

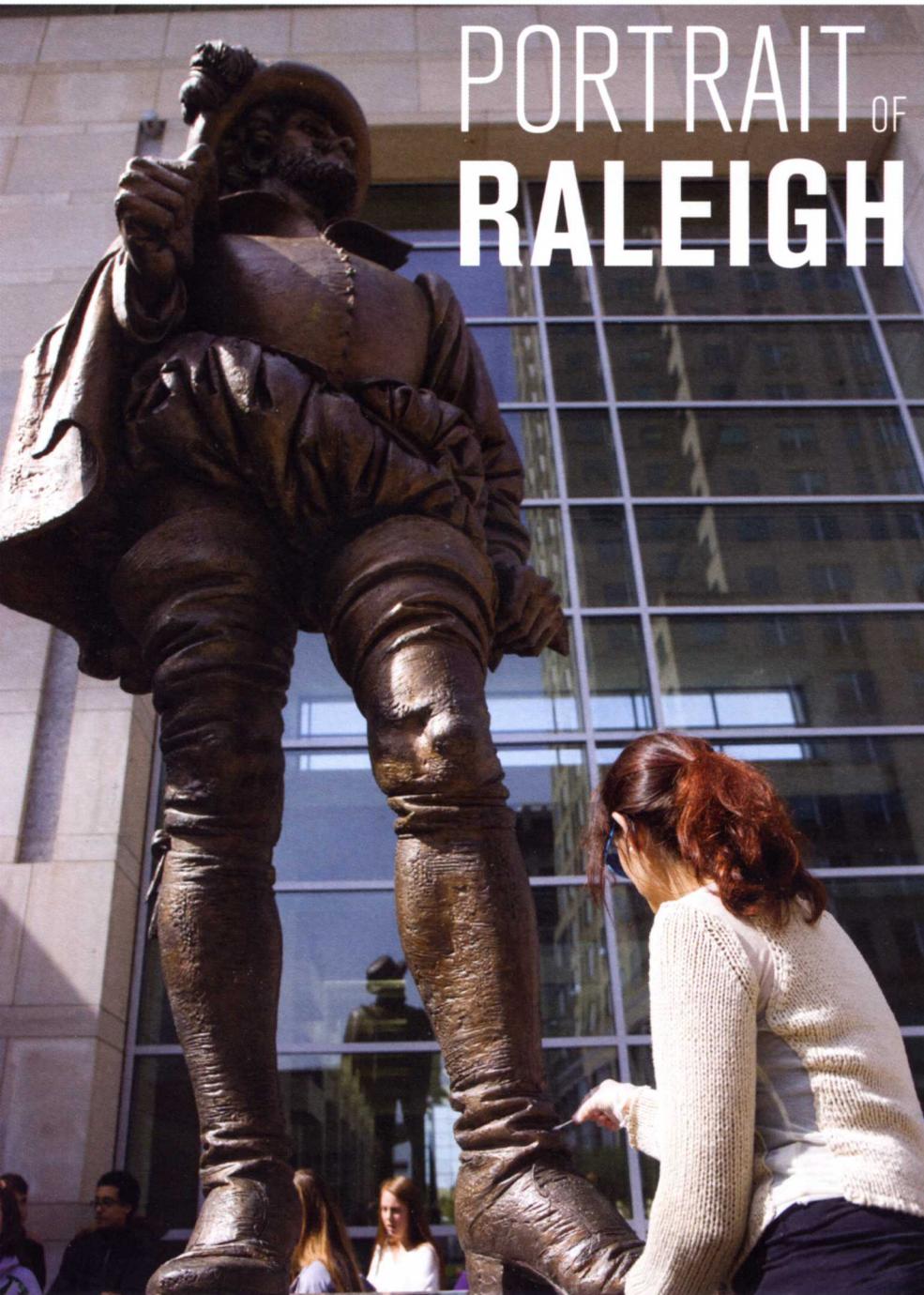
Other Selves

A (MICROBIAL)

PORTRAIT OF
RALEIGH

Brooklyn-based bio-artist Joana Ricou swabs for microbes on the Sir Walter Raleigh statue for her Portrait of Raleigh (the city).

by Carla Burgess, *Special to the Museum*



One thing's for certain about Joana Ricou: she isn't shy. Not everyone could ask strangers on the street to let her see what's in their belly buttons. On a day this fall, she approaches a student on the North Carolina State University campus who is holding a "Free Hugs" sign — an easy mark. She tells him she is an artist who investigates the microorganisms that live in belly buttons. He and a friend agree to participate, and she gives them each a cotton swab. They twirl the tips vigorously inside their navels. After that, she drops the swabs into separate plastic bags and is off down the street.

Ricou, a native of Portugal who lives in Brooklyn, is in town to prepare a new piece of art that coincides with the opening of the Museum's new featured exhibition — The Secret World Inside You. Her traditional method has been to put the samples, one for each participant, into a round petri dish with nutrient agar — food for the microbes to grow on. She swirls the swab to create a spiral shape, then lets the dishes sit for a few days until the microbes grow. She photographs the results, then enhances each image digitally by superimposing two colored circles that complement the natural colors of the microbes, which are typically white, yellow, orange or red, with subtle variations in between.

She never knows how the samples will turn out. Just as every belly button is different, so is each result. A person's microbiome — the assemblage of microorganisms found in and on the body — is thought to be as unique as a fingerprint. It is a part of us, yet apart from us. "The microbiome is not even human," says Ricou. Bacteria colonize every inch of our skin, and they are even busier on the inside. Your gut is home to about 99 percent of your microbiome.

Ricou became interested in the human microbiome at about the same time that a team led by NC State biologist Rob Dunn and Holly Menninger, Director of Public Science for NC State's College of Sciences, was beginning a citizen science project in which volunteers swabbed their belly buttons for science. In samples from 60 individuals, the scientists identified a total of 2,368 species of bacteria, most of them beneficial. On average, each belly button contained about 67 bacterial species. The microbes were consistent with bacteria typically found on the skin. The dominant bacteria in belly buttons were categorized as Staphylococci, Corynebacteria, Actinobacteria, Clostridiales and Bacilli.

