RESEARCHING A GLOBAL PANDEMIC

Research to serve the world.

It is a simple phrase that illustrates our vision for research and scholarship at the University of Michigan. From social justice and driverless vehicle technologies to substance abuse and carbon neutrality, researchers across our three campuses use their passion and expertise to find solutions to the many important challenges facing our society.

The rapidly changing COVID-19 pandemic has transformed our lives in many ways, including the way in which our research enterprise operates. But when the novel coronavirus prompted the university to temporarily pause activity, our community once again exemplified its commitment to serving the world through research and scholarship.

Researchers across disciplines collaborated to identify treatments for the virus, improve personal protective equipment and explore how COVID-19 has exacerbated health inequalities within our communities. These are indeed challenging times, but the generation of scientific knowledge across our campuses will continue to play a critical role as we work together to find solutions to this pandemic.

COVID-19 is just one example of our ongoing contributions to the public good, and I am confident the university is well prepared to meet many other challenges that we face in this world of rapid change.

I encourage you to learn more about the impact and importance of research and scholarship led by U-M in our Fiscal Year 2020 Research Annual Report.

On the Cover
Victoria Blanc, director of the Central Biorepository at the Medical School, lifts specimens obtained from patients with COVID-19 from the dedicated -80 [degrees] C freezer where they are stored. The collection of DNA, plasma, serum and more began in April and now has nearly 21,000 samples for use by researchers across U-M.

Photo: Bryan McCullough, Michigan Medicine

REBECCA CUNNINGHAM, M.D.
Vice President for Research
William G. Barsan Collegiate Professor of Emergency Medicine

Critically ill COVID-19 patients who received a single dose of tocilizumab to calm an overreacting immune system were 45 percent less likely to die overall, compared with those who did not receive the drug, according to research led by U-M.

Assisted by artificial intelligence methods, U-M researchers explore drugs previously approved by the FDA – or more likely a cocktail of several drugs – that are most likely to be effective as therapeutic interventions for COVID-19.

Learn more at research.umich.edu/fy20
RESEARCH TO SERVE THE WORLD

The University of Michigan secured 1,918 research awards during Fiscal Year 2020, supporting a wide range of projects – from prostate cancer to nuclear nonproliferation. The projects below are among U-M’s largest FY20 research awards.

A five-year, $25 million grant from the National Nuclear Security Administration supports a new consortium, led by U-M, that aims to strengthen national security by advancing technologies to identify bomb-making nuclear materials, uncover secret nuclear weapons facilities and detect nuclear detonations worldwide.

**PI:** Sara Pozzi, Engineering/Physics

With a four-year, $7.6 million grant from the National Institutes of Health, a team of U-M researchers is exploring why certain racial/ethnic minority groups experience the highest incidence of Alzheimer’s disease and related dementias risk. Their findings identify strategies to reduce disparities.

**PI:** Toni Antonucci, Psychology

A five-year, $31.4 million grant from the National Institute of Dental and Craniofacial Research will allow a regenerative medicine resource center led by the U-M School of Dentistry to continue its research into the restoration of dental, oral and craniofacial tissues lost to disease, injury or congenital disorders.

**PI:** David Kohn, Dentistry/Engineering

A collaborative team, led by the U-M Water Center and the School for Environment and Sustainability, was awarded a five-year, $19.9 million cooperative agreement to support the National Oceanic and Atmospheric Administration in overseeing research at a nationwide network of 29 coastal reserves.

**PI:** Jen Read, Sustainability

Learn more at [research.umich.edu/fy20](http://research.umich.edu/fy20)
RESEARCH AT A GLANCE
FISCAL YEAR 2020

RESEARCH SUPPORT

$1.62 BILLION
Total Research Volume

$887 MILLION
Federally Sponsored Research

$113 MILLION
Industry Sponsored Research

U-M was able to maintain the same total research volume as FY19 during a fiscal year in which the novel coronavirus prompted the university to temporarily ramp down noncritical laboratory research.

Learn more at research.umich.edu/fy20
RESEARCH AT A GLANCE
FISCAL YEAR 2020

RESEARCH COMMERCIALIZATION

522
New Inventions

31
New Startups

163
Patents Issued

DRIVING THE ECONOMY

$5.6 BILLION
U.S. Economic Impact of the
U-M Research Enterprise
FY02 - FY19

$1.8 BILLION
Michigan Economic Impact of
the U-M Research Enterprise
FY02 - FY19

Learn more at research.umich.edu/fy20