YONE PRODUCTION CO., LTD.

Succeeded, on the world's first attempt, in filming living cells being destroyed by SARS-CoV-2 virus via the use of an optical microscope attached with 8K ultra-high-definition camera.

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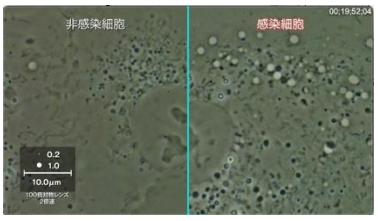
Founded in 1967
CEO: FUJIEDA Ayumi
No. of employees: 9
Type of Ownership: Private
Primary stock exchange: N/A

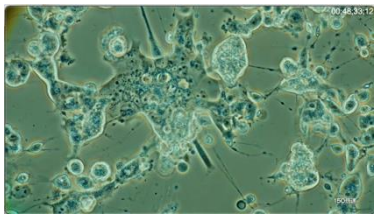
August 2021: Established by KOBAYASHI Yonesaku, a well-known documentary cameraman and pioneer of cinephotomicrography, and Dr ASAKA Tokio, anatomist and expert in biological sample research and development, Yone Production has played a vital role over 50 years in supporting scientific advancement and promoting scientific films.

Venture Valuation (VV) interviewed FUJIEDA Ayumi, CEO.

VV: **Yone Production successfully filmed this year the destruction of cultured animal cells by SARS-CoV-2, the virus causing COVID-19 disease. In the process of filming, unidentified white particles are revealed in infected cells.**

Fujieda: We worked with NHK, Japan's public broadcaster, and NAKAYAMA Emi Associate Professor, Osaka University, and her team to conduct this research project.





An optical microscope is unable to catch sight of the virus but can observe biological interaction in real time. We used a 100x lens. Four hours after cells were infected with viruses, biological interaction progressively began (top image).

Cells were deformed, torn off and destroyed (bottom image). In the process, the film reveals unidentified tiny white particles in infected cells[1]. Dr NAKAYAMA and her team are currently investigating what these particles are, their biological functions, and the infection mechanism of COVID-19.
We are hoping that all the details on the biological interaction we filmed will help scientists to develop a treatment for COVID-19.

[1] The video is available at NHK.

VV: **Technological progress of optical microscopy allows scientists to observe biological interaction by themselves. What is your role with them?**

Fujieda: Scientists can examine living cells through a highly sophisticated optical microscope by themselves. However, techniques for living cell imaging require securing the highest resolution image and preserving alive cells for as long as possible. Our role is to provide scientists with clear and accurate images of the biological interactions they are researching.

With our know-how on time-lapse photography, expertise in the biological sample processing method and 8K ultra-high-difinition technology, we are able to capture meticulous images, for instance, even of exosomes and microparticles. They were treated as excellular junk for a long time.

VV: **Your business has two main branches: research support for academia and industries, and production of videos, TV commercials, and promotional materials.**

Fujieda: We have produced a variety of sicentific films in collaboration with universities, pharmaceutical and food companies. The quality and creativity of our films have been acknowledged worldwide for years. We have received prestigious awards at international film festivals in Italy, Germany, Spain, USA, China, Japan, and so on.

Our video collection is available on our website under Library. It is classified by infection, bones and muscles, digestive system, circulatory system, occurrence, allergies, skin and hair, food poisoning, cancer, microorganism, brain and nerves, and the respiratory system. You are welcome to check our video clips and place an order directly. We also make custom scientific films upon request.

In addition to our regular business activities, we produced an independent short film "Internal Cosmos" showing the development of a chicken embryo through an optical microscope attached to a 4K/8K ultra high-definition camera. The film was awarded Grand Prix at the 2018 Japan International Short Film Festival.

The audience, especially scientists, were astonished by the clear detailed images of the development of heart, network of blood vessels, organs, bones, etc. By analyzing the images, they discussed together what they found, which could lead to new discoveries.

We are pleased that our work can support scientific advancement, education while also providing entertaining way to familiarize the general public with the miracle of life.

VV: **It is worth mentioning that Lennart Nilsson (1922 – 2017), a trailblazing Swedish photographer published "A Child Is Born" followed by "The Drama of Life Before Birth".**

Fujieda: His scientific and artistic virtuosity was outstanding. Our business is much more focused on scientific research projects.

VV Comments after the interview:

Similar to the crucial contribution of X-ray crystallography images to the discovery of the double helix structure of DNA, Yone Production has made a great impact on scientific discoveries directly or indirectly.

Used to illustrative computer graphic images these days, we tend to forget the treasure trove of unexpected findings contained in the reality captured by scientific films.

Yone Production offers pure scientific films not only providing support to research and development but also trying to attract the general public with enjoyable and educational techniques.

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