

# ARNOLD AND MABEL BECKMAN CENTER FOR MOLECULAR AND GENETIC MEDICINE

Over 30 years of innovation, discovery, and  
leadership in the life sciences



## WHERE SCIENCE MEETS ART

I love to express my infinite wonder of the complexities and beauty of nature by combining fine art and scientific illustration.

— Neil Murphy

The cover of this annual report is more than an eye-catching mash of colors and words; it's a look into the brain of artist Neil Murphy, who has painted and designed custom art for Beckman publications and symposia for more than 15 years. Look at the cover—or any art he's done for the Beckman Center—more closely, and details emerge that you might have missed at first.

At his home studio in San Carlos, acrylic paintings of neurons hang alongside sketches of tiny beasts. In many pieces, constellations and trap doors hide in the shadows. In some, he places detailed diagrams of scientific ideas on top of fluid, colorful fine art paintings.

The inclusion of Murphy's art in Beckman publications is not mere happenstance. Art that merges the beautiful with the scientific, and makes people look twice, is an aspect of scientific education, says Dr. Shapiro.

"The wonderful artwork that he does for us is a way of advertising and attracting attention," she says. "But it also stands for who we are; it conveys this excitement we have behind the science and puts our research into this broader context."

Murphy has been an artist since his Hawai'i childhood; he attended the San Francisco Art Institute in the 1960s, before shifting to a career in audio engineering, graphic design, and web development. But when his day job had him spending hours on Photoshop designing corporate websites, he started to miss art—and wondered what would happen if he combined traditional art with new digital tools. About 20 years ago, he started more seriously creating art again, using a technique that merged acrylic painting, ink, and Photoshop.

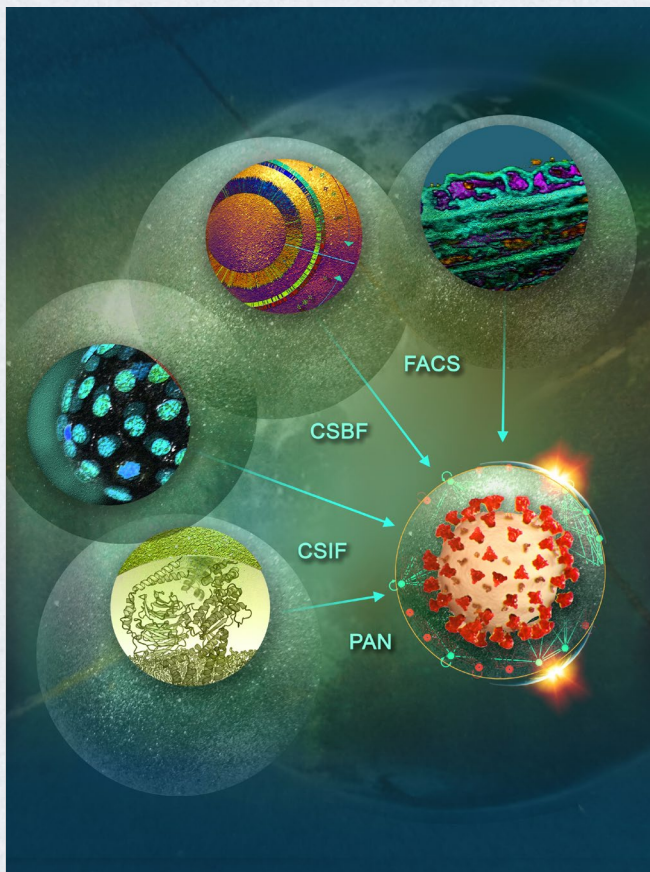
"With traditional media, if you want to change the color of an area, you have to paint over it," says Murphy. "But in Photoshop, you can highlight something and play with the colors. You can add layer after layer and then delete it if it doesn't work."

This image is adapted from the 2019 Beckman Center annual report cover designed by Neil Murphy.

At the same time, Murphy's absolute fascination with the natural and biological world drew him to scientific topics, and the blend of painting and digital manipulation let him easily capture both the fluid beauty of the world and the more concrete patterns of basic science.

"I love to express my infinite wonder of the complexities and beauty of nature by combining fine art and scientific illustration," he says.

Most of Murphy's projects—the cover of this report being no exception—begin with washes of acrylic paint flooding across a thin canvas. Slowly, wash after wash, an image builds up. Then, both on canvas and on screen, he adds shapes, lines, dots, diagrams, or words. But Murphy doesn't just have an eye for the attractive; his art is full of both metaphors for human biology and precise representations of science. A tiny creature outlined in ink might represent the stigma that people with neurological differences face, for instance.



### 2020 BECKMAN CENTER ANNUAL REPORT ARTWORK

"The 2020 annual report cover was inspired by the collaboration and coordination demonstrated by the four Beckman Centers as they worked together to find solutions to the Covid-19 pandemic."  
— Neil Murphy



### 2015 BECKMAN SYMPOSIUM ARTWORK: INNOVATION IN THE BIOSPHERE

"The 2015 Beckman Symposium brought together what may seem to be disparate biological fields of discovery, and showed how they overlap, influence one another, and unify shared knowledge to develop new treatments and understanding of biological processes." — Neil Murphy



**NEIL MURPHY**  
Artist and designer

"When scientists look at my paintings, they're often just delighted by them," says Murphy. "They're able to see the real science—the ion channels, the molecular diagrams—but they also appreciate the chaos and the wonder and craziness that goes beyond the science."

For each piece of Beckman symposia art, Murphy does extensive research; he not only talks to scientists who will present at the symposia, he also watches online lectures on related subjects.

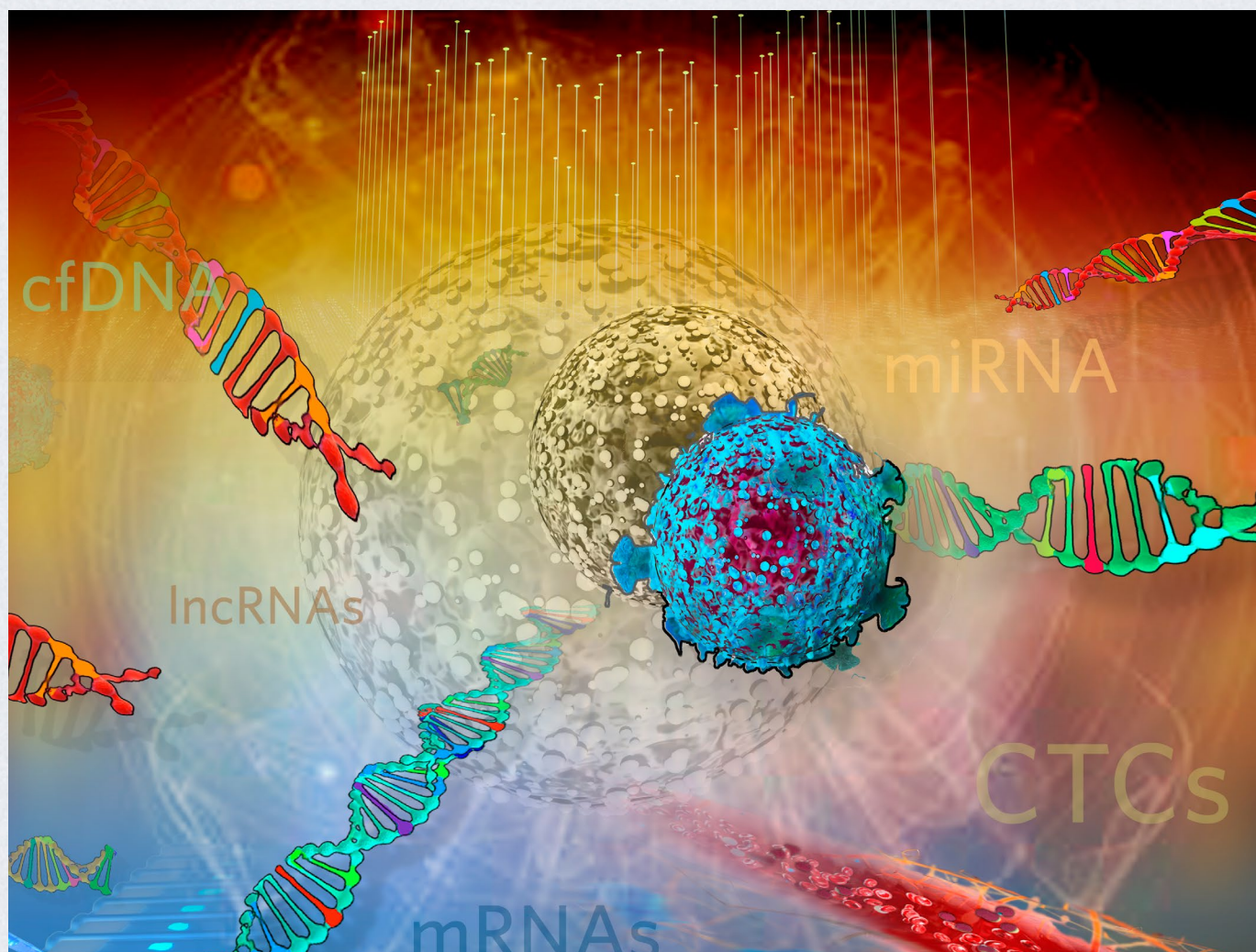
"I try to just be a sponge and absorb a lot of these ideas about the research," says Murphy. "And then I get an idea and run with it."

There are similarities between the way Murphy works and the way Beckman scientists work—in both, ideas from different

disciplines merge to captivate us and move us forward. Whether it is the combination of art and neuroscience, Photoshop and painting, new technology with traditional biological methods, or two fields of science, these innovative connections are what inspire and educate.

"Science is beautiful in and of itself and you could always find a striking microscopy image to use as art on its own," Murphy says. "By there's something about the juxtaposition of science and fine art that is fascinating and adds new dimension."

"The Beckman Center educational programs, with contributions from so many different people, disciplines, and venues, are enriching the scientific community at Stanford by helping current and future scientists to explore the universe of the living world," says Dr. Shapiro.

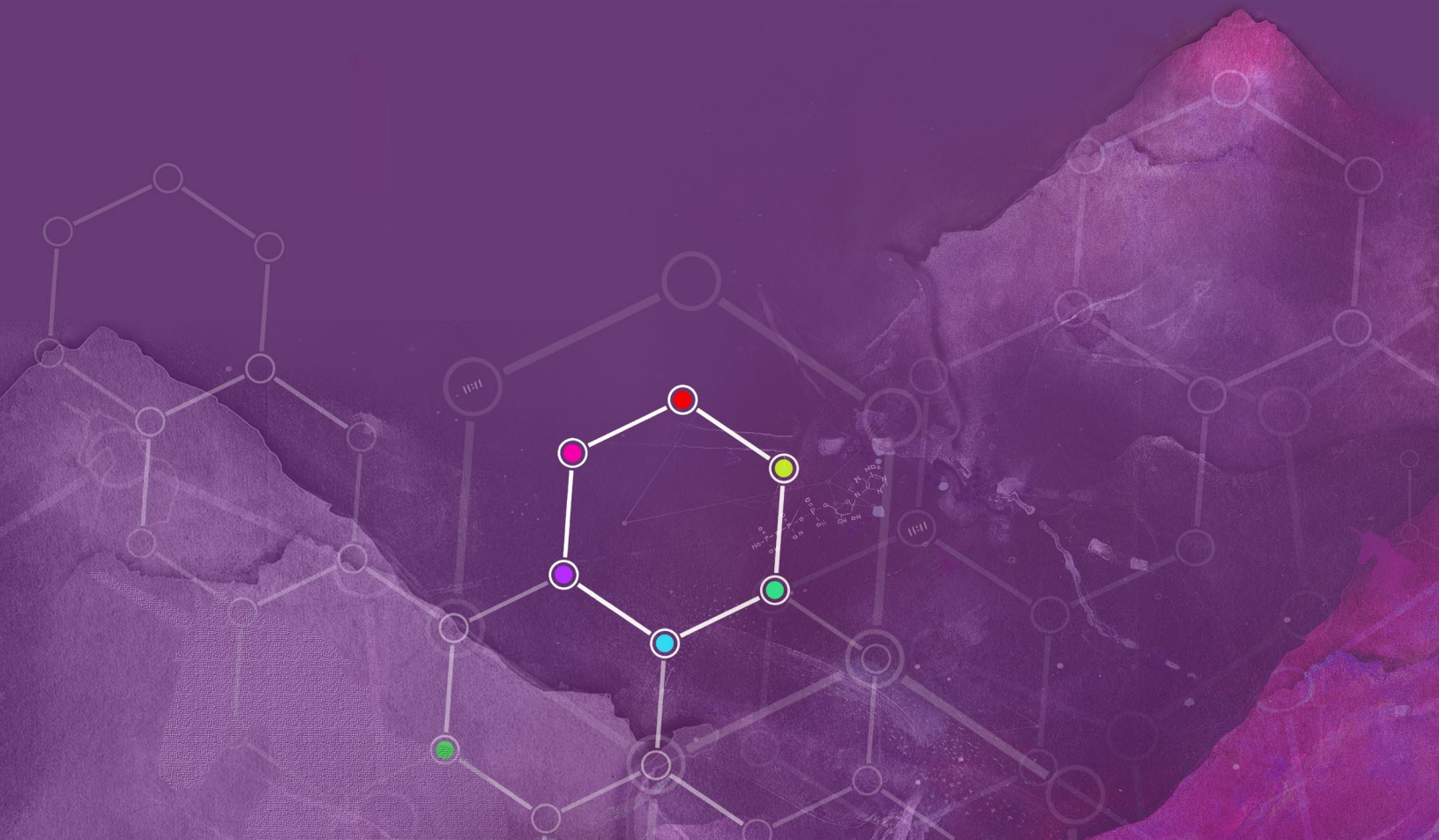
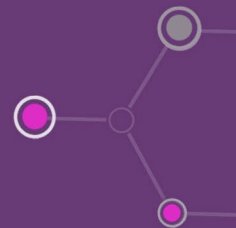


#### 2018 BECKMAN SYMPOSIUM ARTWORK: REVOLUTION IN DIAGNOSTICS

"Diagnostics have become far more accurate, timely, and safe. In this symposium we learned, for example, that amniocentesis, which had required a needle biopsy with its safety concerns, could now be accomplished with a simple blood draw and genetic sequencing."

— Neil Murphy

# OVERVIEW & HIGHLIGHTS



# MEDIA COVERAGE

Included in the appendix are the following articles referenced in the 2021-2022 Highlights section.

## **"Beckman Center Awards Seed Funding to Five Projects"**

*The Beckman Center News*

December 13, 2021

<https://med.stanford.edu/beckman/news/>

[NewsletterFall2021-BeckmanCenterAwardsSeedFundingtoFiveProjects.html](https://med.stanford.edu/beckman/news/NewsletterFall2021-BeckmanCenterAwardsSeedFundingtoFiveProjects.html)

## **"Flora Rutaganira, Ph.D., Joins the Beckman Center"**

*The Beckman Center News*

March 17, 2022

<https://med.stanford.edu/beckman/news/>

[FloraRutaganira.html](https://med.stanford.edu/beckman/news/FloraRutaganira.html)

## **"Face, brain development tightly linked, study finds"**

Stanford Medicine News Center

April 5, 2021

<https://med.stanford.edu/news/all-news/2021/03/Face-brain-development-tightly-linked-study-finds.html>

## **"Stanford machine learning algorithm predicts biological structures more accurately than ever before"**

BIO-X News

August 26, 2021

<https://biox.stanford.edu/highlight/stanford-machine-learning-algorithm-predicts-biological-structures-more-accurately-ever>

## **"Stanford researchers develop tool to drastically speed up the study of enzymes"**

Stanford News Service

July 22, 2021

<https://news.stanford.edu/press-releases/2021/07/22/new-tool-drasticds-study-enzymes/>

## **"Brain's navigation center calls on mental state as well as physical environment, Stanford researchers find"**

Stanford Medicine News Center

August 6, 2021

<https://med.stanford.edu/news/all-news/2021/08/brain-navigation-center-calls-on-mental-state-as-well-as-physical-environmen-.html>

## **"Secrets of how cells cram in oversized genomes revealed"**

Stanford School of Humanities and Sciences News

August 5, 2021

<https://humsci.stanford.edu/feature/secrets-how-cells-cram-oversized-genomes-revealed>

## **"Stanford researchers make 'bombshell' discovery of an entirely new kind of biomolecule"**

Stanford News

May 17, 2021

<https://news.stanford.edu/2021/05/17/stanford-study-reveals-new-biomolecule/>

## **CREDITS**

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