

New Scientist

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SPECIAL ISSUE

YOU AND YOUR MICROBIOME

Everything you need to know about the microbes that shape your health and happiness

Where do your gut microbes come from and why does it matter?

The surprising role of gut bacteria in chronic conditions

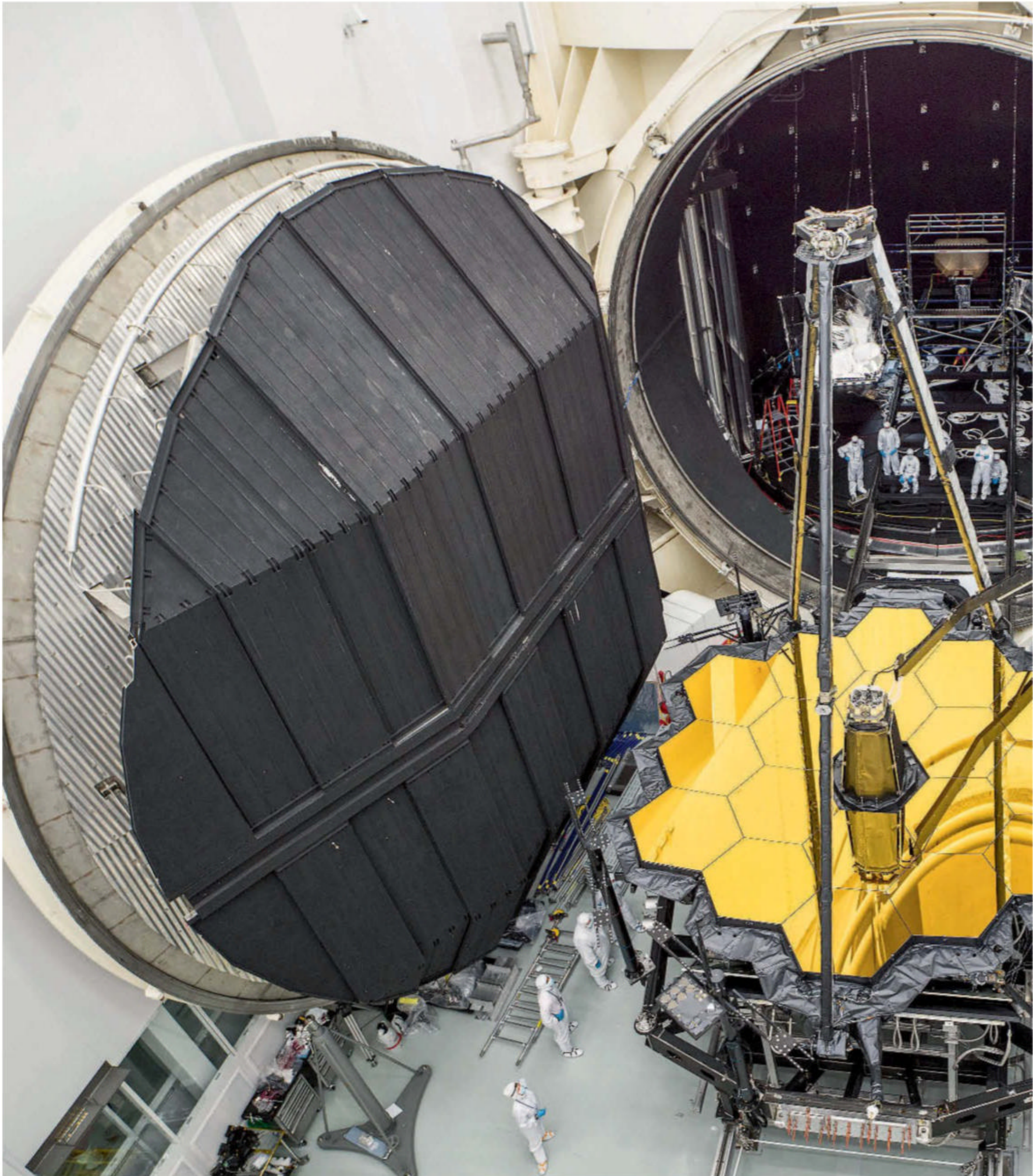
Top tips for keeping your microbiome healthy

The incredible way your friends, family and pets influence your microbiome

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A golden age



Photographer **Chris Gunn** for NASA

THESE photos offer a glimpse into an extraordinary project three decades in the making: the James Webb Space Telescope, or JWST.

Launched in 2021 on Christmas Day, JWST took its first image in July 2022, laying bare a field of never-before-seen galaxies in unprecedented clarity. It has since uncovered new exoplanets and the area around a supermassive black hole, while upending what we thought we knew about the early universe and astronomical objects such as nebulae.

Its conception, development and launch are documented in a new book, *Inside the Star Factory*, by photographer Chris Gunn and writer Christopher Wanjek. Taken from the book, the far left image from 2017 shows JWST's Optical Telescope Element (OTE, known as its "eye"). Its 18 gold-plated mirrors together form a 6.5-metre-wide reflector for infrared light.

Part of what makes JWST more sensitive than its predecessor, the Hubble Space Telescope, is the fact that it sees in infrared, so it can scour interstellar distances beyond the visible light spectrum. Another crucial element is the huge reflector – six times the size of Hubble's – that allows the visualisation of far-off objects and phenomena.

The OTE and reflector are undergoing a nighttime, lights-off inspection in the image at top right, while the image below captures the first moments the mirrors were unveiled, as an engineer assesses the surface of one of them for any artefacts. "I remember standing in the glow of the gold and realizing that I had never stood next to something so precious," writes Gunn in the book, which is out on 17 October. ■

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