

# ART FROM MICROBES

A group of scientists and artists are creating unique paintings known as 'microbial art'. By brushing selected bacteria onto a culture medium in Petri dishes, they create novel, colourful patterns and abstracts.

Leave food out for long enough, and it will be overrun by microbes, eventually sprouting unusual patterns and colours. It's time to throw it away. But a group of scientist/artists are intentionally exploiting the same process to make unique paintings known as 'microbial art'. By brushing selected bacteria onto a culture medium in Petri dishes, they create novel, colourful patterns and abstracts.

Dr. T. Ryan Gregory of the University of Guelph, Canada, started making microbial art for an exhibition inspired by evolution and biodiversity. He soon discovered that other scientists were also using microbes to make art. Some use solutions of luminescent bacteria, some use fungi; others mix bacteria with food dye. But they have one thing in common:

like food, microbial artworks have a short shelf life. Once they have outgrown their original patterns, they die. It's an ephemeral art form: "You can put significant effort into creating a piece," says T. Ryan Gregory, "only to destroy it a few days later."

Creating art from microbes isn't new. Sir Alexander Fleming, who discovered penicillin, used pigments derived from bacteria to create paintings a century ago. Today's bacterial artists employ a variety of techniques:

"We use agar as the growth medium and mix in food colouring to get different colours," says T. Ryan Gregory. "The images are painted on using a small paintbrush and *E. coli* in liquid medium. Then they are allowed to grow in a laboratory incubator."



C005/3403



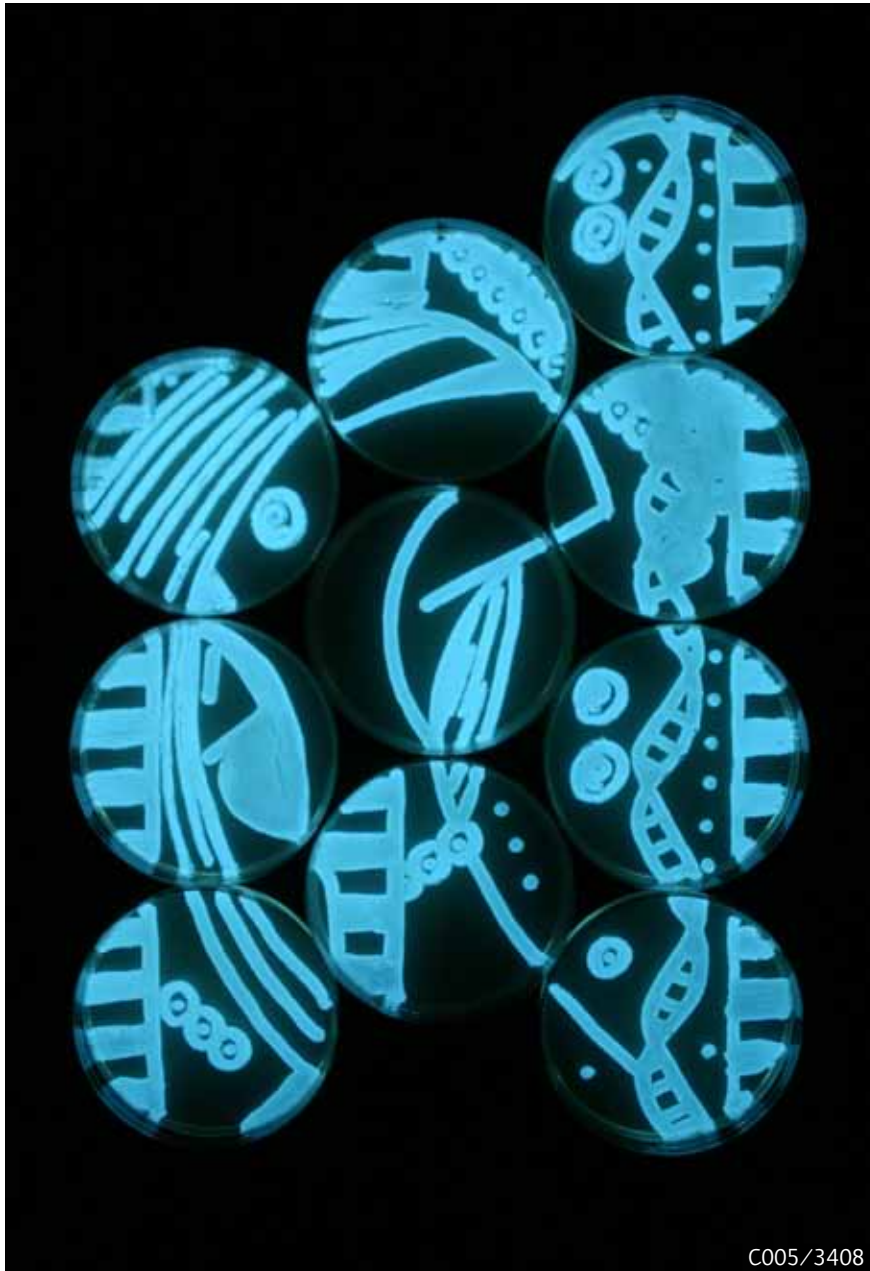
C005/3401



C005/3402



C005/3343



C005/3408



C005/3404



C005/3406



C005/3407



C005/3405



C005/3400



C005/3444

Microbiologist Niall Hamilton usually collects his raw materials from a window sill or takes a swab of the slime around sink plugholes, then uses a sterile metal loop as a paintbrush:

"It's unusual and interesting," he says, "because the exact result can't always be completely controlled."

Geneticist and artist Hunter Cole produces 'living drawings' made from several Petri dishes of light-producing bacteria. She photographs them over a period of two weeks while their shapes change as the bacteria stop glowing and begin to

dim and die.

Because many of the bacteria can cause serious illnesses, microbial art isn't something you can do at home:

"There are many potentially pathogenic microbes out there, and you need proper provision for the safe disposal of artworks," says Hamilton. "The majority of artists are trained microbiologists or biochemists."

WRITTEN BY JON TRUX

ENDS 380 WDS © SCIENCE PHOTO LIBRARY 2010