

## PRESS RELEASE

Houston 28 August May 2023 – ZIBRIO the balance company has been awarded runner-up for the NASA Commercial Invention of the Year for 2023. ZIBRIO's Stability scales use technology originally invented while assessing balance disturbances in astronauts returning from missions to outer space.

The scales are powered by Briocore™ Technology, an AI-powered algorithm which is based on an algorithm originally invented by Drs Katharine Forth, Erez Lieberman Aiden and William Paloski while working at NASA's Neuroscience Laboratory at Johnson Space Center near Houston.

The scales measure human balance patterns during one minute of quiet stance and can predict the probability of a person experiencing a fall up to one year in advance. Current clinical tools are not good at predicting future falls, and in fact, fail to identify 69-85% of patients who are at high risk [\[source\]](#).

“Until we came up with this measuring technique, the best way to predict a future fall was knowing if your patient had already fallen,” says ZIBRIO CEO Katharine Forth. “That’s like waiting for someone to have a heart attack before considering preventive interventions like blood pressure or cholesterol medications.”

Further studies in the older adult population here on Earth showed a 74% reduction in falls was associated with regular access to ZIBRIO technology. This is likely because users were motivated by their score to adopt activities that promoted better balance [\[source\]](#).

Falling down is essentially a gravity problem, and their work on the algorithm at the Johnson Space Center Neuroscience Laboratory was focused on simplifying the sophisticated, time-consuming medical testing of astronaut balance control after space flight to track their postflight recovery and ensure their readiness for returning to duty. The artificial intelligence-informed algorithm emerged from a careful review of postural stability data collected from astronauts over a 20-year period. Like many other AI applications, the Briocore began by imitating human expert observations, but soon grew into this extremely sensitive measure requiring far less data than do humans.

For the majority of us on Earth, the ZIBRIO Stability Scale could be a game-changer for many medical specialists (especially those dealing with the health and wellness of the older population) and home fitness and health enthusiasts. In the test, the patient stands still on the stationary scale with their eyes open while the machine does the work, measuring the tiny movements we all make to stay upright. The AI calculates which movements are in control and which are micro failures in the person's dynamic postural control, providing a simple 1-to-10, red/yellow/green assessment for fall risk status.

ZIBRIO's Stability scales were launched commercially in 2022, and are currently being used in primary care, senior living facilities, and physical therapy. There is also a version available for home use.

For further information about NASA's Commercial Innovation of the Year, see <https://partnerships.gsfc.nasa.gov/internal-inventors/awards/nasa-technology-awards-and-incentives/#commioy>

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