### PULMONARY

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Physical inactivity is best predictor of decline in COPD patients, US' 4th-leading cause of death

PEP PIONEERS is a non-profit corporation comprised of graduates of the Pulmonary Rehabilitation Programs at Medical Centers including Providence Little Company of Mary, Torrance Memorial Medical Center, and Kaiser Permanente. We are dependent on private donations and fundraisers to finance field trips, luncheons, publication and distribution of our monthly newsletter PEP TALK, and other beneficial events to support the well-being of our members.



# Linking Muscle Dysfunction to Lung Disease: The Lundquist Institute Tackles COPD

**LOS ANGELES** — Dr. Harry Rossiter, an investigator at The Lundquist Institute (formerly known as LA BioMed) was among the recipients of a \$1.55 million grant award from the National Institutes of Health (NIH) to study muscle dysfunction in patients with chronic obstructive pulmonary disease (COPD), the fourth-leading cause of death in the United States.

COPD affects nearly 15.7 million people in the U.S. It targets the respiratory system, damaging the lung tissue and causing airflow blockage. However, lack of physical activity—not lung function—is the strongest predictor of health decline in patients with COPD.

A recent study identified that mitochondria in leg muscles—the cellular "powerhouse" that uses oxygen to make energy inside muscle cells—was roughly 40% lower in patients with COPD than those without it, even when including smokers.

This NIH/R01 grant, a multisite award between The Lundquist Institute, the University of Rhode Island, and Brown University, will allow Rossiter and fellow researchers to follow-up with these patients after five years to identify the clinical, behavioral and molecular mechanisms that are associated with this decrease.

"I am deeply appreciative of this grant from the NIH, and am excited to get to work," said Rossiter. "It is critical to get to the root causes of this link between COPD and muscle dysfunction to bring relief to those suffering from this terrible disease."

The study will focus on determining how loss of muscle oxidative capacity progresses in COPD, and will answer fundamental questions about the nature of the associations among mitochondrial dysfunction, sedentary lifestyle, and overall poor outcomes in COPD patients. For the first time, investigators will monitor the rate of decline in lower limb skeletal muscle oxidative capacity over a span of five years.

"Dr. Rossiter's promising research could lead to real answers for the tens of millions of COPD sufferers worldwide," said David Meyer, PhD, President and CEO of The Lundquist Institute. "It has real translational implications, which is emblematic of the 'bedside-to-bench-to-bedside,' full-spectrum ethos of The Lundquist Institute."

Source: The Lundquist Institute Submitted By: Jocelyn Dannebaum

#### **December Birthdays**

1 Del Perry

2 Mary Ann Priore

2 Patricia Elzie

3 Francie Chandler

6 Harry Hahn

6 Nanette Dahlen Wan

9 Sang Kim

12 Jennifer Harrison

16 Anne Robinson

16 Bob Valentine

19 Connie Quintana

20 Joyce Rodgers

21 Rita Jelsma

22 Roberta Moore

24 Kathleen Delgado

26 Barbara Greco

28 Marsha Mullens

#### January Birthdays

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1 Caroline Zepnpfennig

3 Freddie Austin

5 Purita Santillan

8 Russell Hedgman

10 William Leveroni

11 Jackie Chapman

12 Ella Rodgers

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16 Erika Butryn

16 Preston Domingue

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23 Brooke Gilchrist

27 Mary Kay Erickson

27 Bill Paul

29 Sarah Albright

29 Behzad Pak



WE HOPE YOU WILL JOIN US FOR THE PEP PIONEERS ANNUAL

## CHRISTMAS PARTY

Thursday, December 15th, 2022 11:00a-2:00p

Raffles, music, gifts, and camaraderie Free buffet lunch for PEP members!

El Torito 23225 Hawthorne Blvd, Torrance

RSVP with your caller, space is limited!



#### **In Memoriam**

Nancy Anderson

Dorothy Slawson

Tax Deductible donations may be made to:
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**Editor: Tiffany Wilson**