



Recursion Secures \$1.6M NIH Phase 2 SBIR Grant to Identify Therapeutic Candidates for Senescence, a Key Age-Related Disease Process

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SALT LAKE CITY, Nov. 8, 2018 /PRNewswire/ -- [Recursion Pharmaceuticals](#), a biotechnology company that combines artificial intelligence (AI), experimental biology, and automation to discover and develop drugs at scale, today announced a \$1.6 million Phase 2 Small Business Innovation Research award from the National Institutes of Health (NIH) via the National Institute on Aging (NIA). It follows the successful completion of milestones set in the initial Phase 1 grant for \$223,000, [awarded in 2016](#).

Both grants focus on a process known as cellular senescence, whereby individual cells no longer divide or undergo cell death. Research in animal models has demonstrated that a progressive build-up of senescent cells – as happens with age and disease burden – can negatively impact tissue function and foster inflammation. Cellular senescence is, therefore, believed to be an important driver in nearly all age-associated chronic diseases as well as some rare diseases.

For the Phase 1 grant, Recursion set out to develop a morphological profile for senescent cells in a variety of human cell types, independent of existing biomarkers. The company achieved this by applying its proprietary drug discovery platform, which combines experimental biology, bioinformatics, and AI in a massively parallel system to rapidly search for potential treatments for any disease that can be modeled at the cellular level.

"Our success in Phase 1 shows the power of Recursion's platform to identify complex phenotypes in diverse disease processes where there is unmet need," said Chris Gibson, Ph.D., co-founder and CEO of Recursion. "Now the team will proceed to leverage the platform to identify and validate drug candidates that can disrupt the aging process. Since our Phase 1 application, we have grown substantially and initiated our first clinical program in another disease area. This team has the experience, tools, and drive to accelerate the commercial development of any compounds we identify, and we're extremely excited to continue this work."

For Phase 2, the company will leverage its platform to discover novel senolytic agents, molecules that preferentially destroy senescent cells while leaving healthy tissue intact. The efficacy of these agents will then be evaluated in preclinical mouse models to gauge their impact on a variety of tissue functions and age-associated cardiovascular disease in partnership with a number of academic collaborators, including Anthony Donato, Ph.D., and Lisa Lesniewski, Ph.D., co-PIs of the Translational Vascular Physiology Lab at University of Utah Health. The potential of senolytics to reverse tissue dysfunction and pathology has been demonstrated in multiple preclinical animal models of disease, and the first generation of senolytic agents is now in human clinical trials.

"Senolytic compounds are one of the fastest growing and most exciting new pharmaceutical developments of the past decade," said Yolanda Chong, Ph.D. SVP of Biology at Recursion. "Applying our unbiased AI drug discovery platform, we hope to discover the next generation of novel and highly effective senolytic drug candidates that could treat multiple age-related chronic diseases."

About Recursion

Recursion is a clinical-stage biotechnology company combining experimental biology and automation with artificial intelligence methods in a massively parallel system to efficiently discover potential drugs for diverse indications, including genetic disease, inflammation, immunology, and infectious disease. Recursion applies causative perturbations to human cells to generate disease models and associated biological image data. Recursion's rich, relatable database of more than a petabyte of biological images generated in-house on the company's robotics platform enables advanced machine learning approaches to reveal drug candidates, mechanisms of action, and potential toxicity, with the eventual goal of decoding biology and advancing new therapeutics to radically improve lives. Recursion is headquartered in Salt Lake City. Learn more at www.recursionpharma.com, or connect on [Twitter](#), [Facebook](#), and [LinkedIn](#).

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