Pluripotent Stem Cell Medium
Gibco StemFlex Medium is a new pluripotent stem cell (PSC) medium that tests better than standard media on metrics important to novel stem cell applications. The medium achieves up to twofold-faster stem cell recovery following gene editing, and as much as fivefold improvement in clonal expansion following single-cell passaging in the absence of a ROCK inhibitor. It consistently maintains pluripotency with weekend-free feeding schedules, and can also be used for multiple matrices and passing reagents. With these gains in performance and flexibility, the medium enables progress in areas at the forefront of PSC research, including genome editing, single-cell analysis, and reprogramming.

Thermo Fisher Scientific
For info: 800-955-6288
www.thermofisher.com

Organoid Progenitor Cells
Cultrex Organoid Progenitor Cells, derived from normal, healthy mouse small intestine tissue, are now available and suitable for gene editing. These cells can be expanded using reduced growth factor (RGF) BME-R1, and may be induced to express tissue-specific markers under differentiating conditions. Cultrex cells will be of particular interest to the large number of leading research groups worldwide that specialize in drug screening applications and use BME 2 organoid matrices. These cells are also ideally suited for use in common gene-editing techniques such as CRISPR/Cas9, for developing models for infectious disease and cancer, and for studying the normal intestine. Organoid 3D cultures are extracted directly from living tissues similar to primary cultures. Instead of using an artificial, tissue culture–treated plastic environment, stem cell populations are maintained using an extracellular matrix environment under nondifferentiating conditions. When subjected to differentiating conditions, these organoids exhibit expression of tissue-specific genes and differentiation of stem cells into tissue-specific architecture.

AMS Biotechnology
For info: +44-(0)-1235-828200
www.amsbio.com/organoids.aspx

Microfluidic Platform
The CellASIC ONIX2 Microfluidic System converts laboratory microscopes into powerful tools for live cell imaging, to perform in-depth analysis of cellular mechanisms and behavior. It allows precise control and manipulation of cell culture environments, and provides constant, stable imaging conditions while preserving the health of cells. The all-in-one platform consists of a controller that maintains environmental conditions, application-specific microfluidic plates, and intuitive software. With the ONIX2, researchers can monitor cellular responses to environmental changes such as media, stimulants, temperature, and gas, and track individual cells over time. The system provides a new level of reliability to researchers studying long-term growth, movement, signaling, and cellular interactions and responses to environmental stimuli, including hypoxia and cancer cell behavior. Its high-resolution capabilities are ideal for laboratories interested in producing time-lapse cell culture videos or developing cell-based assays and optimizing parameters for short- or long-term cultures.

EMD Millipore
For info: 800-645-5476
www.emdmillipore.com

3D Microscope
The Mesolens microscope makes possible for the first time the imaging of relatively large biomedically important specimens such as embryos, brain areas, or tumors, with full 3D recording of many thousands of cells. The microscope's innovative design includes a novel apochromatic lens with an aperture-to-magnification ratio far in excess of conventional lenses used by other manufacturers. This low-magnification lens, with its exceptionally high numerical aperture, can image an entire specimen while retaining subcellular detail, thus removing the need for image stitching. The focus motor enables the Mesolens to provide highly accurate imaging in the z-axis. The leading-edge repeatability and precision of the microscope stage ensures that the correct position of the specimen is obtained and maintained throughout the entire imaging process.

Prior Scientific
For info: +44-(0)-1223-881711
www.prior-scientific.co.uk

Live Cell Imaging System
The BioSpa Live Cell Imaging System brings together the BioSpa Automated Incubator and the Cytation 5 Cell Imaging Multi-Mode Reader to fully automate live cell imaging and analysis. Plate washing and reagent dispensing can be added to the system to automate the entire process, from sample prep through image analysis. Cytation 5 provides high-quality, powerful, data-rich image capture, processing, and analysis of live cell assays, up to 60x. BioSpa's temperature-, gas-, and humidity-controlled environment houses and protects cells in up to eight microplates or other labware. The robotic gripper moves the plate from the incubator drawers to Cytation 5 for kinetic imaging and analysis in Gen5 software. BioSpa's software seamlessly integrates imaging and liquid-handling protocols in an easy scheduling interface, and provides reporting and 24/7 monitoring of all processes. The BioSpa System has a compact footprint for use on benchtops and in biosafety cabinets.

BioTek Instruments
For info: 888-451-5171
www.biotek.com/products/imaging/biospa_system.html

Live Cell Analysis
The IncuCyte ZOOM System enables observation and quantification of cell behavior over time by automatically gathering and analyzing images around the clock within a standard incubator. Whether it is for simple cell-proliferation assays or more advanced stem cell differentiation biology, our live cell, nonperturbing imaging approach yields kinetic data and insight far beyond that achievable with conventional endpoint or nonimaging based approaches. The system consists of a microscope gantry that resides in the cell incubator, and a networked external-controller hard drive that gathers and processes image data. Different microscope objectives (4x, 10x, 20x) can be housed within each system and readily interchanged by the user. Each IncuCyte ZOOM houses multiple T-flasks or microtiter plates (up to six) and can acquire >2000 images per hour. The platform supports high-definition phase contrast, as well as two-color (green and red) fluorescence automated-imaging modes. The IncuCyte ZOOM is controlled from the office or home by intuitive, easy-to-use desktop software.

Essen Bioscience
For info: +44-(0)-1707-358688
www.essenbioscience.com/en/products/incucyte