

## **Hydra**

*Hydra* presents a living map of the spreading COVID-19 virus in the US from March until October 2020. The creation of the dynamic chronological and proportional growth patterns is based on the Johns Hopkins COVID data collection. The deadly viral spread is mimicked by the unique networking properties of *Physarum polycephalum* or: slime mold, an unusual single-celled organism. The creature displays patterns of behavior that might appear “intelligent“ to us despite its complete lack of neurons. It is capable of solving mazes, anticipating periodic events, optimizing difficult trade-off decisions and even basic forms of learning.

The installation reflects the overwhelming health crisis that confronts the US in the unabated spread of this deadly virus. The slime mold could have been restricted by repulsive salt barriers or bright light gradients. These would represent the analogy to measures and sanctions to limit the spread of the disease. Their overall absence figures as the silent horror of the installation.

To create the installation, we made an 11cm-wide map of the US from agar, to generate a moist substrate for the slime mold. We added slime mold and an oat-agar food source to the first 10 counties to reach 1000 cases of COVID-19 per day, at the corresponding time when each region first reached this milestone. The concentration of the food source added to each region was scaled to the infection count in that area, with heavily infected regions receiving more food. The slime mold was then allowed to spread out unabated from these centers of infection to burst out and dominate the map. For the final film generated from a 50 hour experiment, with shots taken in intervals of 30 seconds, we used retiming video editing tools to merge the film into a compact artistic format.

We use sound tools to mimic ultrasound referring to experiments on moving microorganisms.

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