# neworgan

Prizes and partnerships advancing the regeneration, preservation, and bioengineering of our vital organs to address organ disease and the global organ donor shortage.







Mary Wu



Eileen Drezin



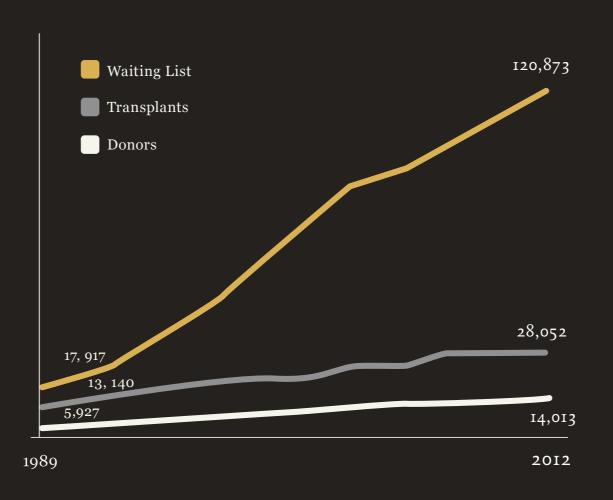
Carol Schutt

## THEY WERE SOME OF THE LUCKY ONES

Millions of others are waiting for a new organ worldwide. Many will die before receiving one.

WE'RE HERE TO CHANGE THAT.

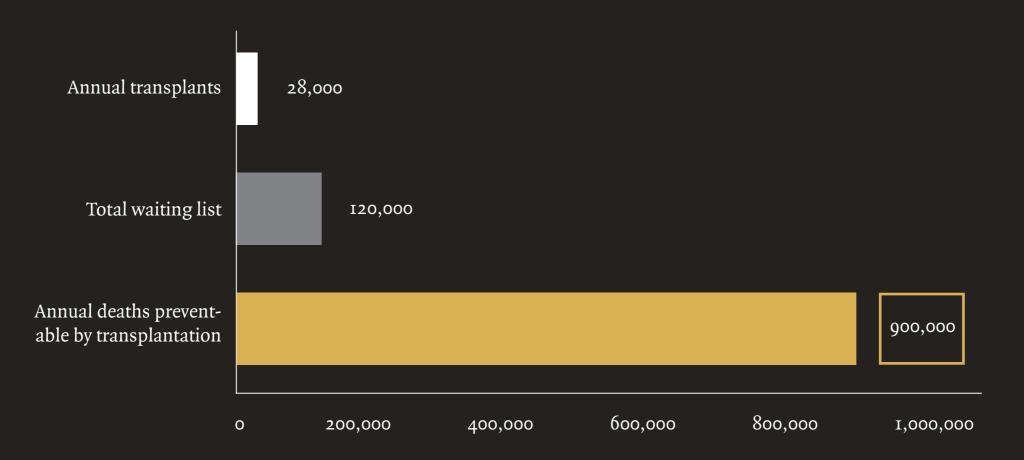
# THE GROWING SHORTAGE



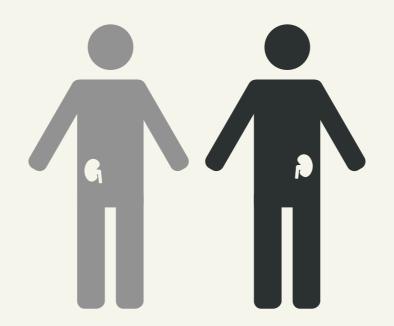
THE U.S. ORGAN WAIT LIST HAS GROWN RAPIDLY, WHILE THE NUMBER OF ORGAN DONORS HAS STAGNATED.

## TRUE NEED IS ALMOST 10X LARGER

THAN OFFICIAL WAITING LIST SUGGESTS



AN ESTIMATED 35% OF ALL U.S. DEATHS COULD BE PREVENTED OR SIGNIFICANTLY DELAYED BY ORGAN TRANSPLANTATION.



### EVEN FOR THOSE FORTUNATE ENOUGH TO RECEIVE COMPATIBLE ORGAN TRANSPLANTS IN TIME, SERIOUS CHALLENGES REMAIN.



#### VITALITY

Immunosuppressants that keep your body from rejecting an organ can harm your immune system, raising the odds of severe illness.



#### LONGEVITY

Transplanted organs often don't last long. You need a new one every 5-15 years, forcing you to endure the waiting list each time.



#### COST

Kidney transplants are \$260,000 in the U.S. Immunosuppressants, which must be taken annually, cost \$10,000 per year.

### GLOBALLY

### THE PROBLEM IS EVEN MORE SEVERE THAN IN THE US



ACCORDING TO THE WORLD HEALTH ORGANIZATION,
ORGAN TRANSPLANTS ARE CURRENTLY MEETING
LESS THAN 10% OF THE GLOBAL NEED.

# ANEW

### WHAT IF AN ORGAN COULD BE CUSTOM MADE, EXACTLY WHEN YOU NEED IT?









# A FUTURE WHERE NEW ORGANS AND TISSUES CAN BE CREATED QUICKLY AND AFFORDABLY IS NOW WITHIN REACH.



# REGENERATIVE MEDICINE IS COMING OF AGE



#### LAB-GROWN BLADDERS

In 2006, Dr. Anthony Atala implanted the first lab-grown bladder into a patient.



#### SYNTHETIC TRACHEAS

In 2008, Dr. Paolo Macchiarini successfully transplanted the first bioengineered trachea.



#### **3D TISSUE PRINTING**

In 2009, Organovo created the world's first production 3D bioprinter.

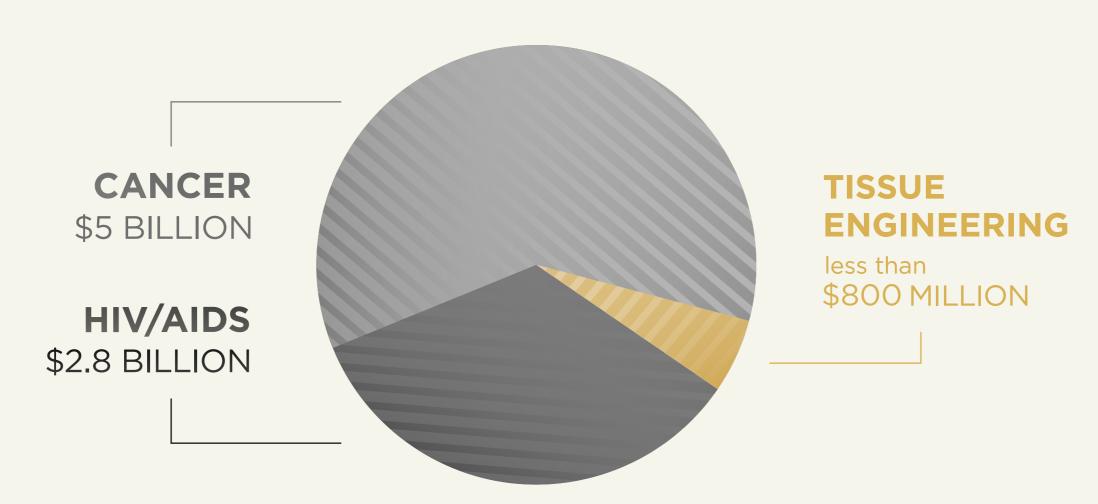
"REGENERATIVE MEDICINE, WITH ITS PROMISE OF REPAIRING DAMAGED TISSUES AND GROWING REPLACEMENT TISSUES AND WHOLE ORGANS, IS THE NEW FRONTIER."

2020: A New Vision – A Future for Regenerative Medicine,
 US Department of Health and Human Services Report

# YET FEW PEOPLE KNOW ABOUT IT

Public demand and research dollars are both severely lagging.

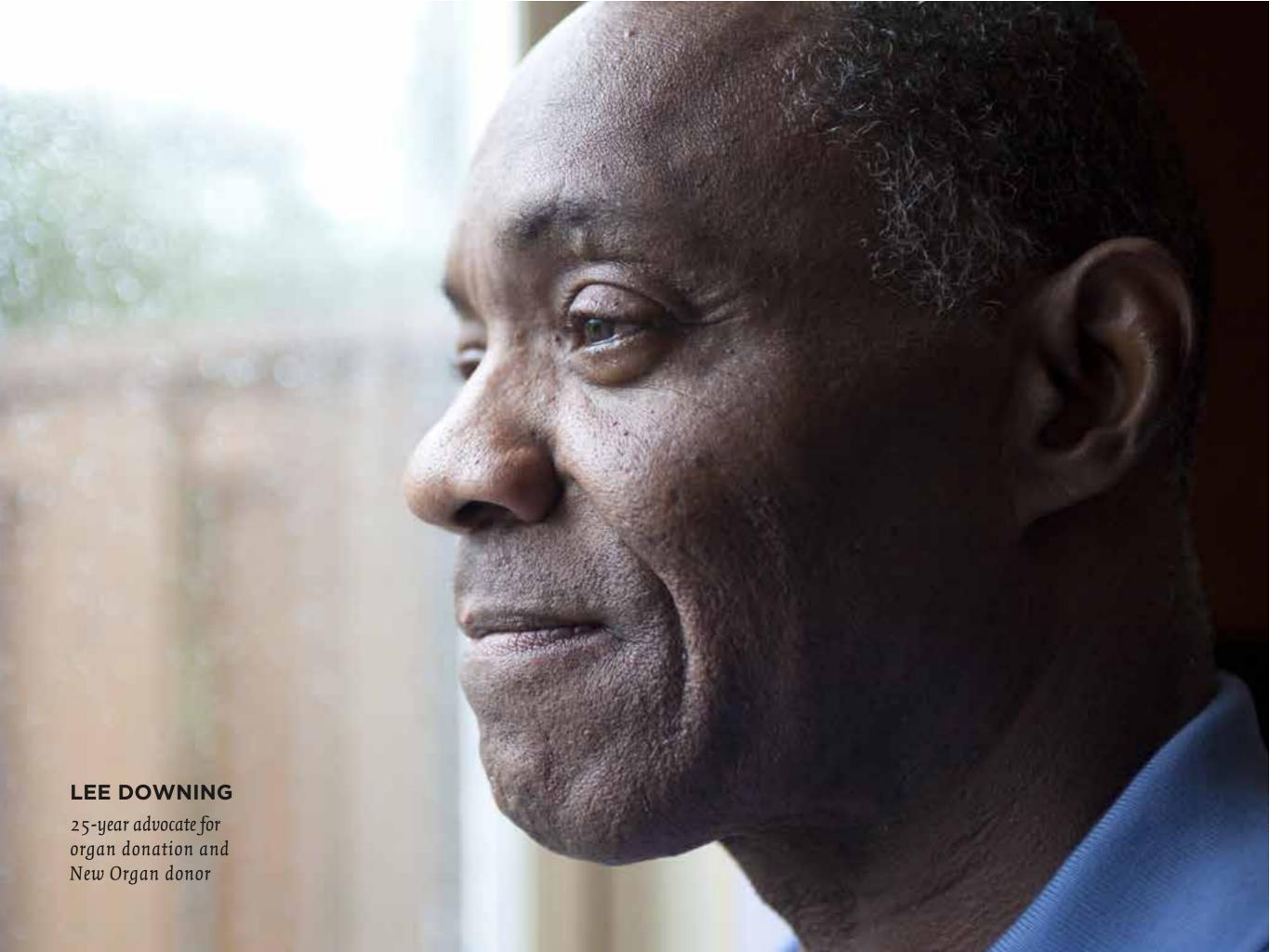
#### **ANNUAL U.S. FEDERAL RESEARCH FUNDING:**



WE ARE CREATING A SERIES OF PRIZES AND A SUPPORTIVE ECOSYSTEM TO PUT THIS CAUSE ON THE MAP, RIGHT NEXT TO AIDS AND CANCER RESEARCH.



STARTING WITH THE LIVER PRIZE.



### NEW ORGAN LIVER PRIZE



### OUR FIRST PRIZE RALLIES SCIENTISTS WORLDWIDE TO REGENERATE A LIVER.

The New Organ Liver Prize will award \$1,000,000 to the first team that creates a regenerative or bioengineered solution that keeps a large animal alive for 90 days without native liver function. Future challenge prizes will cover additional whole organs.

# LIVER PRIZE GUIDELINES

The challenge will be evaluated by independent, well-qualified judges, and will be open to participants globally. The first team to fulfill the guidelines by December 31, 2018, will win.



CLICK HERE FOR GUIDELINES

# VALUE OF AN INCENTIVE PRIZE



Prizes drive new capital to a field. When well structured, they stimulate 5 - 20X their worth from funders backing teams.



Prizes attract new talent with novel ideas, multidisciplinary solutions, and significantly greater public interest.



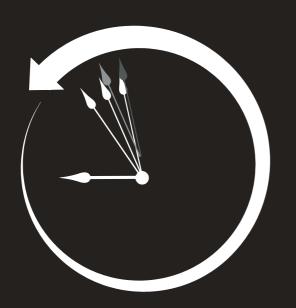
You only pay for a win. This provides unparalleled efficiency for funders – more so than research centers or grants.

Incentive prizes are phenomenal at raising the global visibility and prestige of an undervalued problem and the teams tackling it.



"Tissue and organ engineering is coming of age and complements the field of stem-cell-based regeneration. Now is the time for a prize that hastens the technological breakthroughs to remove one of the darkest shadows today: the worldwide organ donor shortage. We need strong incentives and imaginative approaches. New Organ enables both."

### HOST CHARITY



New Organ is an initiative of the Methuselah Foundation, a public charity dedicated to advancing and celebrating regenerative technologies to reduce unnecessary suffering and extend healthy life.



Over \$4 million in funding for rejuvenation biotech research.



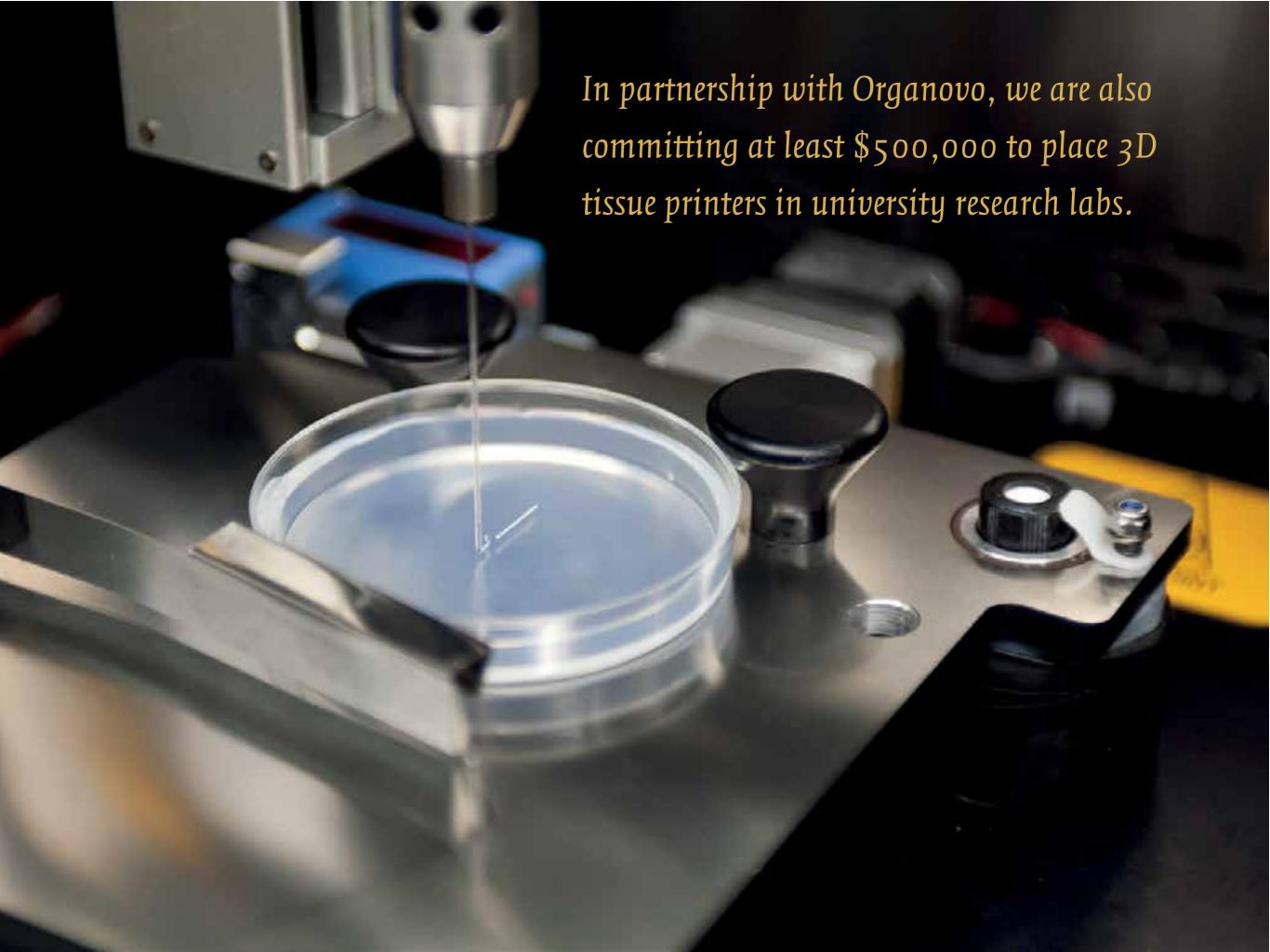
Critical early-stage funding for Organovo (NYSE: ONVO).



The Mouse Prize, the first large prize for rejuvenation research.



Funding that enabled Silverstone to do kidney matching online.



"Regenerative medicine and tissue engineering are at the cusp of conquering the final frontier, the fabrication of vital organs to definitively solve the organ donor shortage. New Organ will help catalyze the efforts to solve the remaining problems to bring this life saving technology to all of the people who desperately need it."



DR. JOSEPH VACANTI

One of the founders of regenerative medicine and tissue engineering



DR. ANTHONY ATALA
Director, Wake Forest Institute
for Regenerative Medicine



DR. STEPHEN BADYLAK
Deputy Dir., McGowan Institute
for Regenerative Medicine



DR. SANGEETA BHATIA
Dir., MIT Lab for Multiscale
Regenerative Technologies



DR. CHRISTOPHER BREUER
Co-Dir., Tissue Engineering at
Nationwide Children's Hospital



DR. KAREN CHRISTMAN
Assoc. Prof., Sanford Consortium
for Regenerative Medicine



DR. SCOTT COLLINS
CTO & Vice President of
R&D, TeVido Biodevices



DR. RAYMOND CHUNG
Dir. of Hepatology, Medicine
Service, Mass General



DR. PAOLO DE COPPI
Clinical Reader & Head of Surgery
Unit, University College of London



**DR. JONATHAN EPSTEIN**William Wikoff Smith Professor of
Cardiovascular Research, UPenn



DR. GABOR FORGACS
Scientific Founder, Organovo,
Co-Founder, Modern Meadow



DR. WOLFRAM GOESSLING
Asst. Prof., Dept. of Medicine,
Harvard Medical School



DR. VALERIE GOUON-EVANS
Assistant Professor, Mount
Sinai School of Medicine



DR. ARMAND KEATING
Director, Cell Therapy Program,
Princess Margaret Hospital



DR. ERIC LAGASSE
Director, Cancer Stem Cell
Center, McGowan Institute



DR. ROBERT LANGER
David H. Koch Institute
Professor, MIT



DR. PAOLO MACCHIARINI
Professor of Regenerative
Medicine, Karolinska Institutet



DR. CHRIS MASON
Chair, Regenerative Medicine
Bioprocessing, UCL



DR. JEFFREY MOLKENTIN Professor, Dept. of Pediatrics, Cincinnati Children's Hospital



DR. ROBERT NEREM
Institute Prefesor Emeritus,
Georgia Institute of Technology



DR. LAURA NIKLASON
Professor of Anesthesiology &
Biomedical Engineering, Yale



DR. HARALD OTT
Instructor in Surgery,
Harvard Medical School



DR. ANDRE TERZIC

Director, Center for Regenerative

Medicine at the Mayo Clinic



DR. KORKUT UYGUN
Assistant Professor in Surgery,
Harvard Medical School



DR. JOSEPH P. VACANTI Surgeon in Chief, Mass General Hospital for Children

#### TEAM —



JOSH NEUBERT

ICS CEO

Josh has extensive experience managing charities and challenge prizes. Since beginning his career at X PRIZE, he has gone on to co-found ICS to help catalyze the prize competition industry.



**TYLER EMERSON** 

New Organ Executive Producer

Tyler leads New Organ's production. Previously he was founding executive director of the Machine Intelligence Research Institute (MIRI), and cofounder and curator of the Singularity Summit.



**DAVID GOBEL** 

New Organ Founder and Methuselah CEO

A forward-looking entrepreneur and father, Dave co-founded Methuselah in 2002 with Dr. Aubrey de Grey. He continues to work tirelessly to advance breakthroughs that will extend healthy life.



**CHLOE BYRUCK** 

ICS COO

Chloe helps teams achieve organizational cohesion. At New Organ, she coordinates every project and guides overall operational design and execution.



**DANE GOBEL** 

Methuselah Operations Director

Dane manages daily operations for Methuselah, overseeing finances and coordinating all projects. He played a leading role in launching New Organ.



**ROSS ROBERTSON** 

New Organ Writer

Ross is a freelance writer, poet, and environmental journalist. Before joining New Organ, he spent eight years as senior editor of EnlightenNext magazine.

"The Founding Fellows of the Tissue Engineering & Regenerative Medicine International Society (TERMIS) strongly and enthusiastically endorse New Organ. Regenerative medicine has made significant advances in the past 15 years and the New Organ Liver Prize represents a golden opportunity for the next leap forward. The public and the medical community will realize a remarkable clinical benefit with the availability of 'off the shelf' livers obviating the need for donor organs, and the medical health care system will simultaneously benefit. We hope this forward-looking effort sets the standard that inspires other initiatives to focus all the resources of regenerative medicine on solving major health care challenges."



### FOR A REAL SOLUTION.

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