

# Human Study Reveals Therapeutic Plasma Exchange (TPE) Reverses Biological Aging

*New Research Offers First Clinical*

*Evidence of TPE's Regenerative Effects in*

*Humans, Co-Authored by Dr. Dobri Kiprof, Founder/President of Global Apheresis*

MILL VALLEY, CA, UNITED STATES, June 25, 2025 /EINPresswire.com/ -- A groundbreaking clinical

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Founder/President of Global  
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study published in [Aging Cell](#) has revealed compelling evidence that [Therapeutic Plasma Exchange \(TPE\)](#), a 75-year-old medical procedure, may significantly reduce biological aging in humans. The research builds on decades of promising animal studies, now delivering the first measurable rejuvenation outcomes in human subjects, marking a major milestone in regenerative medicine.

Often described as an “oil change for the blood,” TPE is a medical procedure that removes plasma from the bloodstream and replaces it with a clean substitute

solution. This process helps eliminate inflammatory proteins, cellular debris, and other molecules linked to aging and age-related diseases. While animal studies have hinted at its regenerative potential, this unprecedented research represents the first human clinical trial to demonstrate that TPE may slow or reverse biological aging at the molecular level.

“These findings confirm what we've long observed in clinical practice — that TPE holds meaningful promise as a therapeutic tool in longevity medicine,” said Dr. Dobri Kiprof, internationally renowned pioneer and expert in therapeutic apheresis, Founder/President of [Global Apheresis](#), and Chief Medical Officer of Lifespan Edge. As the principal investigator of the study, Dobri continues “This is the first human study to show measurable changes in biological age following TPE, offering compelling insight into how this procedure can produce measurable reductions in biological age, with potential benefits for immune health, cognitive function, and overall resilience.”

Key findings from the study include:

- Safe and well-tolerated

The study followed 44 healthy adults over 50 who received different TPE regimens or a placebo.

TPE was well-tolerated, with only mild side effects and no serious adverse events reported.

#### ▣ Marked anti-aging effects

Participants who received bi-weekly TPE with immune globulin (IVIG) showed the greatest biological age reversal across 15 molecular aging markers, as measured by advanced epigenetic clocks.

#### ▣ Immune and inflammation improvements

TPE with IVIG also rejuvenated immune system profiles and significantly reduced inflammation—key factors in slowing age-related decline.

#### ▣ Potential for personalized treatment

Researchers identified blood markers that could help predict who benefits most from TPE, paving the way for individualized anti-aging therapies.

#### ▣ Multi-omics breakthrough

This is the first human aging study to use a comprehensive “multi-omics” analysis to assess TPE’s molecular, immunological, and clinical effects—setting a new standard for longevity research.

#### About Therapeutic Plasma Exchange (TPE)

Therapeutic Plasma Exchange (TPE) is an FDA-approved, well-established medical procedure in which the plasma is removed and replaced to eliminate harmful proteins, inflammatory factors, and cellular waste that accumulate with age. TPE is traditionally used to treat autoimmune and neurological disorders, but emerging research shows its potential to reverse age-related changes in the body and improve immune and cognitive function. This study marks the first time TPE has been clinically shown to slow biological aging in humans.

#### About Global Apheresis

Global Apheresis is a medical innovation company focused on combating and preventing the debilitating effects of chronic inflammation through advanced therapeutic solutions and evidence-based research. Founded and led by Dr. Dobri Kiprov — a globally recognized pioneer in therapeutic plasma exchange (TPE) — we bring together a nationally respected team of physicians, researchers, and healthcare specialists dedicated to transforming patient care. With decades of clinical expertise in apheresis-based therapies, our team specializes in treating



Dr. Dobri Kiprov

immune system disorders, neurodegenerative diseases such as Alzheimer's, and the systemic impact of age-related inflammation. From our founders to our frontline clinicians, Global Apheresis is expanding a nationwide network of outpatient clinics committed to delivering safe, effective, and non-invasive therapies to patients seeking proactive, personalized care. For more information, visit [www.globalapheresis.com](http://www.globalapheresis.com)

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