic force microscope much like an optical microscope, only at nanometer resolution.

The VideoAFM™ works in conjunction with existing AFM's without affecting the functionality of the microscope. The VideoAFM™ also allows large surface areas to be explored before selecting features of interest for a more detailed investigation.

### **Infinitesima:**

Infinitesima is the developer and manufacturer of the VideoAFM™ and focuses on high-speed imaging techniques for atomic force microscopy, a key enabling tool in the field of Nanotechnology. The company is located in the Oxford Centre for Innovation in the historical city of Oxford in the United Kingdom.

### **For further information contact:**

Infinitesima Ltd  
OCFI Bldg., Mill Street  
Oxford OX2 0JX  
United Kingdom

tel: +44 1865 811 171  
fax: +44 1865 793 165  
[www.infinitesima.com](http://www.infinitesima.com)