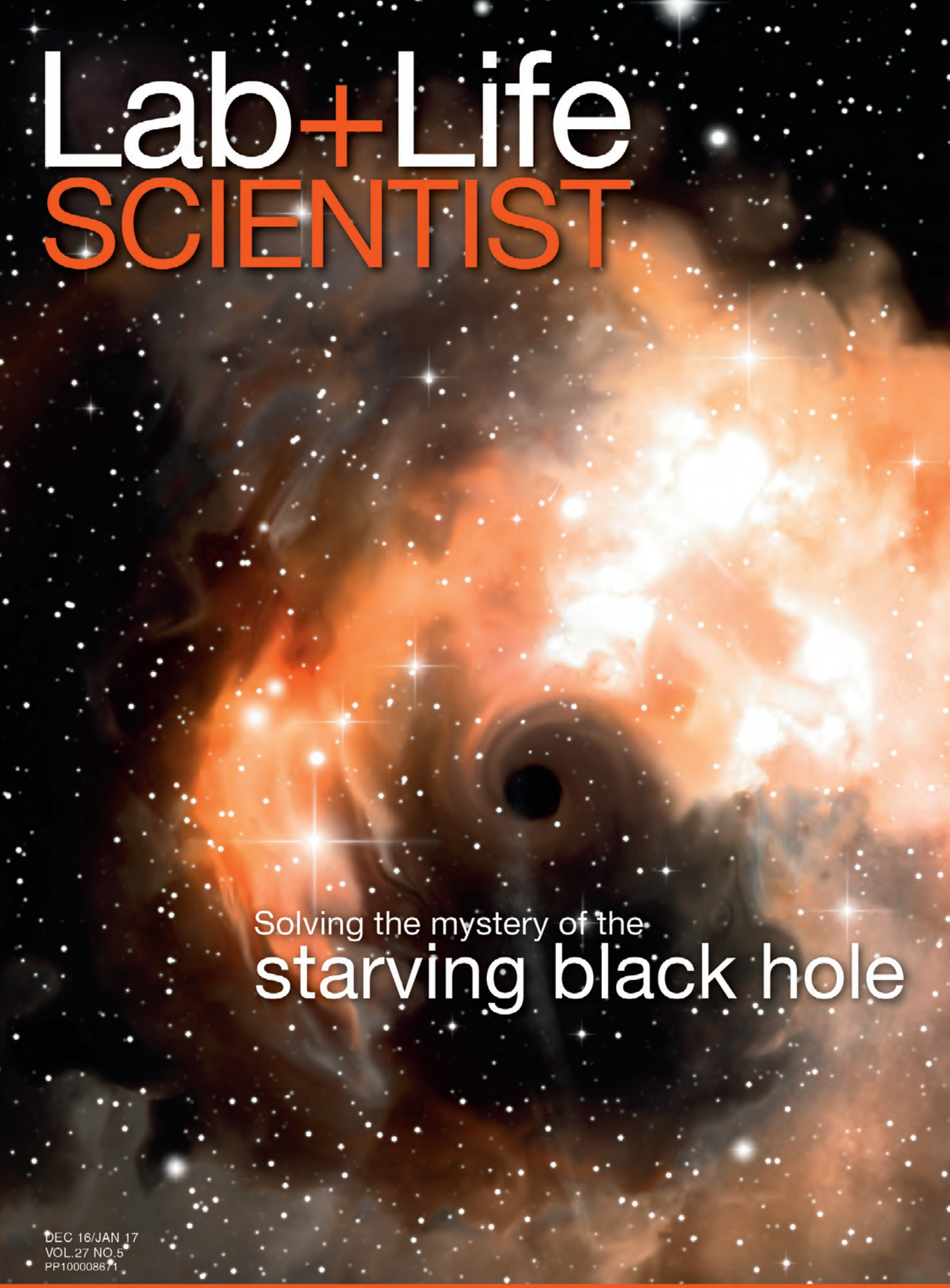
Lab+Life SCIENTIST



Solving the mystery of the
starving black hole

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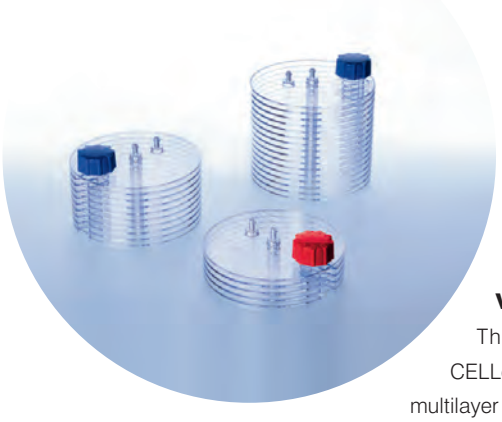


Cell culture vessel

The Greiner Bio-One CELLdisc is a ready-to-use, multilayer system for large-scale and industrial propagation of adherent mammalian cells. Using a robust, pressure-resistant cylindrical design, cultures are maintained for maximum growth area using a minimum of space.

The screw cap opening allows for easy filling and a gas support channel and vent port allow for pressure equalisation. A wide, interconnecting channel facilitates fast liquid exchange and uniform distribution of gas throughout the unit. In addition, a protective base rim guarantees that the bottom layer of the CELLdisc does not touch the surface of the incubator.

The four-layer version has a growth area of 1000 cm^2, the eight-layer unit has a growth area of 2000 cm^2, the 16-layer unit has a growth area of 4000 cm^2 and the 40-layer version has a growth area of 10,000 cm^2. Units are available with standard or advanced tissue culture treatments.

Interpath Services Pty Ltd
www.interpath.com.au

Instruments for studying biosurface interactions

Q-Sense instruments enable the study of molecular binding and interactions with surfaces using the principle of quartz crystal microbalance with dissipation (QCM-D). The systems offer real-time, label-free measurement of the mass of thin films with nanogram sensitivity and simultaneously provide novel insights about their structure.

Q-Sense Dfind is easy-to-use software for analysing QCM-D data which complements the latest product family and includes the Q-Sense Pro, Q-Sense Analyzer, Q-Sense Explorer and Q-Sense Initiator. Q-Sense Initiator is for those interested in real-time monitoring of surface interactions but only need the basic functions of a QCM-D instrument. Graphene oxide (GO) is now included in the long list of coating materials in the Q-Sense product range.

Applications include adsorption and desorption kinetics, film thickness and level of hydration, protein aggregation and conformational changes upon binding of a ligand or cross-linker. Interactions can be studied on substrates such as gold, metals, polymers and functionalised coatings. The measurement chamber is available in single- and four-channel versions and can be combined with techniques such as electrochemistry, ellipsometry and microscopy.

ATA Scientific Pty Ltd
www.atascientific.com.au

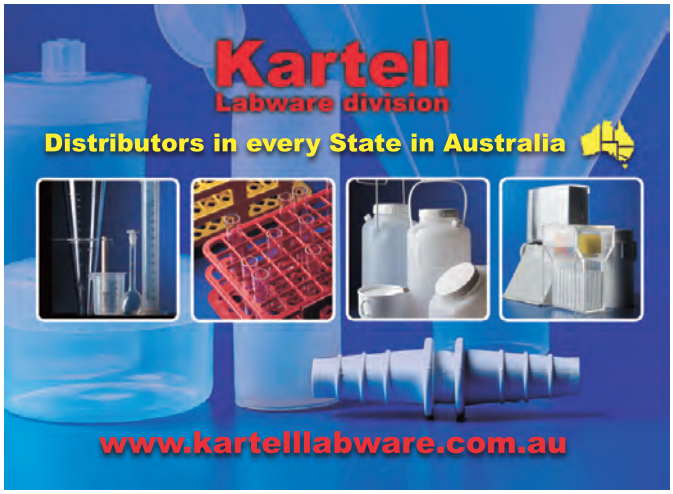
Mini DC electric linear actuator

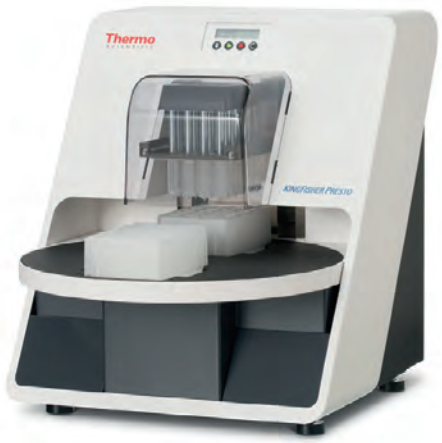
maxon motor has released a completely customised miniature electric linear actuator for positioning tasks. By combining a 16 mm, 60 W, 24 V brushless DC motor with an integrated radial and axial thrust block bearing system, the shaft is manufactured directly as a ball screw assembly.

Despite the tiny dimensions available, with motor diameters as low as 6 mm, the units can deliver high linear forces. The 16 mm ball screw version has a force delivery capability of 403 N. With the brushless motor's ability to accelerate to 12,000 rpm in under 2 ms, the actuator is also dynamic.

The motor is fitted with an integrated digital encoder for detent-free smooth positioning. The length of the ball screw and the nut details are configurable to suit the machine design requirements.

maxon motor Australia Pty Ltd
www.maxonmotor.com.au





Automated sample purification system

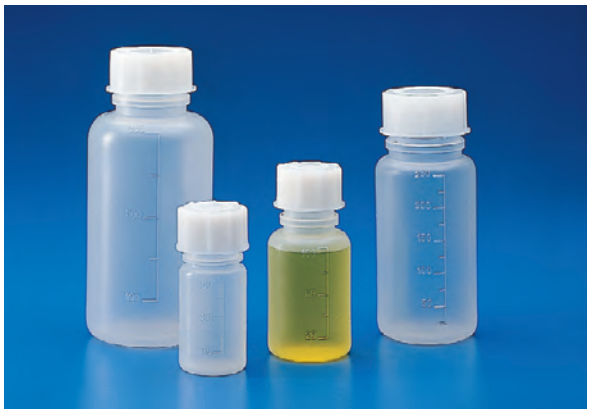
The Thermo Scientific KingFisher Presto sample purification system is designed to be part of an automated workflow using a liquid handler with a gripper or robot arm to purify samples with volumes from 50 μL to 5 mL. The product automates the isolation of target nucleic acids and proteins for biopharma, biotech and research projects in high-throughput laboratories.

The instrument's small footprint allows for easy connection to several liquid handling instruments in a side-by-side or on-deck configuration, allowing flexible selection of platform and use for a wide variety of applications. Stackable, polypropylene KingFisher plates and tip combs are designed to be placed by a robotic arm and suitable for many biological applications, including projects that require a sterile environment.

An extension of KingFisher technology, the system uses magnetic particle technology to integrate seamlessly into a variety of workflows, which reduces hands-on time. The system allows users to choose between 24- and 96-head magnets, depending on the volume and throughput requirements.

Thermo Scientific BindIT software accompanies the system for protocol development, allowing users to create and modify their protocols and import Invitrogen and Applied Biosystems nucleic acid and protein purification kits.

Thermo Fisher Scientific
www.thermofisher.com.au



Graduated wide-neck bottles

Kartell manufactures a range of graduated wide-neck bottles that are autoclavable and meet industry food and drug regulations.

Kartell Graduated Wide Neck bottles are manufactured with a long neck thread that ensures a leakproof closure. They also feature a wide neck, allowing for easy filling and emptying of liquids or powder samples.

The range is known for its sturdy build and rupture resistance. It conforms to DIN 13316 and 168.

The bottles are available in multiple sizes, ranging from 50 to 2000 mL, and are graduated ranging from 10 to 100 mL.

Sieper & Co Pty Ltd
www.sieper.com.au

Imaging system

Cirdan has announced the PathLite Compact + VividPath PACS, a purpose-built system designed specifically for gross imaging within clinical laboratories. The product automates and simplifies tasks, enabling users to focus on what they do best — pathology.

The lightweight unit can be placed wherever it is required in the lab and at a range of heights. The availability of high-quality images removes the need for lengthy text descriptions and hand drawings, leaving less room for error. One-touch calibration takes under a minute, with no need to recalibrate, and ensures measurement at all zoom levels.

LED lighting is built in for consistent image quality, even in badly lit laboratories. Up to 20x optical magnification ensures the picture quality the user requires. Polarisation filters reduce/remove glare from wet specimens.

Cirdan's VividPath software platform allows images to be accessed wherever and whenever needed. They can be shared easily for teaching, research or second opinion purposes. Full traceability ensures compliance and best practice.

There is a selection of user-friendly control interfaces, including touch screen, keyboard, mouse and foot pedal. There is also a full range of medical-grade accessories, including a 17″ touch-screen PC.

Cirdan Ultra Pty Ltd
www.cirdan.com