Happiness & Sustainability Around the Earth

SDSN
United States
of America

SUSTAINABLE DEVELOPMENT
SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

Kerry Kennedy, JD
President, RFK Human Rights

Wayne A. I. Frederick
President, Howard University

Happiness & Sustainability Around the Earth

The Role of Universities in Fighting COVID-19, Achieving Sustainable Development, and Addressing Social Inequalities

Presented by

Wayne A. I. Frederick, M.D., MBA, F.A.C.S.

Earth Day 2020

HOWARD FORWARD

HOWARD UNIVERSITY:
In the beginning

- **March 2, 1867:**   Charter approved by the 39th United States Congress, Named for General Oliver O. Howard, a Civil War hero

- Intent: The University was established on the principle that it would be open to all ethnicities, both sexes, and all social classes

- Charter: The following departments were specified: normal and preparatory, collegiate, theological, medicine, law, and agriculture

HOWARD UNIVERSITY:
Today

- **13 Schools and Colleges**

- **9 schools within Academic Affairs**

- **4 schools of the Health Sciences**

- 6,000 employees including 1,000 faculty

- 256-acre main campus

- New $70 million Interdisciplinary Research Center opened in 2016

HOWARD FORWARD 2019 - 2024

In January 2019, after a year-long development process, that involved representatives from the entire campus community, Howard unveiled its new five-year strategic plan, *HOWARD FORWARD*.

Enhance Academic Excellence

Inspire New Knowledge

Serve our Community

Improve Efficiency & Effectiveness

Achieve Financial Sustainability

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES DIVERSIFYING THE PIPELINE

Join the conversation on social media
@HUPrez17 #HowardForward

HOWARD FORWARD 2019 - 2024

CRITICAL ROLE OF HBCUS

HBCUs Make America Strong:

134,090 Jobs Impact

$14.8 Billion Economic Impact

$130 Billion Lifetime Earnings

UNCF — A mind is a terrible thing to waste®

The University of Georgia — Terry College of Business — Selig Center for Economic Growth

#HBCUStrong
UNCF.org/HBCUsMakeAmericaStrong
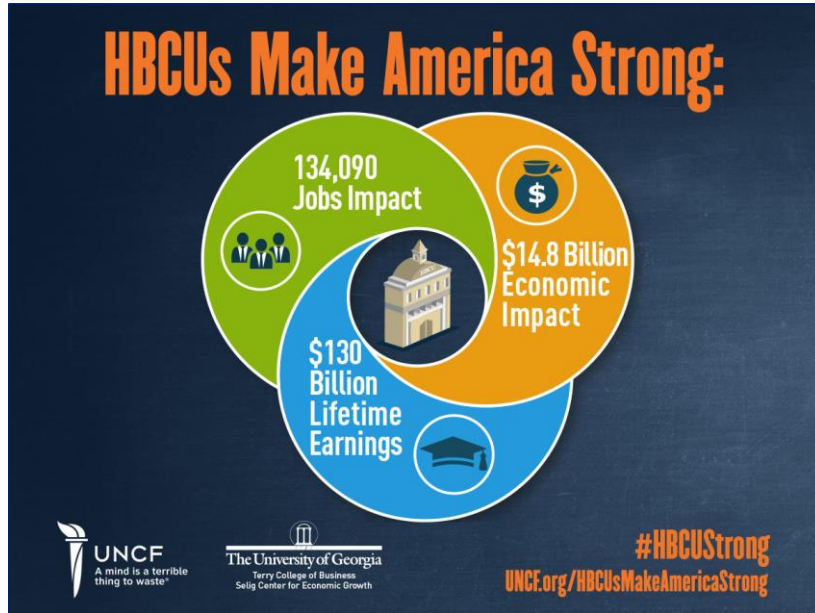
- 300,000 students attend HBCUs
  - Of this population 80% are African American

- HBCUs represent 3% of all four-year institutions

- HBCUs produce 17% of bachelor's degrees awarded to African Americans

Source: National Center for Education Statistics

HBCUS PRODUCE 28% OF AFRICAN AMERICANS IN THE STEM FIELDS*

- 34% of African Americans who received bachelor's degrees in physics, chemistry, astronomy, mathematics and biology earned them from HBCUs*

- Of the top 10 colleges whose African American graduates went on to get PhDs in science and engineering, the top eight were HBCUs**

*National Center for Education Statistics
**National Science Foundation

HOWARD'S PIPELINE

Join the conversation on social media
@HUPrez17 #HowardForward

HF HOWARD FORWARD 2019 - 2024

TOP 50 U.S. BACCALAUREATE-ORIGIN INSTITUTIONS OF BLACK SCIENCE AND ENGINEERING DOCTORATE RECIPIENTS (2002–11)

1. **Howard University 220**
2. Spelman College 175
3. Florida A & M University 154
4. Hampton University 150
5. Xavier University of LA 126
6. Morehouse College 106
7. Morgan State U. 102
7. NC A&T State U. 102
9. Southern U. 100
10. Tuskegee U. 80
10 . U. Maryland, Baltimore County 80
12. U. Maryland, College Park 76
13. U. Michigan, Ann Arbor 73
14. U. Virginia, 72
15 . Harvard U. 71
16. Jackson State U. 69
17. U. California, Berkeley 64
18. U. Illinois, Urbana-Champaign 62

18 .U. North Carolina, Chapel Hill 62
20. Tennessee State U. 61
21. Yale U. 60
22. Brown U. 55
22. Massachusetts Institute of Technology 55
24. U. Florida 54
25. Cornell U. No 51
26 . Alabama A&M U. 50
26. North Carolina State U. 50
28. Duke U. 49
29 . Princeton U. 47
29. Rutgers, State U. NJ, New Brunswick 47
31 . CUNY City C. 46
31. Georgia Institute of Technology, 46
31. Michigan State U. 46
34. Clark Atlanta U. 45

34. Florida State U. 45
34. Prairie View A&M U. 45
37. Tougaloo C. 44
38. U. Pennsylvania 43
39. CUNY, Hunter C. 42
39. Pennsylvania State U. 42
41. Norfolk State U. 41
42. Louisiana State U. 40
42. North Carolina Central U. 40
42. U. California, Los Angeles 40
45. Grambling State U. 39
45. U. South Carolina, Columbia 39
47. Stanford U. 36
47. Texas A&M U., 36
47. U. Georgia 36
50. Dillard U.   35
50 . Fisk U. 35
50. Temple U. 35

TOP 10 UNDERGRADUATE INSTITUTIONS SUPPLYING BLACK OR AFRICAN AMERICAN APPLICANTS TO US MEDICAL SCHOOLS 2016-17

UNDERGRADUATE INSTITUTION	BLACK OR AFRICAN AMERICAN APPLICANTS	TOTAL APPLICANTS FROM THE INSTITUTION
HOWARD UNIVERSITY	111	126
Univ. of Florida	95	854
Xavier Univ. of Louisiana	84	91
Spelman College	76	76
Univ. of N. Carolina Chapel Hill	63	473
Univ. of South Florida	62	366
Florida State Univ.	59	338
Cornell Univ.	58	530

HUMS

MS (2)

Howard University Middle School of Mathematics and Science

STUDENT PROFILE

62%
of students exceeded proficiency in ELA on PARCC

51%
of students exceeded proficiency in Math on PARCC

100%
of students performing at an 8th grade level or higher, upon graduation, as measured by NWEA Measures of Academic Progress

KARSH STEM SCHOLARS PROGRAM COHORT-3

- Average GPA   3.8
- Average ACT   30
- Average SAT   1384
- 15 women and 14 men

All have committed to pursuing a Ph.D., or a combined MD/Ph.D.

KARSH STEM SCHOLARS PROGRAM COHORT-4

- Gender : Male – 21
          Female – 19

- Race: Black – 36
          Black & Latinx – 3
          Asian – 1

- Major: Biology – 11
          Physics – 7
          Chemical Eng. – 6
          Computer Science – 5
          Mechanical Eng. – 5
          Computer Eng. – 3
          Chemistry – 3
- Average GPA: 3.92
- Average Combined SAT: 1410
- Average SAT Math: 724
- Average Composite ACT: 30

2019-2020 COHORT II STATISTICS

- Howard University Students

  - 27 Computer Science Majors

  - 2 Information Systems Majors

  - 1200 SAT score

- Students took a selection of applied Computer Science Courses from HBCU/HSI Faculty including:

  - Machine Learning

  - Product Management

  - Cloud Computing

  - Mobile Applications

  - Database Systems

Institution	Students Enrolled
Howard University	29
California St. – Dominguez Hills	5
Dillard University	3
Florida A&M University	5
Morgan State University	5
New Mexico State University	5
Prairie View A&M University	3
Spelman College	3
University of Puerto Rico-Mayaguez	5
University of Texas-El Paso	5

Tech Exchange
(Howard West)
Google Partnership

3.61
Average GPA
for current students

1200
Average SAT Scores
for current students

Current Gender Breakdown
12 Female/17 Male

Tech Exchange COHORT II STATISTICS

Institution	Students Enrolled
Howard University	29
California St. – Dominguez Hills	5
Dillard University	3
Florida A&M University	5
Morgan State University	5
New Mexico State University	5
Prairie View A&M University	3
Spelman College	3
University of Puerto Rico-Mayaguez	5
University of Texas-El Paso	5

1200 SAT score

27
Computer Science Majors

2
Information Systems Majors

Students took a selection of applied Computer Science Courses from HBCU/HSI Faculty including:

- Machine Learning

- Product Management

- Cloud Computing

- Mobile Applications

- Database Systems

HOWARD FORWARD 2019 - 2024

Pre-Health Scholars
2019 Program Participants

The average GPA is
3.42

The average MCAT practice score increase:
+5 points

The average DAT score Increase:
+4.4 points

Of the 25 members, 17 - females; 8 - males

Major Breakdown

Biology (13)

Chemistry (1)

HHPL/Sport Medicine (7)

Math (1)

HHPL/Community Health (1)

Nutritional Sciences (1)

Neeli Bendapudi, PhD.
President, University of Louisville

Happiness & Sustainability Around the Earth

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

Who we are:

- **Established 1798 as one of the oldest city universities**

- **12 schools of study, 22,000+ students**

- **ONE of only 69 Universities in the World**
  - One of 131 Carnegie R1s
  - One of several hundred Carnegie Community-Engaged

- **40% of our students are Pell-eligible**

- **UofL Health consists of 5 hospitals and 4 ambulatory care centers with more than 10,000 employees**

UNIVERSITY OF
LOUISVILLE.

Delivering coronavirus testing to KY

Diagnostic Testing

Key Researchers: Julio Ramirez and Ruth Carrico

- UofL has ramped up its efforts to combat the deadly pandemic;

- Delivered thousands of results to all 15 major area hospitals and others across the state, and processing drive-through testing for UofL Health;

- Testing capacity has increased to more than 1000/day and will continue to grow.

Manufacturing PPE

Key Researchers: Sundar Atre and Ed Tackett

- UofL created a 3-D printed swab made of a pliable resin material;

- Promising solution for the shortage of swabs in COVID-19 test kits in Kentucky;

- Collaboration: UofL's Additive Manufacturing Institute of Science & Technology (AMIST), Schools of Dentistry, Engineering and Medicine.

Research Impact
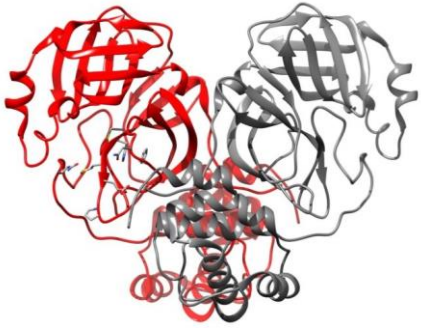
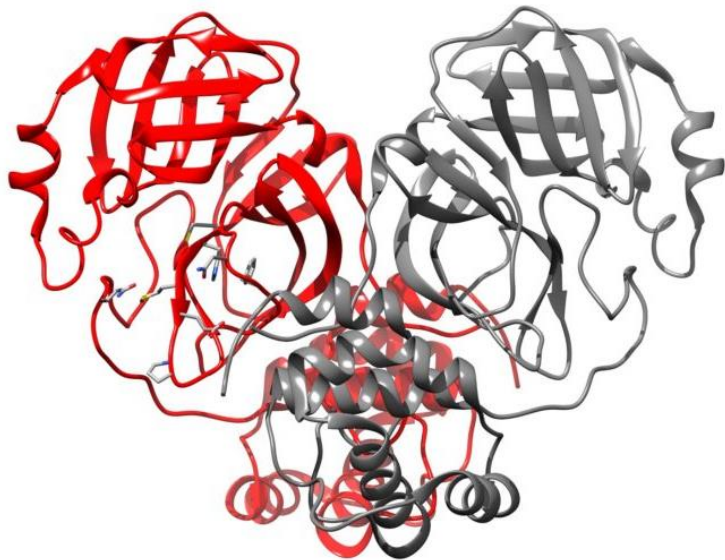**Seeking new drugs using computers in Kentucky schools**
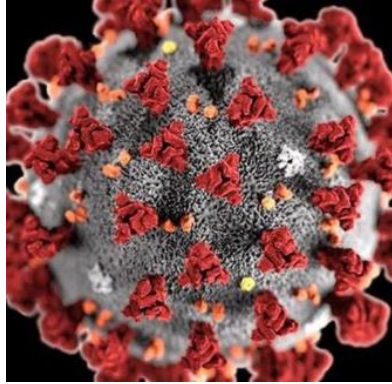
DNA tech for fighting novel coronavirus

Tobacco compounds as therapeutic agents

Seeking new drugs using computers in Kentucky schools

Key Researcher: John Trent

- **UofL using the computing power of thousands of computers in classrooms across the state to identify drugs to treat COVID-19;**

- **Part of the DataseamGrid, a network of computers housed in classrooms of 48 Kentucky school districts;**

- **Computers at work 24/7 to identify the most promising drugs and compounds to fight SARS-CoV-2 and its disease, COVID-19**

UNIVERSITY OF
LOUISVILLE.

DNA tech for fighting novel coronavirus

Key Researchers: Paula Bates, John Trent and Kenneth Palmer

- **UofL technology is believed to block the novel coronavirus SARS-CoV-2 from infecting human cells;**

- **Based on a piece of synthetic DNA -- an "aptamer" -- which targets and binds with a human protein that viruses hijack to replicate inside the body;**

- **Leverages Center for Predictive Medicine for Biodefense and Emerging Infectious Diseases (CPM) and Regional Biocontainment Lab;**

- **Licensed by a commercial partner and planning clinical trial.**
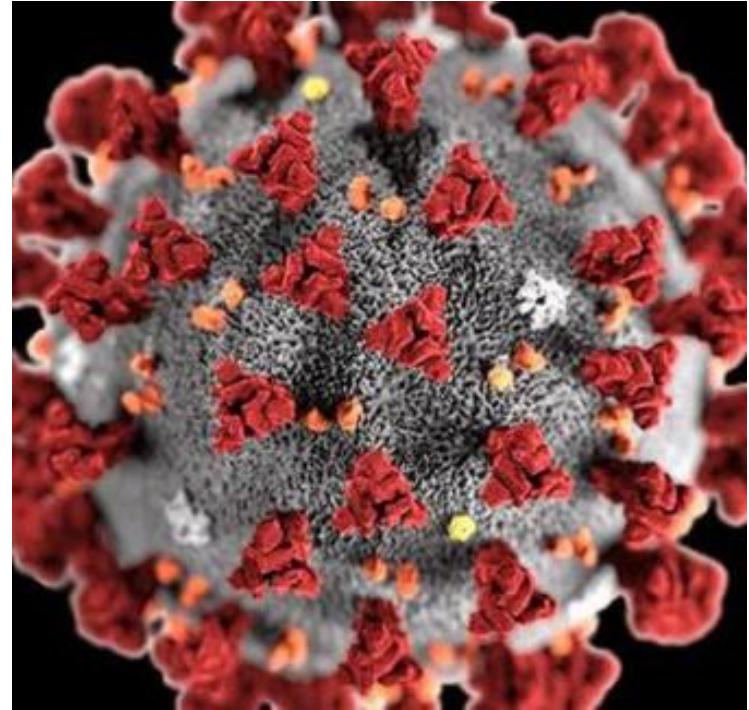
Tobacco compounds as therapeutic agents

Key Researchers: Kenneth Palmer and Donghoon Chung

- UofL exploring COVID-19 therapeutic agents that could be grown quickly in host tobacco plants;

- Compound is known as Q-Griffithsin;

- Co-owned by the university with the National Cancer Institute and the University of Pittsburgh;

- Strain could be the key to quickly mass-producing a preventive agent, treatment or vaccine for COVID-19;

- Leverages UofL's Regional Biocontainment Laboratory (RBL), housed in the CPM.

UNIVERSITY OF
LOUISVILLE.

Christina Lee Brown Envirome Institute

Key Researchers: Aruni Bhatnagar and Ted Smith

Envirome Institute Community Co-Immunity Project

- **Town-Gown Partnership**
- **https://louisville.edu/envirome/covidstudy**

U of L Sustainability

Commitment to a Sustainable Future.

louisville.edu/sustainability

- **2008** – Signed Carbon Commitment & established university-wide Sustainability Council
- **2009** – Established annual Green Threads: Sustainability Across the Curriculum faculty workshop
- **2010** – Released Climate Action Plan
- **2010** – First recognized as Tree Campus USA
- **2011** – 10th school in nation submit for a STARS sustainability rating (Silver) from the Association for the Advancement of Sustainability in Higher Education (AASHE)

- **2013** – Named the most Bicycle-Friendly University in Kentucky
- **2014** – Received AASHE Award for Best Case Study for Earn-A-Bike Program
- **2016** – One of only 100 schools to achieve STARS Gold sustainability rating
- **2019** – Achieved nearly 16% reduction in carbon emissions despite our growth

UNIVERSITY OF LOUISVILLE.

GRANDCHALLENGES

- *Empowering our communities.*
- *Advancing our health.*
- *Engineering our future economy.*

UNIVERSITY OF
LOUISVILLE.

louisville.edu

Peter Salovey, PhD.
President, Yale University

Happiness & Sustainability Around the Earth

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
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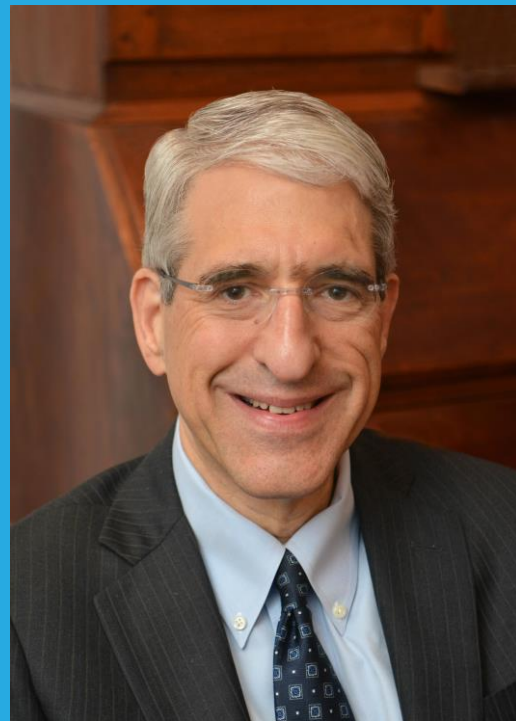
Learning from COVID-19 and Becoming More Resilient

24-Hour Webinar for Earth Day

UN Sustainable Development Solutions Network

April 22, 2020

Peter Salovey, Ph.D.

President

Chris Argyris Professor of Psychology

Yale
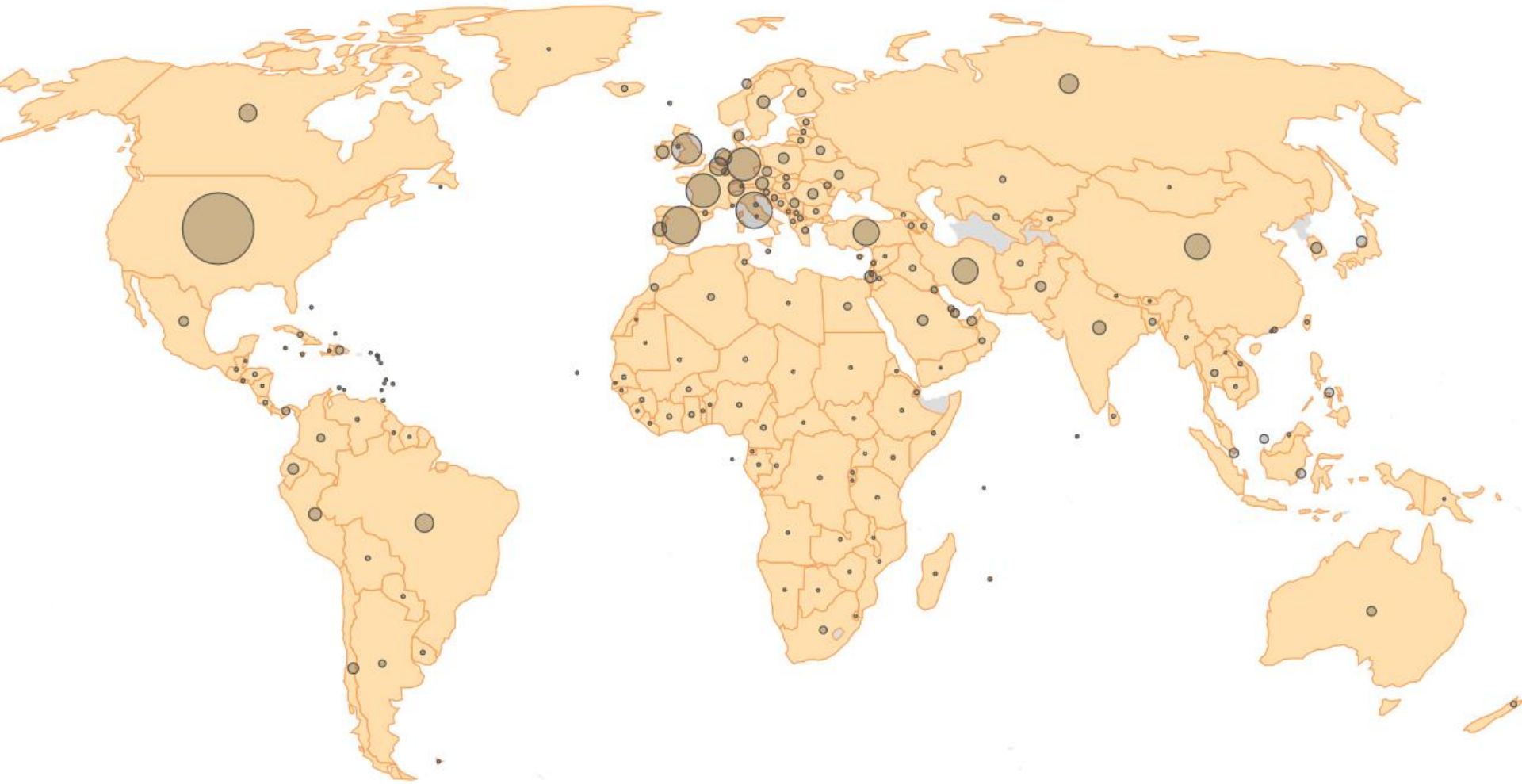
Three Essential Elements

1. Create new knowledge
2. Translate new knowledge into actions
3. Educate the next generation of leaders

Research and Clinical Efforts

Biology

Biostatistics

Clinical Diagnostics & Therapeutics
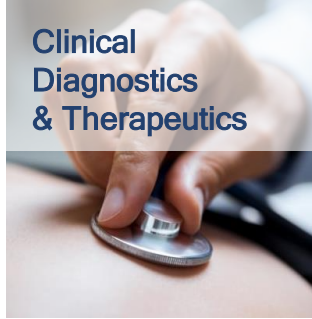
Bioinformatics & Computer Science

Engineering

Epidemiology, Modeling, Community & Global Health
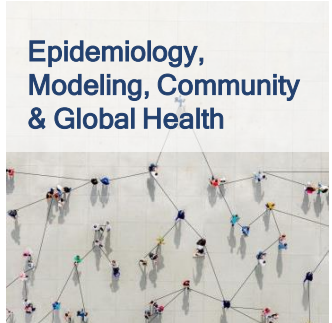
Health Disparities

Molecular Biophysics & Biochemistry
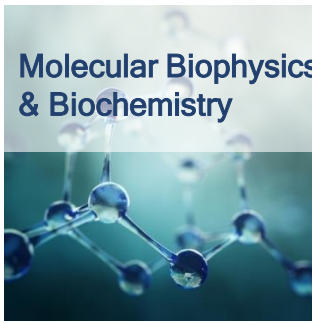
Social Sciences

Virology & Immunology
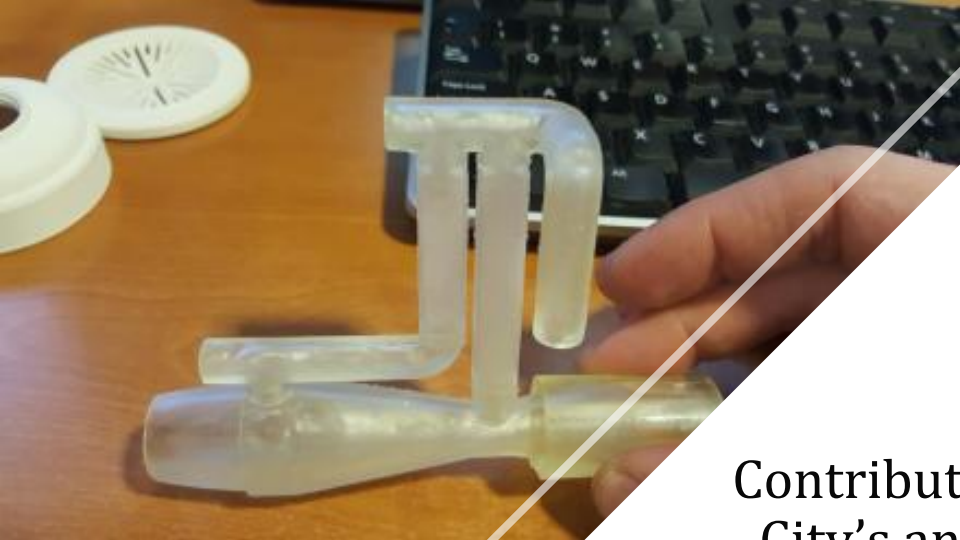
Yale

Contributing to the City's and State's Response

Looking Ahead

NETWORKS
SCIENCE
QUITY
CE
LEADERSHIP LOCAL-REGIONAL

ADAPTIVE
ENERGY
GREEN
FORESTS
DISRUPTION
INDIGENOUS

Good Health and Well-Being, 2810

Quality Education, 733

Reduce Inequality, 616

Industry, Innovation and Infrastructure, 562

Decent Work and Economic Growth, 294

Gender Equality, 410

Partnership for the Goals, 354

Life on Land, 326

Climate Action, 179

No Poverty, 153

Peace, Justice, and Strong Institutions, 933

Sustainable Cities and Communities, 333

Responsible Consumption and Production, 202

Affordable and Clean Energy, 111

Life Below Water, 54

Clean Water and Sanitation, 98

Zero Hunger, 66

Kristina Johnson, PhD.
Chancellor, State University of New York

The Role of Universities in Fighting Covid-19, Achieving Sustainable Development, and Addressing Social Inequalities

Kristina M. Johnson, PhD.
Chancellor, State University of New York

SUNY
The State University
of New York

Plattsburgh
Clinton
Canton
Potsdam
North Country
Jefferson
ADIRONDACK
MOUNTAINS
Niagara County
Brockport
Oswego
Upstate Medical University
Adirondack
SUNY Polytechnic Institute
Empire State *
U Buffalo
Monroe
Genesee
Onondaga
Herkimer County
Fulton-Montgomery
Buffalo State
Erie
Finger Lakes
Environmental Science & Forestry
Schenectady County
Geneseo
Cayuga County
Mohawk Valley
Morrisville State
Cobleskill
Albany
Hudson Valley
FINGER LAKES
Cortland
Oneonta
Fredonia
Tompkins Cortland
Jamestown
Alfred State
Broome
Delhi
Columbia-Greene
Corning
Sullivan County
Ulster County
Binghamton
New Paltz
Dutchess
Alfred University Ceramics
Cornell University
Agriculture & Life Sciences
Human Ecology
Industrial & Labor Relations
Veterinary Medicine
Orange County
Rockland
Westchester
Stony Brook
Purchase
Old
Westbury
Suffolk County
Maritime College
Optometry
Farmingdale State
Fashion Institute of Technology
Nassau
Downstate Medical Center

● University Centers and Doctoral Degree Granting Institutions
● University Colleges
● Technology Colleges
● Community Colleges

* Empire State College has 35 locations throughout New York State.

SUNY COVID-19 TASK FORCE

Provides guidance to campuses, Chancellor, Board, and other relevant stakeholders

SUNY COVID-19 CHAIRS

Tod Laursen, Robert Haelen, Stephanie Fargnoli

STEERING COMMITTEE

Specialty Groups Listed Below

Advisors to the Steering Committee in the following areas:

- Counsel
- Finance/Enterprise Risk Management
- Research Foundation
- Communications (Internal and External)
- External Agencies

| MEDICAL | INTERNATIONAL PROGRAMS | RESIDENTIAL/ STUDENT SERVICES /STUDENT HEALTHCARE | EMERGENCY MANAGEMENT/ EH&S/ POLICE | ACADEMICS | EMPLOYMENT |

Major SUNY COVID-19 Timeline of Events

Dec. 31: First person known to have the virus identified in Wuhan, Hubei, China

January 23: SUNY Outreach to students studying in China impacted by travel restrictions.

January 30: First case confirmed in United States

February 22: Chancellor action planning with President Min

March 4: SUNY/CUNY study abroad programs suspended from Level 2,3

March 9: SUNY students in South Korea and Japan are evacuated

January 6: CDC's first notice of a Level 1 warning

January 27: SUNY COVID-19 team starts regular website information posts

February 13: Chancellor and Provost meet with SUNY Korea President Wonki Min

March 2: Chancellor appoints SUNY COVID-19 Task Force; DOH webinar for campuses

March 7: SUNY students in Italy are evacuated; Governor signs EO 202 Declaring a Disaster Emergency in NYS

Week of March 9: Online communities of practice System-wide discussions

www.suny.edu

COVID-19 Timeline of Events

March 10:
Chancellor initiates daily calls with 64 campus Presidents; All SUNY Spring 2020 study abroad programs cancelled

March 16:
Spring Break extended to facilitate migration to remote instruction (returning March 30)

March 20:
Governor Cuomo Signs NY on Pause; 100% Closure of Non-Essential Businesses Statewide

March 25:
CARES Act signed

April 3:
NY State Enacted Budget signed

April 16:
Governor extends "NY on Pause" to May 15, 2020

March 11:
First confirmed case on a SUNY campus; SUNY moves to remote instruction for remainder of Spring semester

March 16:
Governor Cuomo announces expansion hospital capacity and statewide employee reductions & school closings

March 22:
Stony Brook and Old Westbury established as temporary hospital space

March 27:
8,800 laptops and chrome books delivery started to SUNY students who need them

April 5:
SUNY Downstate University Hospital becomes a COVID-19 only facility

April 17:
29 campuses affected;164 faculty/staff and students tested positive

www.suny.edu

The Path to Absolute Inclusivity

Happiness & Sustainability Around the Earth

Q&A
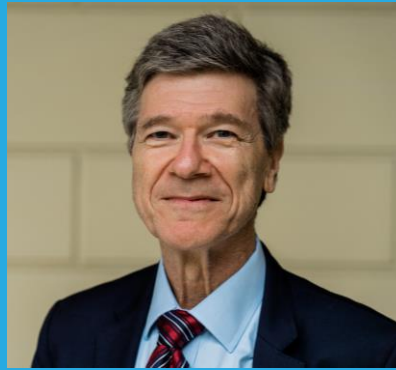
Dr. Jeffrey Sachs
SDSN President and Director of the Columbia University Center for Sustainable Development

Dr. Kristina M. Johnson
State University of New York System Chancellor

Dr. Wayne A. I. Frederick
Howard University President

Dr. Peter Salovey
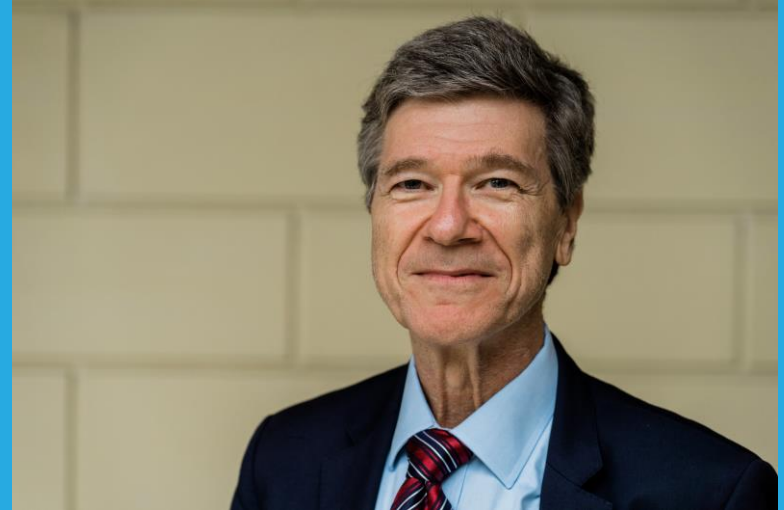Yale University President

Dr. Neeli Bendapudi
Yale University President

Jeffrey Sachs, PhD
President, SDSN
Director, Columbia University Center for Sustainable Development

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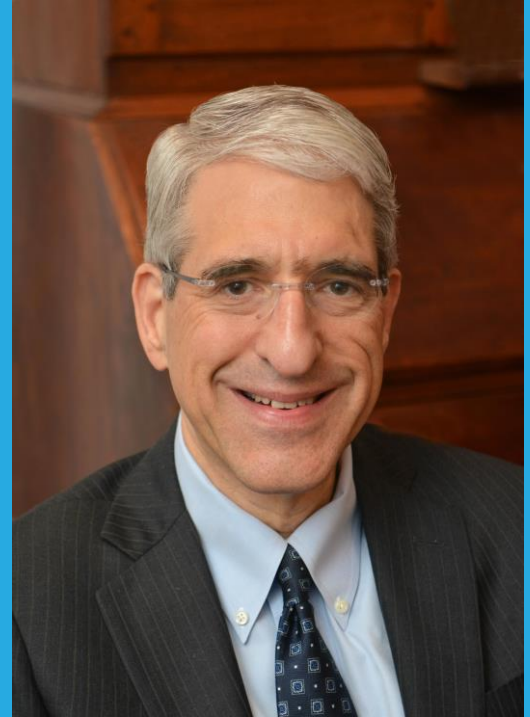
Kristina Johnson, PhD.
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Thank you!

www.sdsnusa.org