



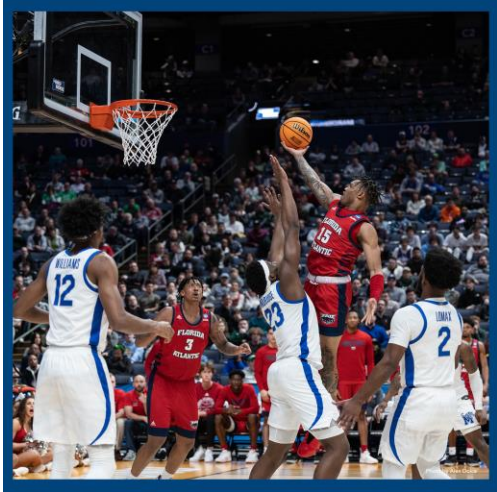
# FAU Health Network

THE TIME IS NOW ...

TRANSCEND   
 TOMORROW  
THE CAMPAIGN FOR  
FLORIDA ATLANTIC UNIVERSITY

# Excellence – On and Off the Court!

Our Florida Atlantic Men's Basketball athletes made it to the Final Four. We are doing the same with our healthcare students.





## OUR STRATEGIC VISION

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**FAU Health** will bring renowned academic medicine to **Southeast** Florida, driving our community forward and improving the lives of our citizens.



All of the nation's top 20 hospitals<sup>1</sup> are academic medical centers, of which 20% are public.

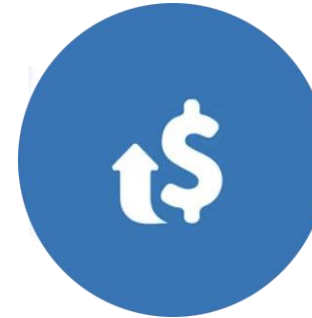
**THE TIME IS NOW TO TRANSFORM HEALTHCARE IN FLORIDA.**

<sup>1</sup>. As ranked in the *U.S. News & World Report's* 2022-2023 Best Hospitals Honor Roll.

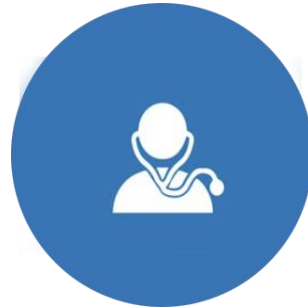
# What We Intend to **Accomplish**



Elevated **Academic Care** in the region



**Growth** in the faculty group practice to **Reinvest** in academics



**Recruit** and **Retain** the best faculty



Increased availability of **High-Quality Patient Care** services in the market



Strengthen **Teaching Programs** and grow **Research** footprint



# Market Metrics

## What's in Florida?

Academic Healthcare Missing in Market

**Shands Hospital**  
**University of Florida**

Gainesville

**University of South Florida**

Tampa

**Tampa General Hospital**

Tampa

**HCA Healthcare**  
**University of Central Florida**

Orlando

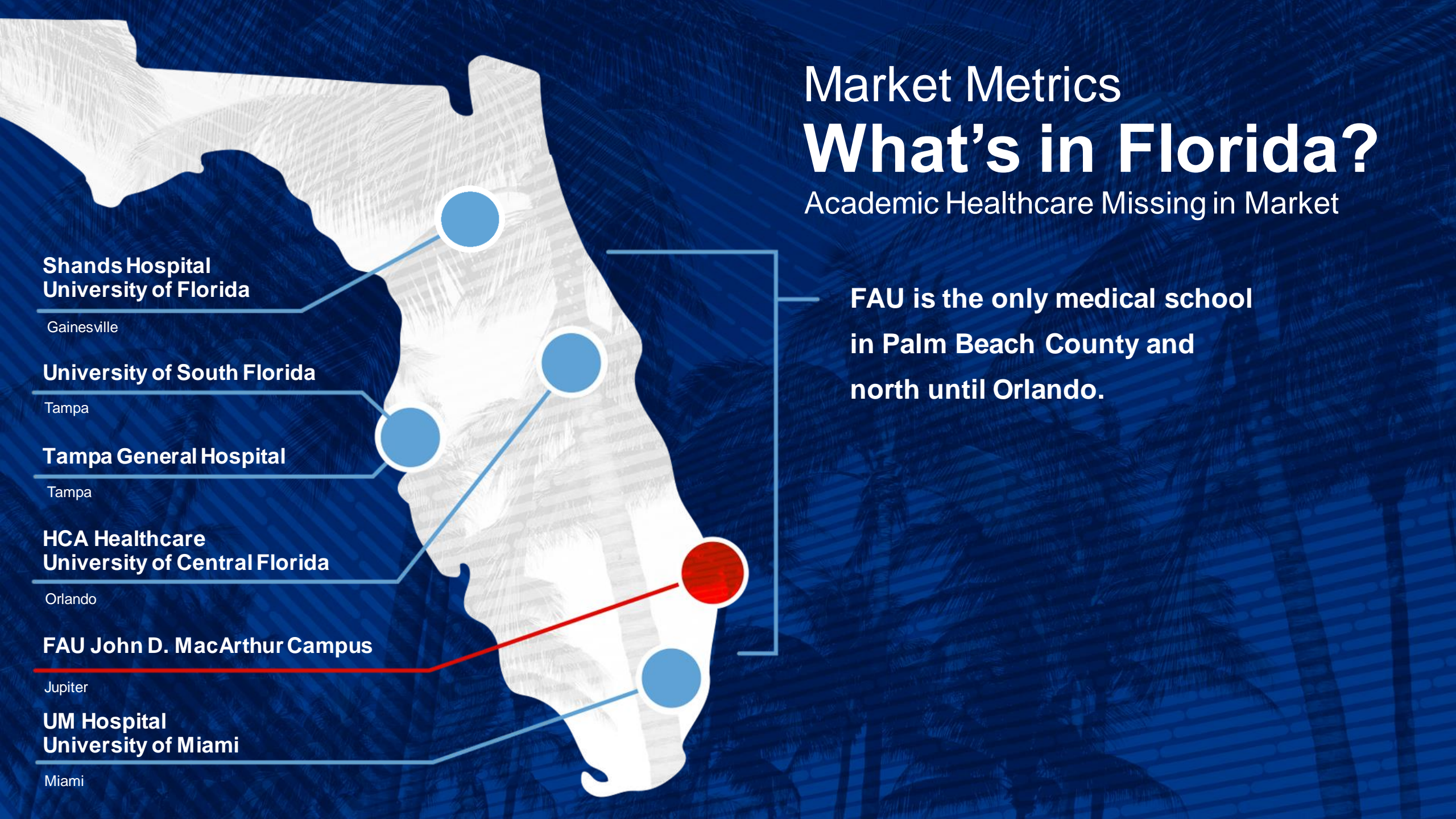
**FAU John D. MacArthur Campus**

Jupiter

**UM Hospital**  
**University of Miami**

Miami

**FAU is the only medical school  
in Palm Beach County and  
north until Orlando.**





# Market Metrics



**~7-10%**  
Notable out-migration\*



Significant physician shortage  
average MD age **61**;  
work less than a **1.0**  
full-time equivalent\*

\*Comprehensive ECG Analysis




# Growing College of Medicine

**200+**  
Post-Graduate  
Year Trainees

**Residencies:**  
general surgery,  
internal medicine,  
emergency medicine,  
neurology, psychiatry

**Fellowships:**  
vascular, cardiovascular  
medicine, geriatric medicine,  
hospice and palliative care

**62.5%**   
Medical Students  
in 3 years

*Of the Community, for the Community*

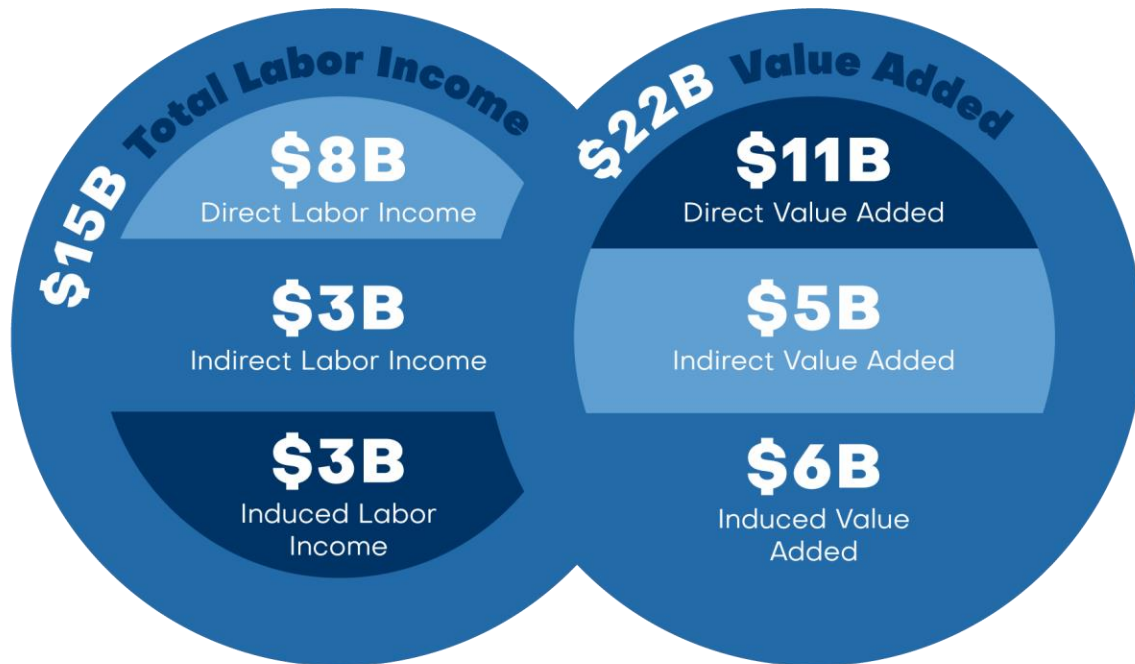


**FOUNDED IN 2017**

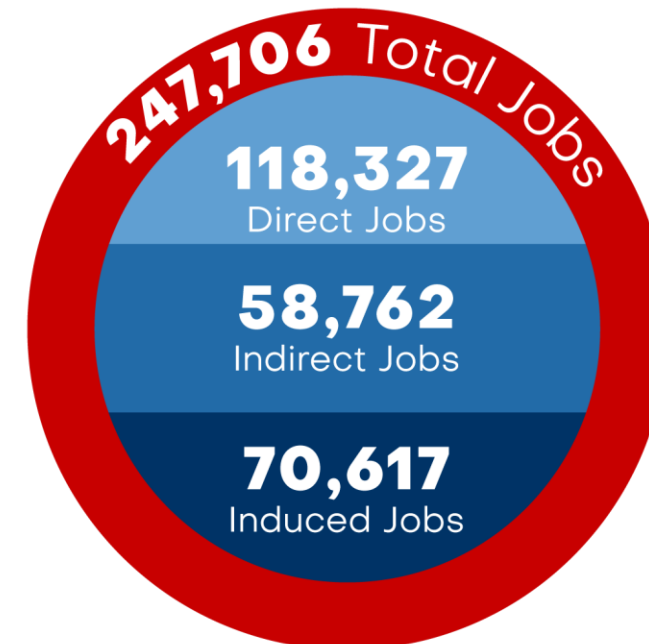
# Academic Medicine **Economic Impact** in Florida

- Supports **247,706 jobs**
- Contributes **\$22.06B** to **Florida's economy** = **1.88%** to **Florida's GDP** (or \$1,027 per resident)
- The **average job** supported in Florida pays **\$60,017**

## Economic Impact in Florida



## Jobs Created in Florida

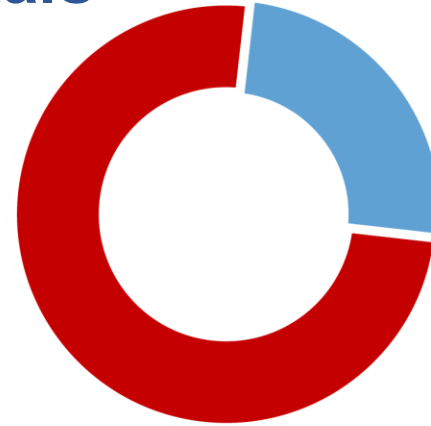




**Academic  
 Medicine  
 Economic  
 Impact U.S.**

**Economic Impact of Medical Schools and Teaching Hospitals**

Medical Schools and Teaching Hospitals Contributed **\$728B** to GDP in 2019



**GDP from Medical Schools**  
 \$235B

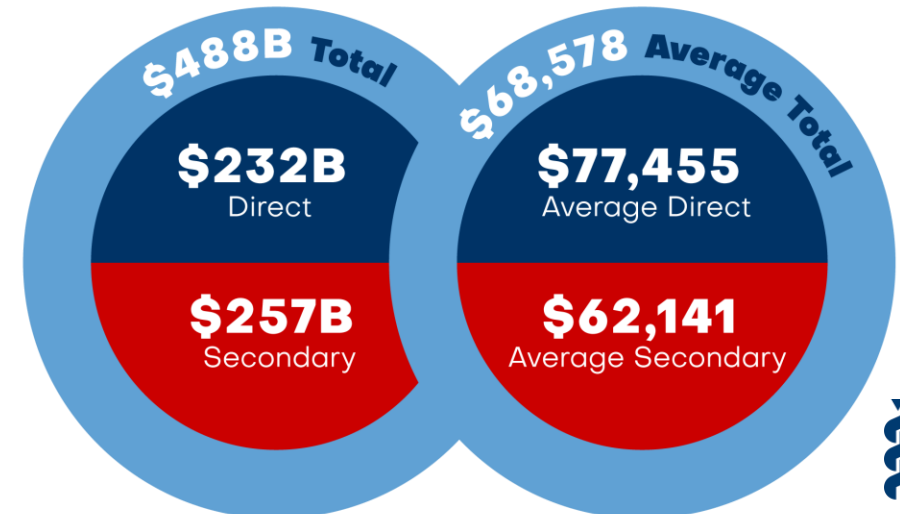
**GDP from Teaching Hospitals**  
 \$493B

*This equate to about 3.2% of U.S.GDP, or roughly \$2,218 per person.*

**Jobs**



**Wages, Salaries and Benefits**



*AAMC-member medical schools and teaching hospitals supported more than 7.1M U.S. jobs in 2019. This is approximately 4.4% of jobs nationwide.*

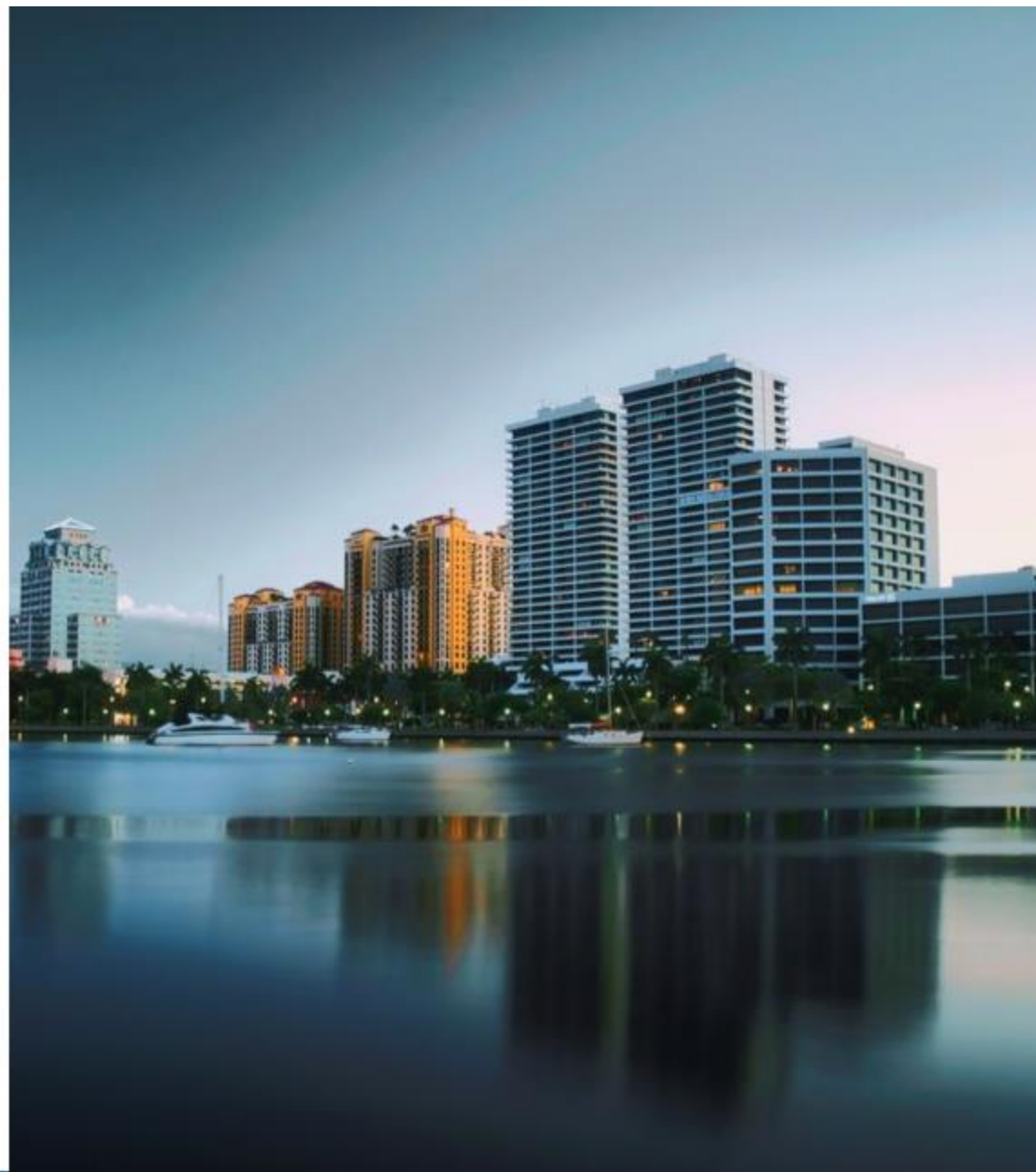
**Academic  
 Medicine  
 Economic  
 Impact U.S.**



1- Secondary effects include two additional economic effects. The first is the new business spending as AAMC-member institutions buy more goods and services from other local businesses to meet growth. The second is the additional spending brought about by the salaries and benefits associated with job creation.  
 2- AAMC. Table 1: Applicants, matriculants, enrollment, and graduates of U.S. MD-granting medical schools, 2012-2013 through 2021-2022. AAMC 2021 FACTS. <https://www.aamc.org/media/37816/download?attachment>. Published Nov. 17, 2021. Accessed April 6, 2022.  
 3- AAMC analysis of membership data as of December 2021 and 2022 data from the National Cancer Center Institute’s Office of Cancer Centers.  
 4- AAMC analysis of the FY 2020 Council of Teaching Hospitals and Health Systems Annual Survey of Hospital Operations and Financial Performance. Data are based on voluntary survey responses from AAMC-member teaching hospitals that were required to submit IRS Form 990.

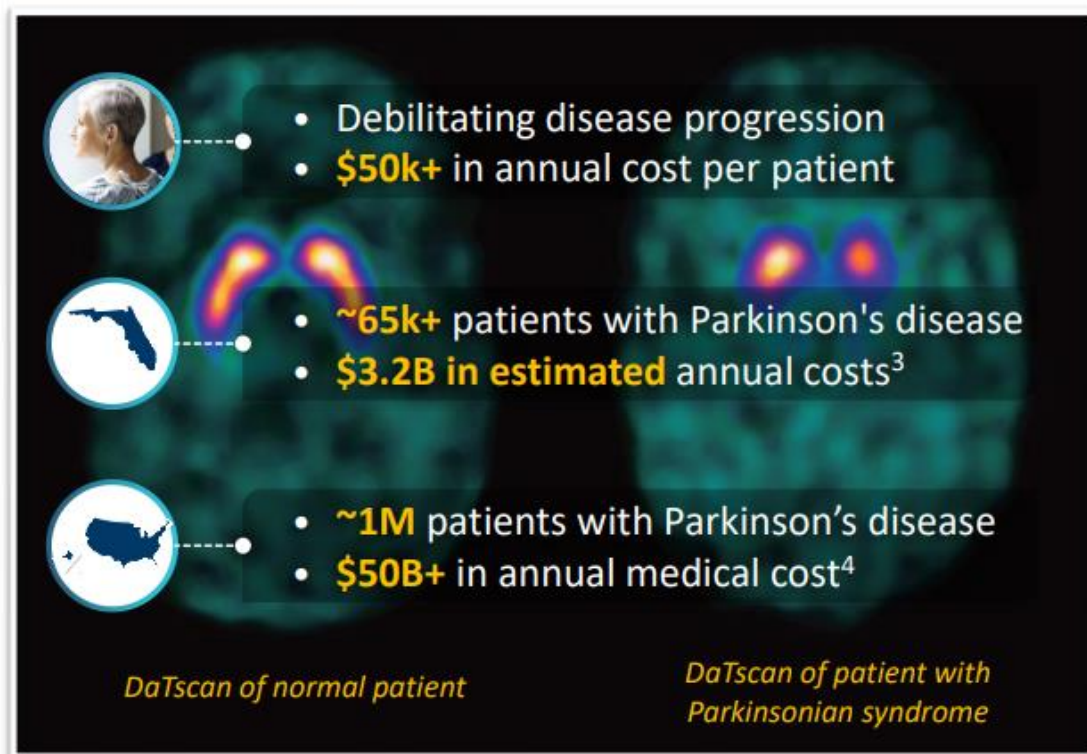


# CENTER OF EXCELLENCE PARKINSON'S DISEASE

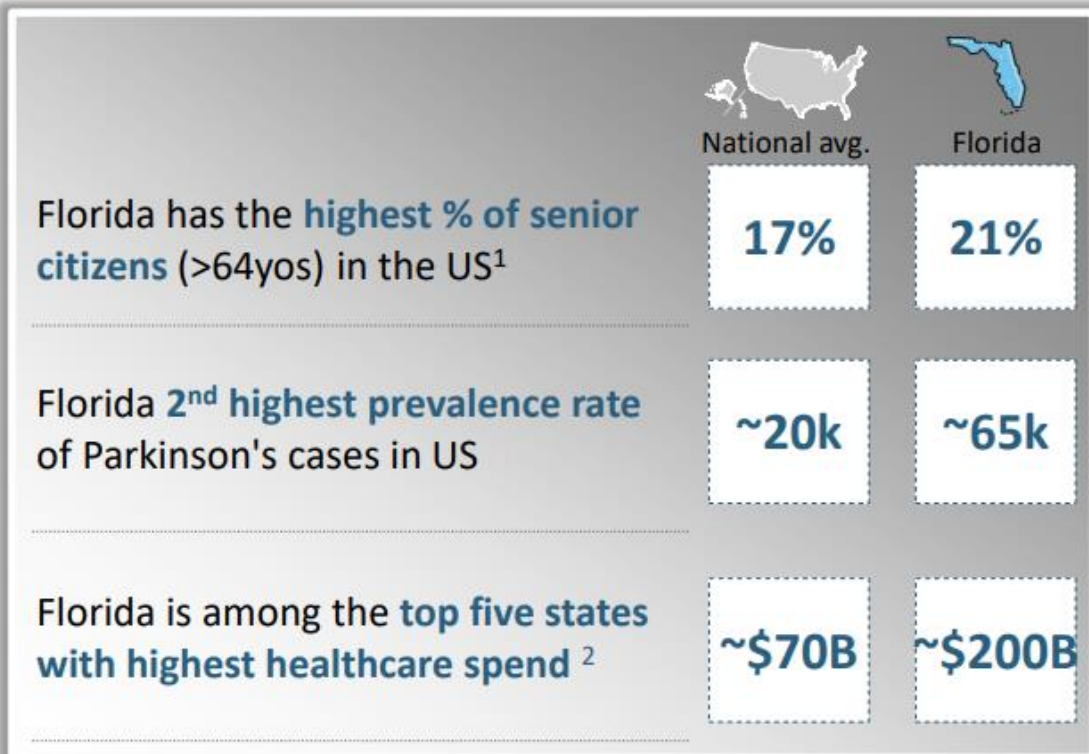


# Parkinson's disease incurs massive cost for the individual and the society, and is disproportionately impacting FL

## Cost of Parkinson's Disease



## Impact to Florida



1: 90%+ of Parkinson's patients across the US are 50+ years old

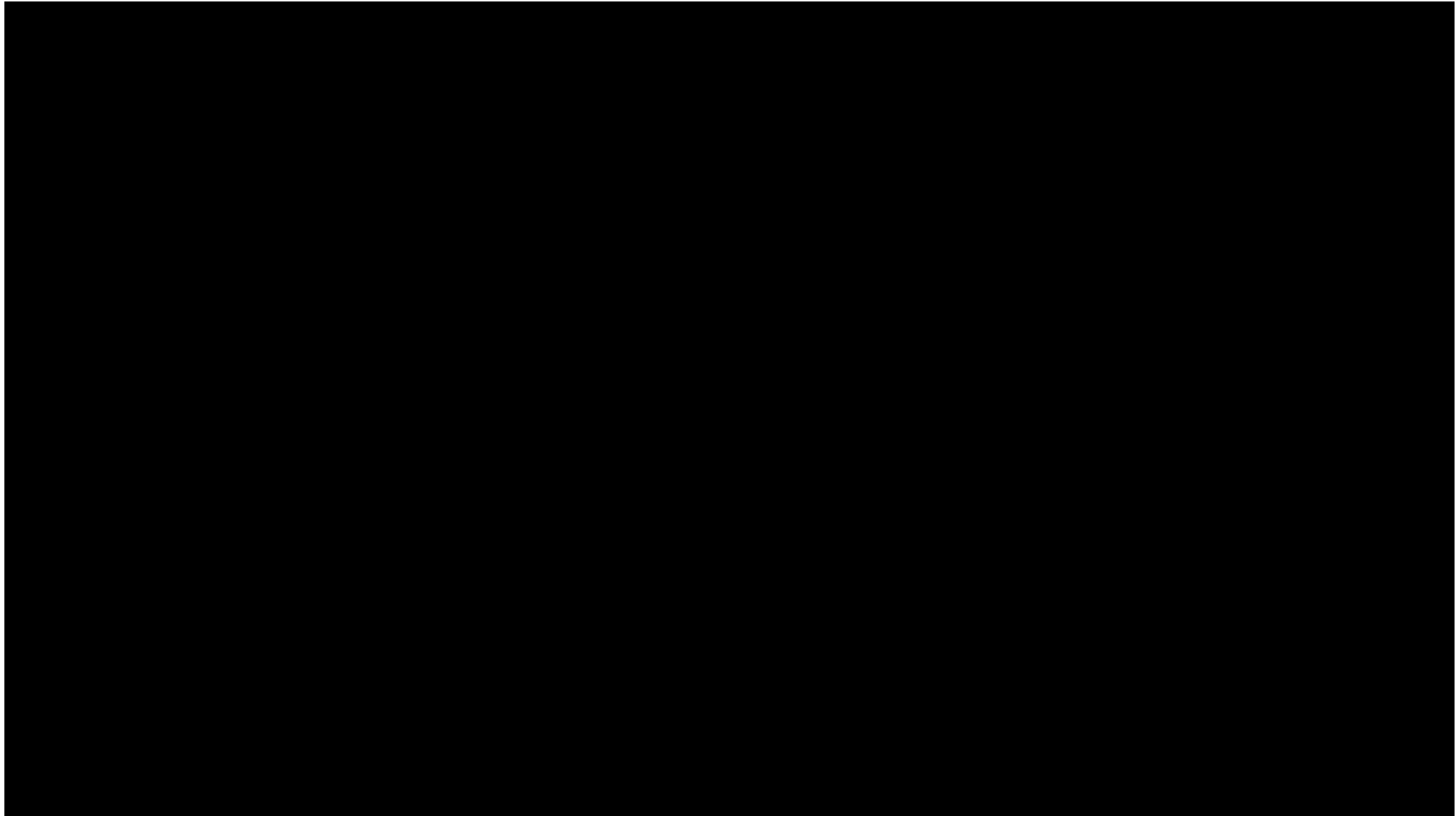
2: Centers for Medicare & Medicaid Services (2020)

3. Extrapolated based on applying the % of total US Parkinson's disease population residing in Florida to the total US PD direct related cost

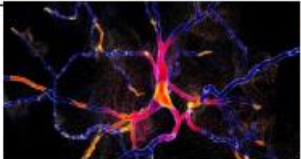



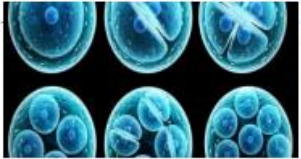
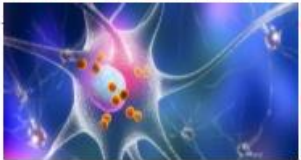
4. Estimates as of 2017



# What We Have **Today**



# Current approaches won't solve this problem...

	Current Modalities	Limitations and side effects
Symptomatic treatment	<b>Conventional pharmacological therapy</b> <span style="color: green;">●</span>	 <ul style="list-style-type: none"> <li>• <b>Drug resistance</b> developed during later stages</li> <li>• Side effects include <b>dyskinesias</b> and <b>"on-off" effects</b></li> </ul>
	<b>Deep brain stimulation</b> <span style="color: green;">●</span>	 <ul style="list-style-type: none"> <li>• <b>Ineffective</b> for imbalance, freezing of gait or non-motor symptoms</li> <li>• Side effects include <b>worsened memory</b></li> </ul>
	<b>Lesion surgery</b> <span style="color: green;">●</span>	 <ul style="list-style-type: none"> <li>• Risk of permanent <b>side effects</b>: numbness, vision loss, Cognition worsening etc.</li> </ul>
Disease modifying	<b>Gene therapy</b> <span style="color: yellow;">●</span>	 <ul style="list-style-type: none"> <li>• <b>Unproven genetic causes</b> for heterogeneous disease</li> </ul>
	<b>Stem cell therapy</b> <span style="color: yellow;">●</span>	 <ul style="list-style-type: none"> <li>• Concerns of <b>tumor formation</b></li> <li>• Niche therapy, <b>difficult to drive scale</b></li> </ul>
	<b>Immunotherapy</b> <span style="color: yellow;">●</span>	 <ul style="list-style-type: none"> <li>• <b>Unclear toxic protein species</b> of alpha-synuclein</li> <li>• <b>Difficulty to image toxic proteins</b> in cell / animal models</li> </ul>

Treatment / drug development stages

● Discovery phase    
 ● Pre-clinical / early clinical trial    
 ● Approved treatment / drug

...due to many challenges

- 1 **Lack of sufficient multi-modal data** to accurately diagnose, discover treatment, or design clinical trials at scale
- 2 **Low success rate for neurological treatments** due to limited experimental data, unrepresentative cell/animal models, and few sophisticated prediction technology
- 3 **Lengthy trials and decoupled research & clinical operation** leading to underdeveloped personalized treatment



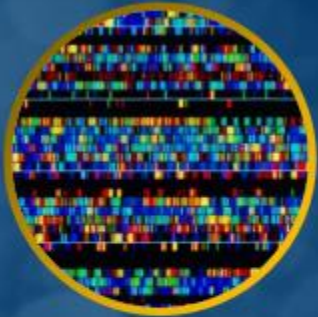
Significant tailwind behind our effort...



Florida is the home to second largest Parkinson patient population in US

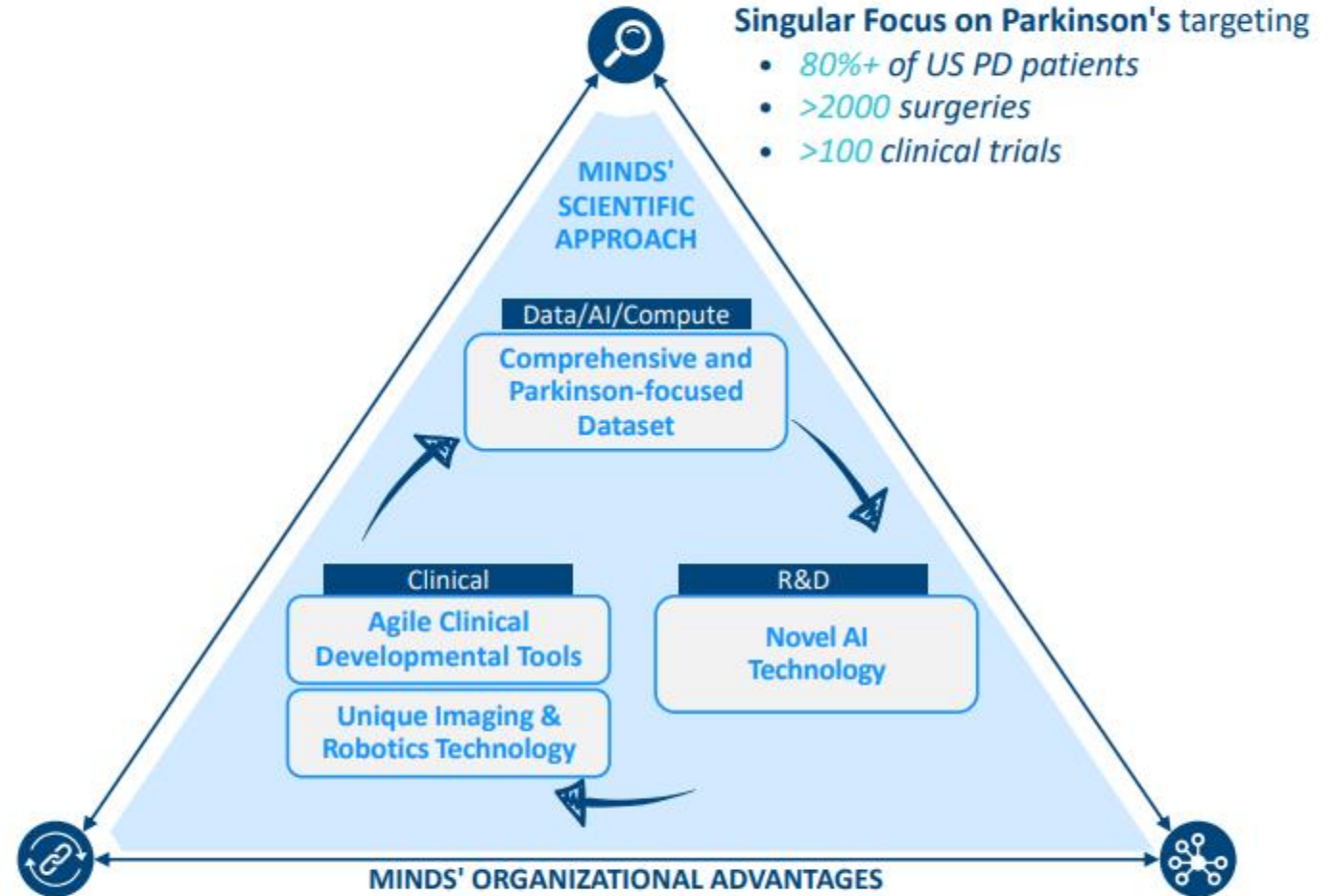


Advancement in AI powered computing



Global initiatives to abundant of data, starting with Global genome projects

...MINDS is uniquely structured to solve this problem



Closely-coupled multidisciplinary ecosystems designed with

- >100 Top neurologists
- >\$40M in research funding

Strategic Partnerships

- BCG
- Max Planck
- ...



Many multidisciplinary projects have gained momentum...

<b>20+</b> Universities, tech companies and medical partners co-developing framework to promote Healthcare AI adoption		
<i>Healthcare Enabled by AI in Real Time - Coalition for Healthcare AI (CHAI)</i>		
<b>30+</b> Universities, enterprises, and federal agencies building world-class threat detection and neutralization capabilities		
<i>Soft-target Engineering to Neutralize the Threat Reality (SENTRY)</i>		
<b>25+</b> Universities, tech companies, and gov. agencies developing NextGen tech for best-in-class security screening		
<i>Awareness and Localization of Explosives-Related Threats (ALERT)</i>		

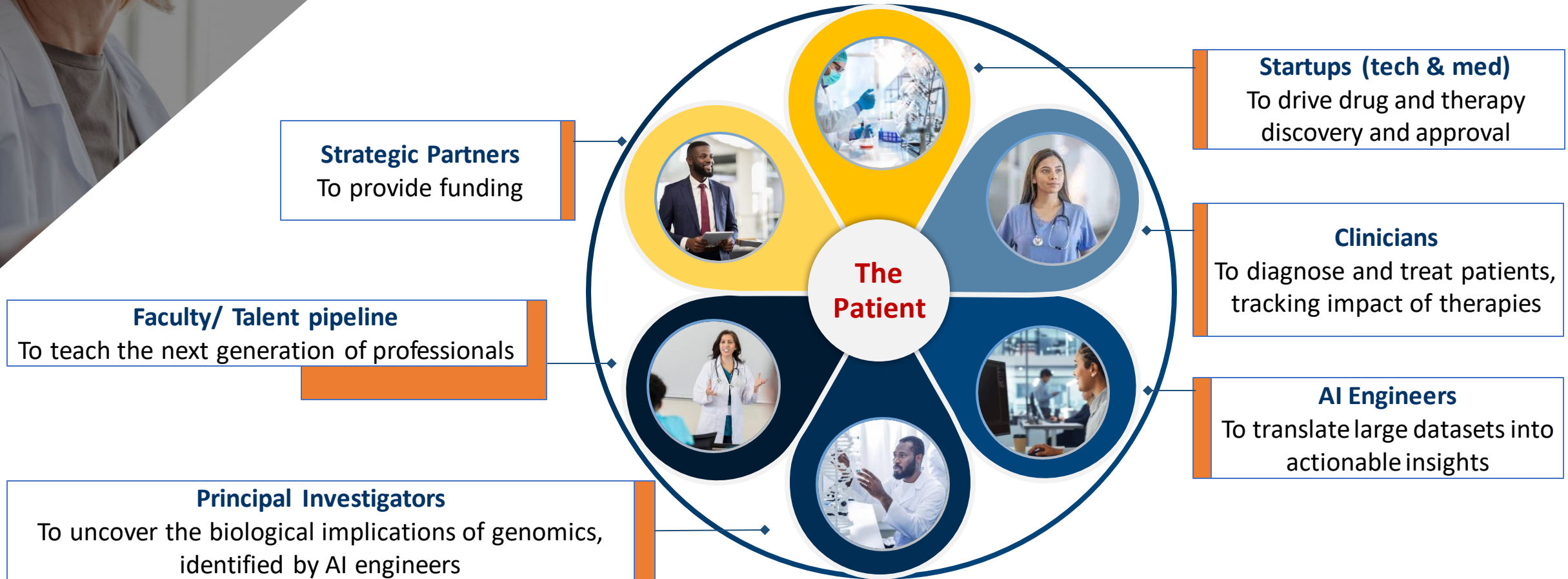
...distilling best practices for MINDS

- Start with an important world challenge
- Invest time and resources into building a multidisciplinary research team
- Foster long-term community and stakeholder engagement
- Train the next generation

Source: Department of Homeland Security; Duke Health and Duke Institute for Health Innovation; Coalition for Health AI



# Transdisciplinary Collaboration will Enable Comprehensive, Personalized Care for Patients



# Community Strategic Partners







# Research Strategic Partners



**MAX PLANCK**  
FLORIDA INSTITUTE FOR  
NEUROSCIENCE



# FAU: Continuing to Lead the Nation in Alzheimer's Disease Research, Services, and Treatment

## FAU, DELRAY MEDICAL CENTER, INSIGHTEC TEAM UP ON GROUNDBREAKING STUDY



Lloyd Zucker, M.D., a board-certified neurosurgeon and medical director of neurosurgery (left); and Hermes Kamimura, at Delray Medical Center treating the first patient with Insightec's non-invasive focused ultrasound technology. (Photo credit: Delray Medical Center)

**DELRAY BEACH, Fla. – Feb. 15, 2023** – Delray Medical Center is the first hospital in Florida to treat an Alzheimer's disease patient using non-invasive focused ultrasound technology as part of a groundbreaking study being conducted in collaboration with [Florida Atlantic University's](#) (FAU) Institute for Human Health and Disease Intervention.

In the [FDA](#)-approved clinical trial, focused ultrasound technology is used to disrupt the blood-brain barrier in participating Alzheimer's patients. Alzheimer's may be caused by a buildup of certain proteins in the brain. Precisely guided by magnetic-resonance imaging, ultrasound waves are directed at specific areas of the patient's brain to create a temporary opening in the blood-brain barrier where the protein buildup may be reduced. The [Delray Medical Center](#) patient enrolled in the clinical trial received the first of three treatments at the hospital on Feb. 15.

"[Delray Medical Center](#) is proud and excited to be a leader in this effort to determine the safety and efficacy of this potentially revolutionary treatment for Alzheimer's patients," said [Lloyd Zucker MD, FAANS](#) a board-certified neurosurgeon and Medical Director of Neurosurgery at [Delray Medical Center](#).

"The study will help determine whether the use of this non-invasive focused ultrasound technology can lead to cognitive improvement in patients with Alzheimer's disease."





# STARTUPS

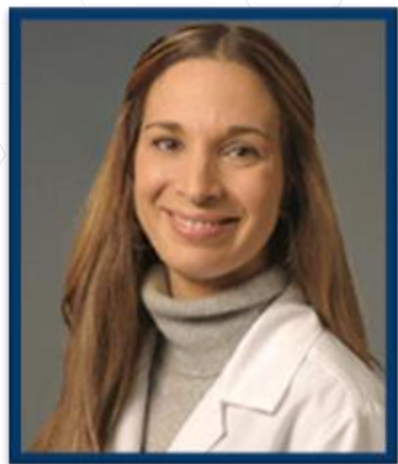
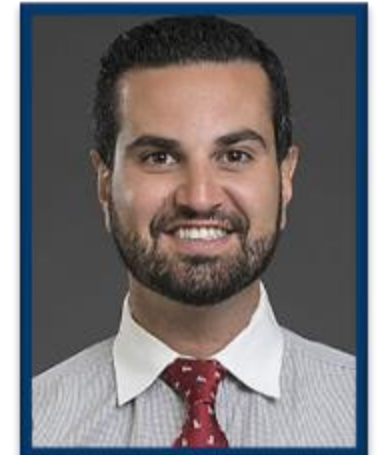
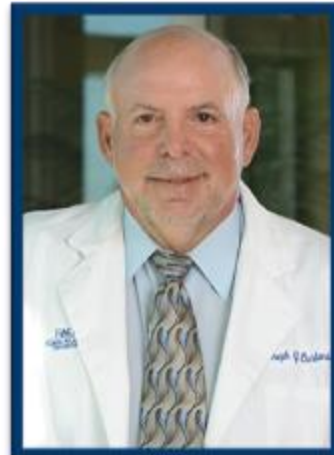


RESEARCH PARK  
AT FLORIDA ATLANTIC  
UNIVERSITY®



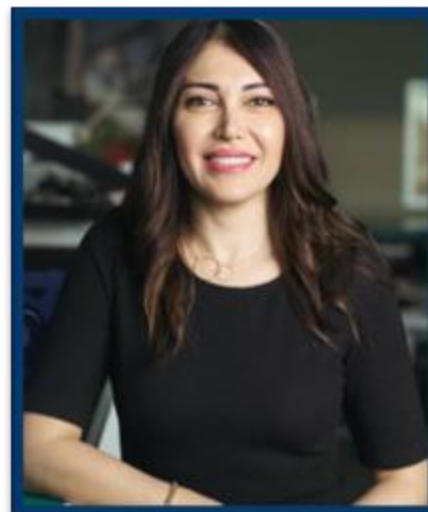
A COMPLIFE COMPANY

# Expert Clinicians





# Principal Investigators



# AI Engineers





# Talent Pipeline

**FAU**  
**College of**  
**Medicine**

**Health Data**  
**Infrastructure & Analytics**  
**AI in Health Care**  
programs



**Rubin & Cindy**  
**Gruber Sandbox**

**Stiles-**  
**Nicholson**  
**Brain**  
**Institute**

**NEUROSCIENCE**  
**GRADUATE**  
program

**MAX PLANCK**  
FLORIDA INSTITUTE FOR  
NEUROSCIENCE



**FAU-MAX**  
**PLANCK M.D./PH.D.**  
**DUAL DEGREE**  
programs

**FAU**  
**College of**  
**Engineering**

**Bachelor of Science in**  
**Biomedical Engineering**  
**(B.S.B.M.E.)**  
program

# Personalized Care for Patients





# Media Reach: Instrumental in Reaching Target Audience & Creating Awareness

## FAU Health Network

30-second commercial aired nationally on **ESPN+** during the second half of the FAU Men's Basketball Team in Spring 2023, reaching **450,000 viewers**

## Scripps TV

**22M**

Views

**55**

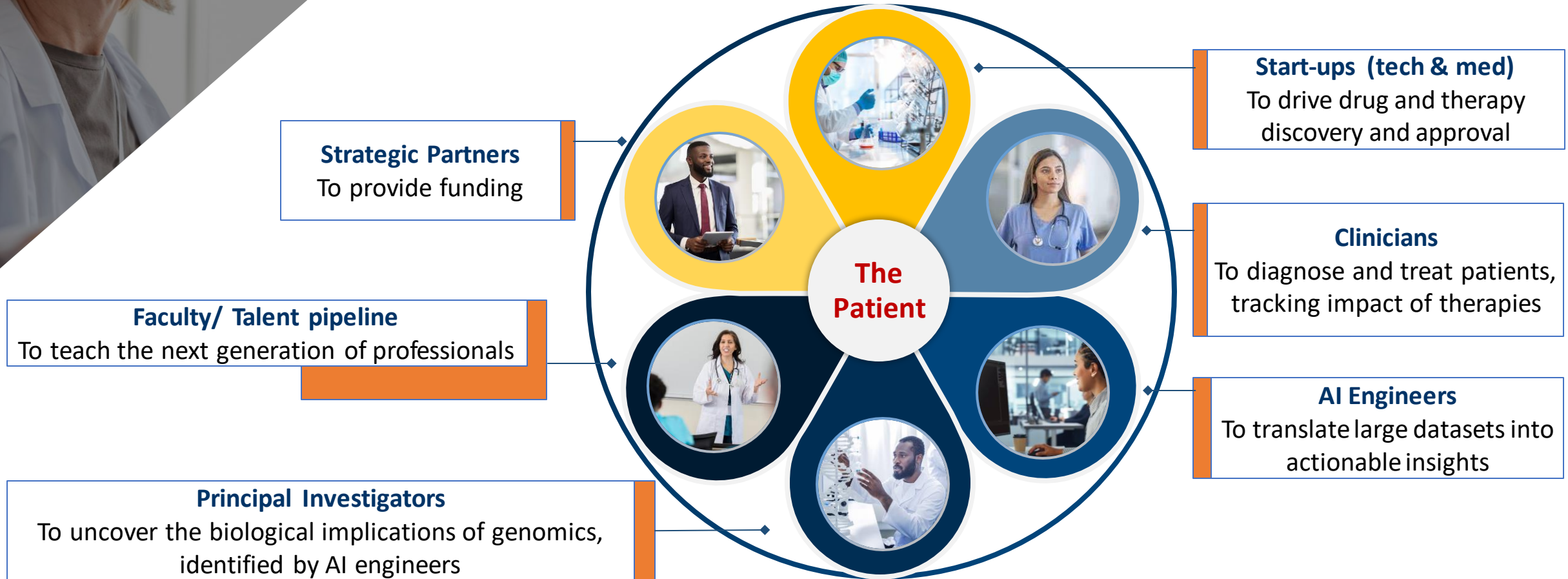
National TV stations

**WPBF  
WPTV  
CBS**

**Fox  
News**

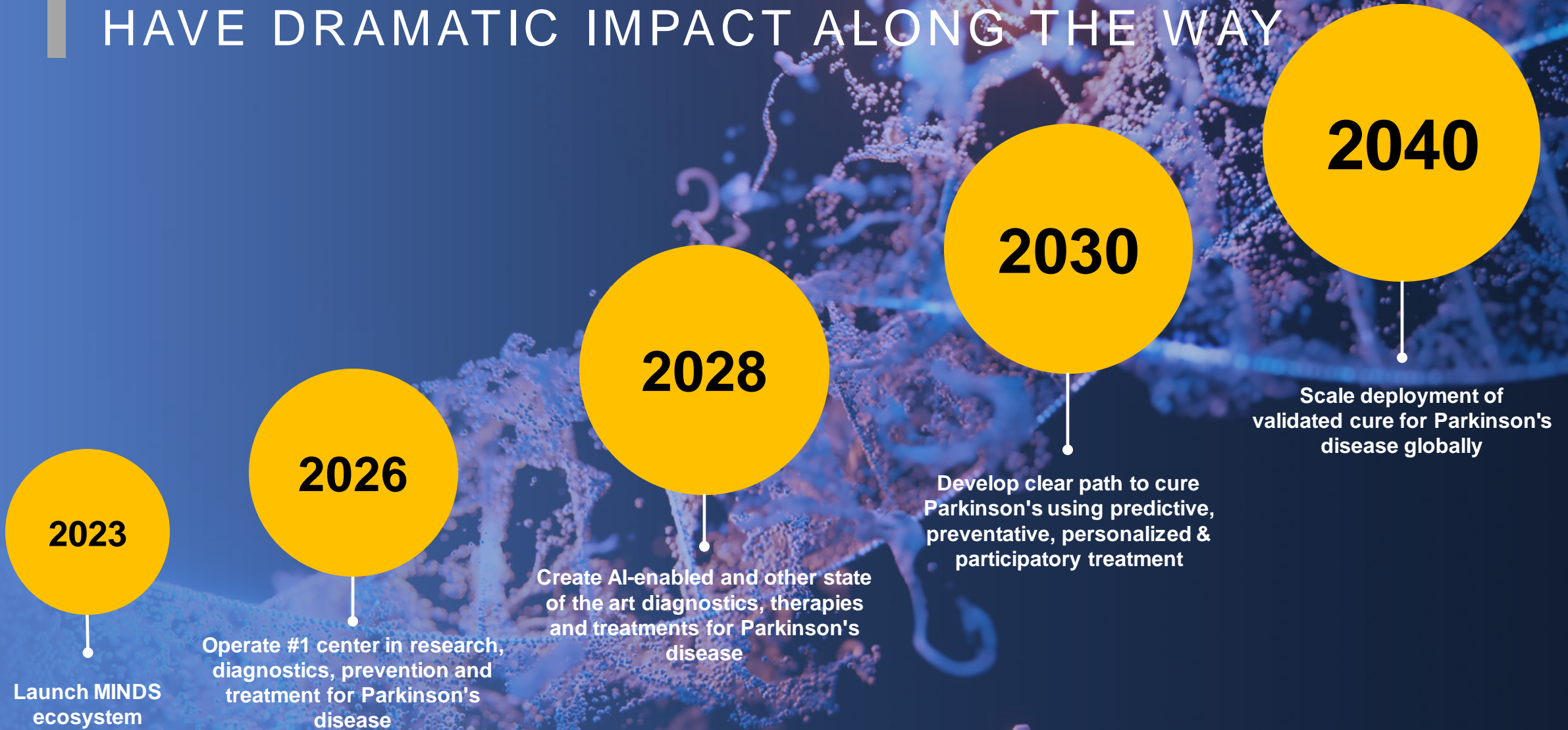
**Neurology  
Live**

# Transdisciplinary Collaboration will Enable Comprehensive, Personalized Care for Patients





# IT WILL BE A CHALLENGING JOURNEY, BUT WE WILL HAVE DRAMATIC IMPACT ALONG THE WAY





**M**ULTIDISCIPLINARY  
**I**NSTITUTE OF  
**N**EURO-TECHNOLOGY &  
**D**ATA  
**S**CIENCE

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FLORIDA'S NEXT MOONSHOT:  
**CURE PARKINSON'S BY 2040**

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*"We choose to go to the moon in this decade and do the other things,  
not because they are easy, but because they are hard."*

John F. Kennedy