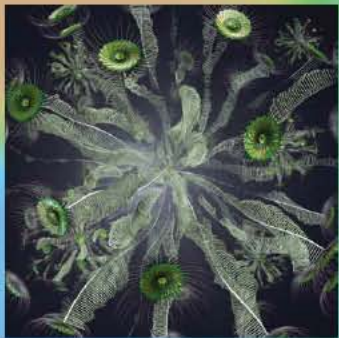


William Myers



Bio Art is an emerging art practice that responds to the new and often dislocating realities revealed by the advance of the life sciences. This book presents work by more than sixty contemporary artists who blend techniques from the laboratory – such as tissue-culturing and genetic engineering – with traditional art-making. The results evoke an ominous future where human manipulation of the natural world has altered cultural norms, with results both beautiful and alarming.



Bio Art Altered Realities William Myers

BioArt

Altered Realities



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Julian Voss-Andreae

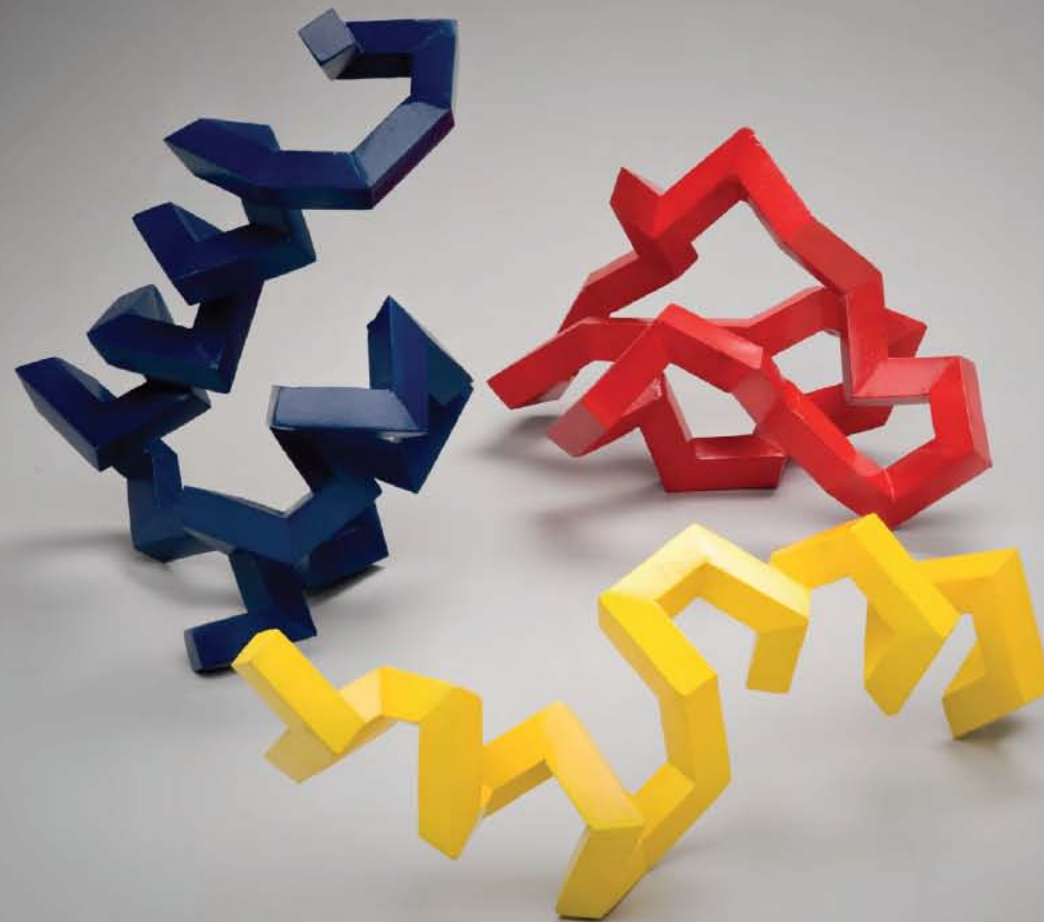
Voss-Andreae is a sculptor who inventively visualizes difficult scientific concepts, such as the laws of quantum physics and invisible matter, which we are usually forced to consider in the abstract. The artist combines his university training in both art and experimental physics to arrive at processes of making and presenting form, often at the scale of monumental sculpture. By applying these processes to data sets observed in a laboratory or derived using math, Voss-Andreae makes it possible to “touch” the folds of a protein. The artist experiments with forms as media of translation, as with *Quantum Man* (2007), which consists of hundreds of vertical steel sheets arranged at precisely the same angle, such that when the viewer changes his or her point of view, the figure all but disappears. The work is an analogue to the wave-particle duality of matter, the concept in quantum mechanics that elementary particles exhibit the qualities of waves *as well as* particles. Thus, our easy grasp of dimensionality stands in for our inability to see either these waves or particles.

The Building Blocks of Life (2009) are small, sculptural versions of three peptides—the backbones of proteins—chosen from different kingdoms: plant, animal, and unicellular organism. Protein structure is essentially a line or spine that twists and turns and from which sprout discrete branches, like limbs of linked atoms. This can be represented as a line snaking through three dimensions, like a tangled but single piece of wire. To translate this form to sculpture, a computer program of the artist’s devising translates known coordinates on this winding form of a protein to a diagram for a miter-cut sculpture (the technique typically employed in pipe laying or picture framing to ensure a connection between two points meeting at an angle). Along with *Synergy* (2013) these protein sculptures neatly visualize complex, and otherwise invisible, forms.



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Voss-Andreae’s sculpture *Birth of an Idea* (2007) envisions an ion channel. It was commissioned by Roderick MacKinnon, who shared the Nobel Prize in 2003 for his work describing the structural and mechanistic properties of such channels, which are water-filled tunnels that regulate ion permeability across cellular membranes. The mix of media and overall composition used in the piece echoes 20th-century modernist sculpture, such as that of David Smith, Louise Bourgeois, and Juli González i Pellicer. Voss-Andreae’s work *Angel of the West* (2008) takes its cues from much further back: the 15th-century *Vitruvian Man* ink drawing by Leonardo da Vinci. For this commission, Voss-Andreae arranged fragments of the molecular makeup of antibodies in a composition bound by a ring and including focal points mapped to match those of da Vinci’s original work. Additionally, *Angel of the West* evokes the classical form of the *Nike of Samothrace* (2nd century BCE) and Antony Gormley’s *Angel of the North* (1998). The connections this work offers are many: antibodies are indeed protective and miraculous things on which we rely, and here the ‘west’ may allude to the Western traditions of the Enlightenment and the pursuit of knowledge through scientific means. Through these densely composed series of associations and striking forms the artist well succeeds in his objective to offer a “sensual experience of a world that forms the foundation of our physical existence and that is usually accessible only through our intellect.”



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65 *Synergy* • 2013
Installation at Rutgers University, New Jersey
Stainless steel, colored glass

66 *The Building Blocks of Life* • 2009
Painted steel



67

67 *Birth of an Idea* • 2007
Commissioned by Roderick MacKinnon
Steel, glass, wood

68 *Angel of the West* • 2008
Commissioned by The Scripps Research Institute,
Jupiter, Florida
Stainless steel



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