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Bio-artist Adam Zaretsky sleeps with the fishes

Using nature to create art.

By Wendy Wolfson

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In Adam Zaretsky's WorkHorse Zoo, a biological performance art piece shown recently in Salina, Kansas, the exhibit's animals were encouraged to eat each other. Aided by fellow artist Julia Reodica, Mr. Zaretsky spent the week living in an 8-foot-square clean room. His bunkmates were eight of the workhorse organisms of molecular biology: *Arabidopsis thaliana* (mustard plant), *Saccharomyces cerevisiae* (yeast), *Caenorhabditis elegans* (roundworm), *Danio rerio* (zebra fish), *Drosophila melanogaster* (vinegar fly), *Escherichia coli* (bacteria), *Mus musculus* (mice), and *Xenopus laevis* (African clawed frog).

The satiric exhibit was intended to critique the impact of science and biotechnology on our society--and how our cultural choices influence genetic research. Funded by a \$20,000 grant from the Daniel Langlois Foundation, WorkHorse Zoo was part of the Salina Art Center's "Unmediated Vision" exhibit in February.

Mr. Zaretsky, 34, claims that his father, a behavioral psychologist, and his mother, a Jungian, kept him in a Skinner box, a kind of laboratory cage, for the first two years of his life. (His father says it was actually psychologist B.F. Skinner's version of a hospital incubator, known as an air-crib.) His parents later quit psychology to become artists and moved to Woodstock, New York.

As an adult, Mr. Zaretsky followed in his parents' unconventional footsteps: in between undergraduate studies at the University of California at Davis, he spent time as a punk rocker and street urchin in New York, a farmer in the jungles of Belize and Kauai, and a cook and videographer in a house of domination.

He studied at the Art Institute of Chicago with Eduardo Kac, an associate professor who is notorious for commissioning Alba, the transgenic green fluorescent protein rabbit that fluoresces under ultraviolet light. Mr. Zaretsky went on to work in a laboratory at the Massachusetts Institute of Technology, where he learned laboratory bench techniques and discovered the "Humperdinck Effect," in which the vibrations of "loud, really awful" lounge music applied for 48

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hours spurred antibiotic production in *E. coli* bacteria.

In his subsequent project, *Microsushi*, he injected a sterile solution of cream cheese into tobiko (flying fish eggs). Last year, when Mr. Zaretsky was a visiting professor of conceptual art at San Francisco State University, his class collaborated with the local zoo to design an animal enrichment program in which lions were fed horse meat and dead rabbits encased in large papier-mâché mice. "It made the animals' life more exciting, like giving them giant cat toys," says Mr. Zaretsky.

WorkHorse Zoo's clean room conditions were deliberately messy. Flies swarmed everywhere. Roundworms tunneled in the dirt floor. Pedigreed mice from Charles River Laboratories, a Swiss breed imported by the Rockefellers in 1925, gamboled amid the *A. thaliana*. Yeast beer brewed in the corner. Periodically Mr. Zaretsky paddled in a tub with the frogs and zebra fish. He slept on a gurney donated by the Salina Fireman's Union.

"Not for hundreds of generations have these lab animals lived together in an environment in which they can interact," he says. "We don't know whether they are research animals or pets, wild or food. These are the organisms that are having their genomes sequenced, the models for engineering humans in the future. As new reproductive strategies change the way we are evolving, artists offer a more radical aesthetic to help people question the cultural influence on mutation."

The Zoo's daily themes and costume changes charted a steady devolution, from Sunday's "Corporate Biotech Day" to Wednesday's "Medical Patient and Feed the Artist Day," when Salina residents proffered McDonald's fare and gourmet sticky buns. Kids threw crackers over the clean room's walls and Mr. Zaretsky, wearing a hospital smock and pink hat with little ears, caught them in his mouth.

For the first few days, the animals were fed a regular diet, while Mr. Zaretsky relied on a stash of Beef-A-Roni and Slim-Fast drinks. But on Thursday, "Caveman Day," as part of the experiment everybody had to start fending for themselves. Ms. Reodica swiped Mr. Zaretsky's food and stopped feeding the frogs in hopes they would regain their hunting instincts. They did: the zebra fish started to disappear from the bathtub. Mr. Zaretsky, clad in a leopard-spotted loincloth and black cowboy boots, in turn dined on frogs and zebra fish that he stir-fried with a little olive oil over a Bunsen burner and garnished the dish with *A. thaliana*.

Friday, "Wild Animal Day," found Mr. Zaretsky dressed in a tiger suit, hungrily scrounging for mice. The piece concluded with the cherubic artist wearing a diaper decorated with a fig leaf.

Mr. Zaretsky is part of a movement of bio-artists, who use the tools of

science to incorporate living organisms into their work. Bio-artist pioneer Joe Davis, with whom Mr. Zaretsky worked at MIT, in collaboration with Harvard University biologist Dana Boyd, synthesized DNA "infogenes" by embedding coded language and symbols in the genome of E. coli. Natalie Jeremijenko, on the mechanical engineering faculty at Yale University, melds biotech and popular culture with her cheerful Biotech Hobbyist do-it-yourself kits, like "Grow Your Own Skin." At the University of Western Australia near Perth, Symbiotica: the Art and Science Collaborative Research Laboratory of Guy Ben Ary, Oron Catts, and Ionat Zurr uses tissue engineering to make semiliving entities like pig wings (in an attempt to determine when pigs will be able to fly).

"The best thing about this art is that it gives you an escape from anthropocentrism. There is so much more in the world than humans," says Mr. Zaretsky. He explains that biology attracted him "because it is messy and hard to control. Art and technology weren't wet enough. I like life. I'm a vital-philiac. I felt like some of the scientists involved in developmental biology and transgenics were the best sculptors on the planet. Why would you make something out of clay when you could make it out of living, breathing flesh that could reproduce and continue your idea?"

Next, Mr. Zaretsky will go to Australia as a visiting honorary researcher with the Symbiotica Collaborative to set up Macro Micro Music Massage. In this project, which will use vibrating acoustical speakers, participants will titillate each other with voice-activated massage chairs while simultaneously fermenting E. coli cultures. He also intends to investigate how to grow a third eye.

Wendy Wolfson has written for [Salon.com](#) and [Informationweek.com](#) and is a commentator on technology for WBUR, the Boston affiliate of National Public Radio.

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