

# IIAS Announces Second Dedicated Research Spaceflight with Virgin Galactic

IIAS-02 To Fly Bioastronautics Researchers Kellie Gerardi, Dr. Shawna Pandya, and Dr. Norah Patten

BOULDER, CO, UNITED STATES, June 20, 2024 /EINPresswire.com/ -- The <u>International Institute</u> <u>for Astronautical Sciences</u> (IIAS) announced a first-of-its kind, multi-researcher dedicated

Our organization is looking forward to working with Virgin Galactic to optimize the research potential of their Delta-class space vehicles while opening the doors for future IIAS scientist-astronauts" Dr. Jason Reimuller scientific mission on <u>Virgin Galactic</u>'s new Delta vehicle. The crew of the IIAS-02 Mission will include IIAS bioastronautics researchers Kellie Gerardi of the United States, Dr. Shawna Pandya of Canada, and Dr. Norah Patten of Ireland.

The IIAS-02 research spaceflight will advance the scientific knowledge and operational insights gained from the inaugural IIAS-01 research spaceflight with Virgin Galactic in 2023, during which IIAS payload specialist Kellie Gerardi conducted biomedical and thermodynamic fluids research, while introducing novel physiological and physical sciences payloads. The IIAS team will collaborate closely with

academic, government, and commercial partners to carefully plan the crew's spaceflight activities to maximize the science and technology returns gained from this Mission.

Since 2015, IIAS has operated microgravity research and payload development programs that use a variety of Earth-based testbeds for space, including microgravity research flight campaigns in partnership with the National Research Council of Canada, gravity-offset facilities, and neutral buoyancy facilities. The international crew of IIAS-02 have years of experience working together as a team in dynamic, operational research environments.

"We are excited to continue to work with Virgin Galactic and its unique platform for humantended microgravity research in our second spaceflight. In their tenures at IIAS, Kellie, Shawna, and Norah have consistently demonstrated the teamwork, excellence, and expertise needed to produce high-quality, cutting-edge research in operational environments. Our organization is looking forward to working with Virgin Galactic to optimize the research potential of their Deltaclass space vehicles while opening the doors for future IIAS scientist-astronauts," said IIAS Founder and Executive Director Dr. Jason Reimuller. IIAS Payload Specialist Kellie Gerardi added, "We were thrilled with our data from IIAS-01 and we're excited to put 'fly, fix, fly' into practice with IIAS-02. The Virgin Galactic team is leading the way with microgravity quality and active payload integration in human-tended research, and our research community is excited for increasing opportunities to use space as a laboratory to benefit humanity."

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## About IIAS

Founded in 2015, the International Institute for Astronautical Sciences (IIAS) is a 501c3 nonprofit research and education organization with licensure from the State of Connecticut. With students from over 60 different countries, IIAS provides educational services and research opportunities in aeronomy, bioastronautics, microgravity science, space medicine, space suit evaluation, operational science, and flight test engineering through partnerships with the National Research Council of Canada, Florida Tech, Survival Systems USA, NAUI, and the Canadian Space Agency. IIAS science and research campaigns produce peer-reviewed scientific publications, deployable space technologies, and inspire the nextgeneration of international space professionals. Additionally, IIAS also sponsors three outreach programs designed to serve under-represented minorities in STEM: PoSSUM13, Out Astronaut, and Space for all Nations. More at https://astronauticsinstitute.org.



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## About Kellie Gerardi

Kellie Gerardi is a bioastronautics researcher and payload specialist who serves as the Director of Human Spaceflight Operations for the International Institute for Astronautical Sciences (IIAS). IIAS-02 will be Kellie's second spaceflight, building on the knowledge gained from the IIAS-01/Galactic-05 research mission in 2023, during which she operated three biomedical and thermodynamic fluids experiments in space on behalf of IIAS. Kellie has tested and matured technologies across more than 100 parabolas in reduced gravity research flight campaigns performed here on Earth, including with the National Research Council of Canada (NRC) and the Canadian Space Agency (CSA). Kellie is a notable science communicator and the author of the acclaimed children's picture book series Luna Muna, which has been read aloud from both the International Space Station and the First Lady's Reading Nook at the White House. Kellie serves on the Defense Council for the Truman National Security Project and as Mission Operations Lead at Palantir Technologies. Kellie lives in Jupiter, Florida with her husband Steven and their daughter Delta V.

## About Dr. Shawna Pandya

Dr. Shawna Pandya is a physician, aquanaut, bioastronautics researcher with the International Institute for Astronautical Sciences (IIAS), skydiver, pilot-in-training, VP Immersive Medicine with Luxsonic Technologies, and Director of IIAS' Space Medicine Group. Dr. Pandya was on the first crew to test a commercial spacesuit in zero-gravity in 2015. To date, she has flown 10 parabolic flight campaigns, culminating in over 160 parabolas of experience in micro- and reduced gravity. She served as Payload Crew and co-PI of the 2023 IIAS-01 suborbital research flight, as well as a PI and/or co-I for Ax-2, Polaris Dawn and Blue Origin payloads. Her publications include a paper on medical guidelines for commercial suborbital spaceflight, and book chapters on space technologies that have benefitted terrestrial medicine, psychological resilience in long-duration spaceflight, reproduction and sexuality in long-duration spaceflight, and the future of space medicine. In 2022, Dr. Pandya was named to the Explorers' Club's "50 Explorers Changing the World." In 2024, she was recognized for her contributions by the Women's Space Awards in the Medicine and Health category, and named a Karman Pioneer. Her work has been profiled by Nature Careers and the Royal Canadian Mint. The IIAS-02 Mission will be her first spaceflight.

## About Dr. Norah Patten

Dr. Norah Patten is an aeronautical engineer and bioastronautics researcher with the International Institute for Astronautical Sciences (IIAS). Norah's extensive research experience includes multiple microgravity research campaigns, commercial spacesuit testing and evaluation, and emergency egress operations. She was the PI of an experiment investigating the aerosolization of water droplets in microgravity, and tested a novel 3D bioprinter investigating novel solutions for skin grafts in weightlessness. Norah is an award-winning author and STEM advocate and is passionate about inspiring the next generation. In 2019, Norah released her children's book called 'Shooting for the Stars' and it won the An Post Children's Book of the Year, senior. She was awarded the IIAS Educator Award in 2018, was a recipient of the Emerging Space Leaders Grant and a Next Generation Plenary panelist at the International Astronautical Congress in 2015. Norah holds a PhD in Aeronautical Engineering from the University of Limerick. The IIAS-02 Mission will be her first spaceflight and make her the first Irish astronaut.

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