



COMMITTEE ON  
**SCIENCE, SPACE, & TECHNOLOGY**  
Lamar Smith, Chairman

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Media Contact: Kristina Baum  
(202) 225-6371

**Statement of Chairman Lamar Smith (R-Texas)**  
*Advances in the Search for Life*

**Chairman Smith:** For centuries, humanity has wondered if life might exist elsewhere in the cosmos. Only in the last few decades have we been able to detect the existence of other worlds.

Twenty-five years ago, we didn't know that planets existed beyond our solar system. Today, we have confirmed the existence of over 3,400 exoplanets that orbit other suns. And we continue to make new discoveries.

Today we can observe planets that may harbor life. Earlier this month, scientists announced the first detection of an atmosphere around an earth-like planet outside our solar system. This is a significant step towards being able to determine whether some form of life exists there.

Last week, scientists announced the discovery of another earth-like exoplanet in the habitable zone of a star forty light-years away – close by in cosmic terms. It is a prime target for future investigation.

Even within our own solar system, scientists have found intriguing possibilities of habitability. NASA recently announced the discovery of hydrogen gas in plumes shooting from the icy surface of Saturn's moon Enceladus.

Organisms on Earth use hydrogen in a process to create nutrients. Perhaps simple organisms living near Enceladus' hydrothermal vents could use a similar process.

Hopefully, NASA will find similar conditions when it sends a spacecraft to investigate Jupiter's moon Europa, where scientists have identified plume-like features.

The United States pioneered the field of astrobiology and continues to lead the world in this type of research. Since its beginning, NASA has searched for life beyond Earth and has conducted numerous scientific investigations.

Supported by NASA, the 2017 Astrobiology Science Conference is meeting this week in Mesa, Arizona. The theme of the conference is "Diverse Life and its Detection on Different Worlds."

The NASA Transition Authorization Act of 2017, which President Trump signed into law last month, ensures continued American leadership in astrobiology and the search for life.

It establishes “the search for life’s origin, evolution, distribution, and future in the universe” as a fundamental objective for NASA. To accomplish this, the bill directs NASA and the National Academies to develop an exoplanet exploration strategy and an astrobiology strategy.

The pursuit of evidence of life beyond our planet fascinates the American people.

Programs like the James Webb Space telescope and the Wide Field Infrared Survey Telescope, both of which the NASA Transition Authorization Act supports, will further advance our understanding of exoplanets and inspire the next generation of American explorers.

We do not just look at places where life might be. We are laying the groundwork to go there. The National Academies highly recommended a mission to Europa. The Europa Clipper mission will greatly aid NASA’s search for signs of life on Jupiter’s moon.

Private citizens, amateur astronomers, and non-government organizations also play an important role in our search for life.

Private citizens and philanthropists fund organizations such as the SETI Institute, which searches for extraterrestrial intelligence. Citizen scientists conduct astronomical observations and analysis of vast astronomical data sets.

Earlier this month, news came of a mechanic who used NASA data to help discover a new exoplanet system. This is a great example of citizen scientists at work.

We should support more contributions from citizen scientists. It enhances public engagement and helps encourage the next generation of young students to pursue careers in astronomy, astrophysics and astrobiology.

It is human nature to seek out the unknown and to discover more about the universe around us. Many Americans often gaze into the beauty of the night sky in awe. We rightfully wonder if there is life beyond our pale blue dot.

I thank our witnesses and look forward to hearing their testimony on recent developments in the field of astrobiology and the search for life elsewhere in the universe.

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