

ANNUAL REPORT 2021 2022

**Chuck Noll
Foundation**

FOR BRAIN INJURY RESEARCH



ABOUT US

OUR VISION

To diminish the impact of sports-related head injuries.

OUR MISSION

The Chuck Noll Foundation for Brain Injury Research awards grants in order to advance research related to the diagnosis and treatment of injuries to the brain occurring primarily from sports activities.

OUR PEOPLE

BOARD OF DIRECTORS

Arthur J. Rooney, II
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Shelly D. Timmons, MD, PhD, FACS, FAANS

Don Whiting, MD

Joseph C. Maroon, MD, FACS

BY THE NUMBERS

5

Years of fundraising and grant disbursement.

18

Grants disbursed.

\$2.1

Million awarded.

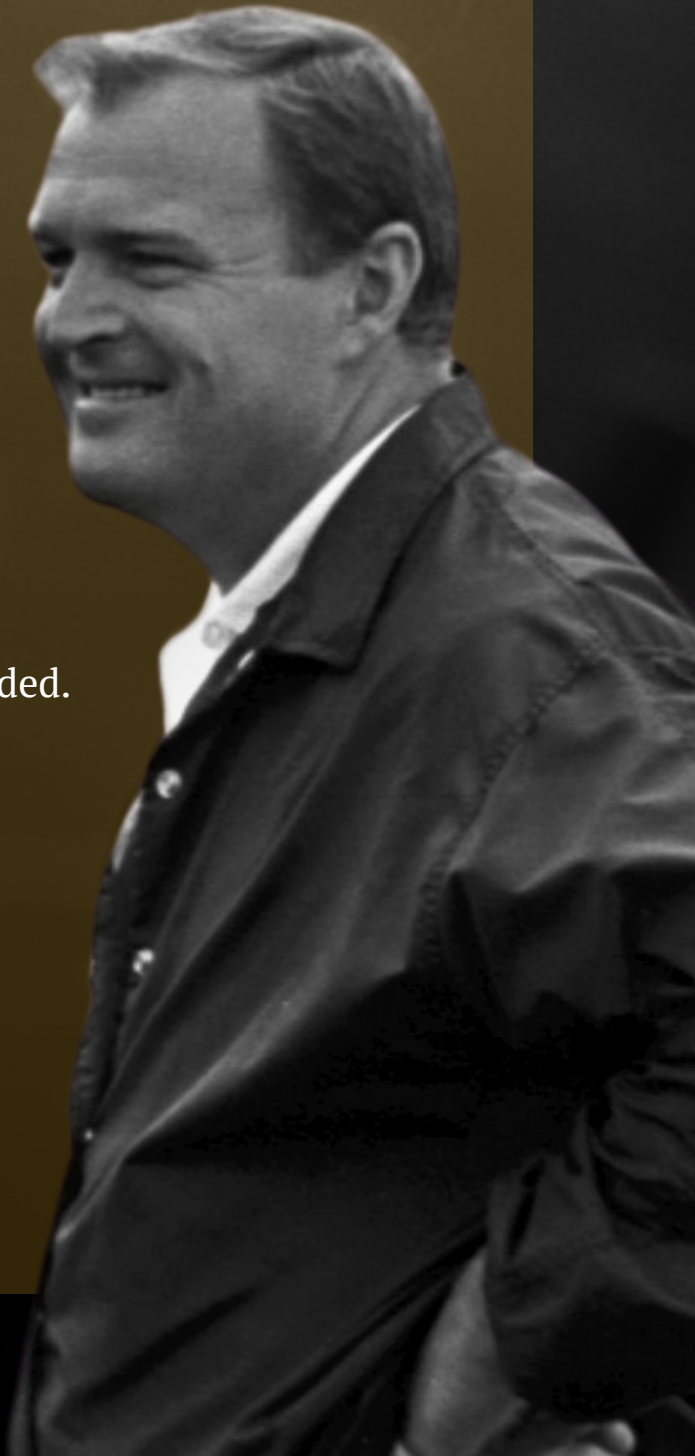
\$1.6

Million distributed.

7

Research institutions awarded.

It's been an honor helping fund brain injury research for athletes of all levels over the past five years; with this year's Annual Report, we hope to keep the good going.



FOREWORD

What if?

"What if ... you start a foundation?"

Those were the words from Patrick Gallagher, then-Chancellor of the University of Pittsburgh, when we met in 2016. "What if you started a foundation to fund research focused on ways to diagnose, treat, and prevent brain injuries?"

Pittsburgh is well known nationally as a center of excellence in brain research and concussion management: The University of Pittsburgh hosts one of the largest brain banks in the country; UPMC Sports Medicine treats over 20,000 athletes annually who have experienced a concussion; and Carnegie Mellon University's Brain Hub is bringing AI to brain research.

Additionally, the Pittsburgh region is known for its professional and amateur sports teams. We win Super Bowls, Stanley Cups, and state championships, all while providing life lessons to thousands of middle- and high-school age athletes. So, what if the foundation specifically focused on brain injuries resulting from sports related activities?

... And what if we honored a Hall of Fame football coach who was ahead of his time when it came to player health? Four-time Super Bowl champion Chuck Noll cared as much about his players' health as he did about winning. Coach Noll was the first to have his players take what was then the rudimentary ImPACT test.

Five years later, and \$2.2 million dollars granted to 18 innovative, early stage research projects, the Foundation has supported researchers who moved the ball in developing biomarkers to detect when a concussion has occurred, advanced precision medical treatment for several types of concussions, and established more precise ways of monitoring the healing of a brain injury. What if . . .

As we enter our next five years, we still ask the question, "What if?" What if we can support technology that can prevent concussions from sports-related activities? What if we are able to be more precise in the way we treat cervical or ocular concussions? With your help and support of the Chuck Noll Foundation for Brain Injury Research, "What if?" can turn into, "Why not?"



Art Rooney II



John R. Denny

SPOTLIGHTS *Joe Maroon Fund*



For 30+ years, Dr. Joseph Maroon spent time in surgery and on the football field healing patients and protecting players. In between, Dr. Maroon was leading institutions, inspiring and teaching young doctors, and advancing science. Now he chairs the Chuck Noll Foundation's National Science Advisory Committee. In his honor, Art Rooney and the board have officially established the Dr. Joseph C. Maroon Fund, to support cutting-edge investigators in the field of brain injury research.

Contributions can be made by heading to tinyurl.com/Joemaroon

Chuck Noll Foundation Lecture

What if one of the largest contributing factors to whether kids played contact sports wasn't concussions? What if, instead, parents could feel secure knowing that contact sports were a means of learning the value of teamwork, exercise, and commitment? Chuck Noll Foundation lecturer and



Chief Medical Officer of the NFL, Dr. Allen Sills, took us from "What if" to "What is" in his speech at the American Association of Neurological Surgeons' 2022 Scientific Conference. After all, player safety and building character shouldn't be mutually exclusive.

Board Member Jerome Bettis

In January of 2022, the Foundation's Board of Directors added former Steeler great and football hall of fame running back, Jerome Bettis. In his own words:

"The Chuck Noll Foundation's mission to diminish the impact of head injuries goes beyond professional sports – and has the potential to impact every kid who is injured playing in the front yard, and every person who falls or gets in a car accident. Traumatic brain injuries are a major cause of disability, impacting athletes at all levels and people of all ages. I'm honored to be part of this important work and eager to help shape the future of concussion and TBI research."



RESEARCH GRANTS AWARDED

2021-22

“What if” . . . all our grants came true?

What if we could inspire one person to think of their health differently? Think about obesity, something that impacts 41.9% of our population, athletes and nonathletes alike. Obesity can affect the likelihood of sustaining a concussion and impact its treatment.

What if a high school athletic trainer could monitor the brains of every athlete on a women’s soccer team simultaneously to more quickly and accurately detect if or when a brain injury has occurred?

What if we were able to identify a concealed, hidden brain injury without requiring an invasive test? Could it mean a more efficient, less painful diagnostic?

Our latest round of grants, totaling \$453,000, just might help us answer these “what if” questions.

GRANT #0015

“Identifying Occult Traumatic Brain Injury in Professional Athletes Using a Novel Non-invasive Biomarker”

**NITIN AGARWAL, MD,
PRINCIPAL INVESTIGATOR**

\$125,000 disbursed.

GRANT #0016

“Sulfonylurea Receptor-1 and Glyburide: A Single-Cell Precision Medicine Approach to Preventing Brain Swelling and Providing Neuroprotection for the Second Impact Syndrome”

**PATRICK M. KOCHANEK, MD &
RUCHIRA JHA, MD MSC
PRINCIPAL INVESTIGATORS**

\$125,000 disbursed.

GRANT #0017

“Impact of Obesity on Blood-Based Biomarkers and Recovery Trajectories Following Mild Traumatic Brain Injury”

**SHAWN R. EAGLE, PHD ATC CSCS &
DAVID O. OKONKWO, MD PHD
PRINCIPAL RESEARCHERS**

\$125,000 disbursed.

GRANT #0018

“Examining the Link Between Finite Element-Based Strain Predictions and Cognitive Changes”

**REUBEN KRAFT, PHD
PRINCIPAL INVESTIGATOR**

\$78,000 disbursed.

FUNDRAISING

What if....we had more support?

Our work is never really done. There will always be room for more support and there will always be opportunities for more funding.

In just five years, we have raised \$4 million dollars and awarded nearly \$2.2 million. This has leveraged an additional \$12 million in funding. What if we doubled what we have raised? That could leverage an additional \$24 million.

We have an annual grant cycle. **What if . . .** we had more support to hold two grant cycles per year? **What if . . .** we had more support to fund twice as many research projects? And **what if . . .** we had more support to increase the amount of our individual grants beyond early stage seed funding.

With additional support, all of these what ifs, could become, what's done . . . like discovering a biomarker for concussions, or finding a noninvasive way of reducing brain swelling, or better understanding the different impact a concussion can have on women's health versus men's health.

So, **what if we increased our number of donors and the size of each contribution?** Sure, we would be very grateful, but only *you* can answer that "what if" question.

Andrew Bryer, Director of Development

GRANTS

2021/22 Grants

New Grants 4
Grant Dollars Awarded \$452,589

Total Grants

Total Grants Awarded 18
Average Grant Size \$117,751
Clinical Research \$1,485,089
Basic Research \$634,436

Total Dollars Awarded \$2,119,525

Additional Funds Leveraged

\$12 million



Chuck Noll Foundation

FOR BRAIN INJURY RESEARCH

To donate to us, please scan
the code with your phone or
head to our website.



ChuckNollFoundation.org

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