

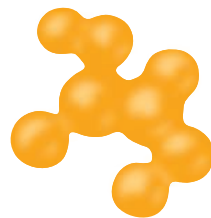
A microscopic view of several cells, likely fibroblasts, with prominent nuclei and cytoplasm, set against a warm, orange-toned background. The cells are interconnected, with one large cell in the foreground and others in the background.

# Exceptional scientists wanted

Present your work to the world.

Are you a representative of the upcoming generation of thought leaders in your field? Together we look forward to your application for the new Sartorius & *Science* Prize for Regenerative Medicine & Cell Therapy.

Apply now!



The Sartorius & Science  
Prize for Regenerative  
Medicine & Cell Therapy

[www.sartorius.com/sartorius-and-science-prize](http://www.sartorius.com/sartorius-and-science-prize)

---

Awarded by

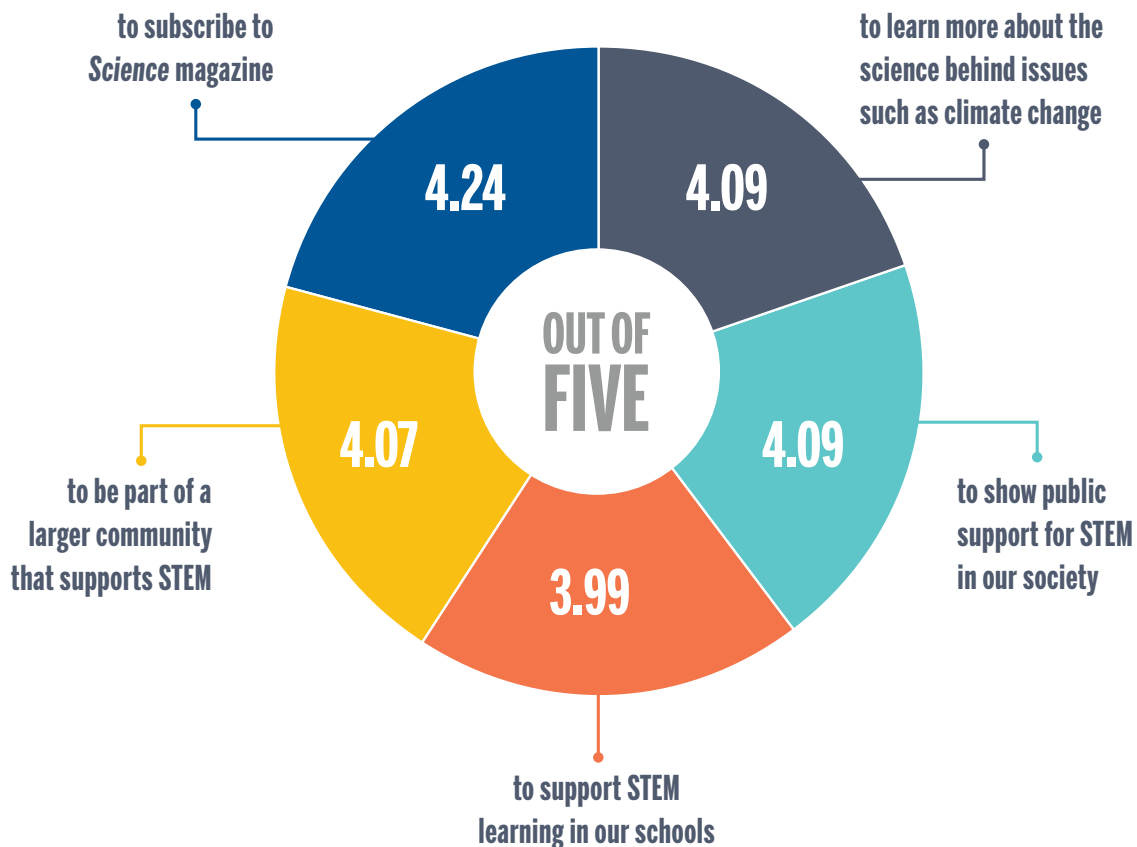


sartorius

Science

# AAAS IS THE FORCE FOR SCIENCE

According to the 2018 Member Survey, you joined AAAS ...



**TELL US WHAT'S IMPORTANT TO YOU!**

The 2019 Member Survey is launching in the fall. Look in your inbox for a link.

Your responses help us to better serve science, scientists, and the global community.  
Don't miss your chance to tell us what's most important to you!



### Hybrid Microscopes

Despite sharing many optical components, conventional microscopes have always existed in two basic configurations: upright or inverted. While most labs have to purchase two separate microscopes for viewing different samples, Echo has developed the

world's first hybrid microscope that can be flipped to perform in either configuration. Users can quickly tailor their microscope to suit their specific needs and will appreciate the intuitive touchscreen. Touchscreen functions drive cameras and illumination, replacing manual turrets and levers. No more clicking is needed—just tap to count or draw lines to measure. Traditional eyepieces have been replaced with iPad Pro tablets to provide easier viewing and crystal-clear images through their Liquid Retina display. Restore settings from previously captured images to accurately reproduce experiments. Share findings in seconds with Dropbox, AirDrop, USB, and other iOS file-sharing options.

#### Echo

For info: 858-429-9565  
discover-echo.com

### EV Isolation System for Serum and Plasma

System Biosciences offers the SmartSEC HT EV Isolation System for Serum & Plasma, the first kit on the market that enables extracellular vesicle (EV) isolation in a 96-well plate-based format. With SmartSEC HT, you get high yields of highly pure EVs needed for biomarker discovery, diagnostic development, therapeutic development, and more. SmartSEC HT combines all the benefits of size-exclusion chromatography (SEC)—purity, yield, reproducibility, and preservation of EV integrity—with a contaminant-trapping feature that overcomes the limitations of conventional SEC for a fast, easy, EV isolation workflow. Each SmartSEC HT kit comes with optimized amounts of SmartSEC resin already aliquoted into a 96-well filter plate, SmartSEC Isolation Buffer, and two collection plates. Each well of the filter plate can be loaded with 250  $\mu$ L–500  $\mu$ L of serum or plasma, and if desired, unused wells can be preserved for future use. The entire system is compatible with standard manual and automated liquid-handling systems.

#### System Biosciences

For info: 888-266-5066  
www.systembio.com

### Soft X-Ray Light Source

The 642-1 Soft X-Ray (SXR) light source from McPherson features a six-position anode carousel. Users can easily change anode target materials without breaking vacuum. Using different anode materials allows for tuning of the emitted electronvolt energy. The vacuum housing of the source features standard NW40K vacuum flanges (optionally DN40CF). It also features two equivalent output beams, which enable sample/reference comparison and device calibration. The new source is easy to set up and provides a reliable emission-line source and a means for at-wavelength calibration, or metrology of SXR lithography materials, multilayers, or grazing-incidence optical systems for astrophysics and other fundamental research.

#### McPherson

For info: 800-255-1055  
www.mcphersoninc.com

### Infectious Disease Reagents

The Native Antigen Company is one of the world's leading suppliers of reagents that enable research into vaccine development and diagnostics for emerging and endemic infectious diseases. It specializes in the development and manufacture of native and recombinant viral and bacterial antigens, antibodies, and immunoassays, alongside bespoke product development and custom manufacturing using its proprietary mammalian cell expression system. The Native Antigen Company's team has decades of experience in the isolation and purification of native antigens and high-yield mammalian cell expression systems, ensuring conformity to native type. Its high-quality reagents have been widely adopted by leading pharmaceutical companies, in vitro diagnostic assay manufacturers, and academic groups involved in cutting-edge vaccine research and serology, where correct folding and glycosylation are vital.

#### The Native Antigen Company

For info: +44-(0)-1865-595230  
thenativeantigencompany.com

### Targeted Protein Degradation for Drug Discovery

AMS Biotechnology has introduced a new range of homogeneous proximity assays, critical enzymes, and small-molecule inhibitors to assess the chemical adaptor function of proteolysis targeting chimeras (PROTACs). Targeted protein degradation using PROTACs is a promising new therapeutic method in drug discovery. PROTACs can regulate protein degradation through targeted control of ubiquitin E3 ligases. The PROTAC method offers many advantages compared to traditional protein inhibition, which requires sustained protein binding to evoke the intended biological reaction. This can be problematic in the incidence of target overexpression, the presence of competing ligands, or protein mutations that lead to binding resistance. PROTACs bypass these issues by promoting degradation that circumvents the native resistance of proteins against sustained inhibition. Even select weak-binding and promiscuous ligands can be used with PROTACs and still demonstrate high degradation efficacy. Also, ineffectual ligands that do not modulate the cellular functions of the protein of interest can mediate degradation through PROTACs. Whether the ligand is a strong inhibitor, a weak binder, promiscuous, or ineffectual, PROTACs offer the ability to degrade proteins previously believed to be "undruggable" through conventional small-molecule inhibition.

#### AMS Biotechnology

For info: 617-945-5033  
www.amsbio.com

### Mass Spectrometer

The Thermo Fisher Scientific Orbitrap Exploris 480 mass spectrometer is a quadrupole-Orbitrap mass spectrometer based on the hardware and instrument-control software designs of the next-generation Thermo Scientific mass spectrometers. Built on the guiding principles of ease-of-use and hardware reliability, its robust system performance boosts sample throughput. Soundness of data is assured with high-resolution accurate-mass (HRAM) selectivity, high scan speed and best-in-class mass spectral quality, all within a compact footprint to conserve bench space. Simplified operation, smart scheduling, and execution of user-selected scan types deliver rich, high-confidence sample insights for users of all skill levels in a wide range of applications, from small molecules to peptides and intact proteins.

#### Thermo Fisher Scientific

For info: 866-984-3766  
www.thermofisher.com

Electronically submit your new product description or product literature information! Go to [www.sciencemag.org/about/new-products-section](http://www.sciencemag.org/about/new-products-section) for more information.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and governmental organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS of any products or materials mentioned is not implied. Additional information may be obtained from the manufacturer or supplier.

CALL FOR PAPERS

SPJ  
SCIENCE PARTNER JOURNALS



[spj.sciencemag.org/bmef](http://spj.sciencemag.org/bmef)



## BME Frontiers

 OPEN ACCESS

*Biomedical Engineering (BME) Frontiers* is a **Science Partner Journal** distributed by the **American Association for the Advancement of Science (AAAS)** in collaboration with the **Suzhou Institute of Biomedical Engineering and Technology, Chinese Academy of Sciences (SIBET CAS)**. *BME Frontiers* aims to serve as an effective platform for the multidisciplinary community of biomedical engineering. The journal will publish breakthrough research in the fields of pathogenic mechanisms as well as disease prevention, diagnosis, treatment, and assessment.

The Science Partner Journals (SPJ) program was established by the American Association for the Advancement of Science (AAAS), the nonprofit publisher of the *Science* family of journals. The SPJ program features high-quality, online-only, open access publications produced in collaboration with international research institutions, foundations, funders and societies. Through these collaborations, AAAS expands its efforts to communicate science broadly and for the benefit of all people by providing top-tier international research organizations with the technology, visibility and publishing expertise that AAAS is uniquely positioned to **offer as the world's largest general science membership society**.

**Submit your research to *Biomedical Engineering Frontiers* today!**

Learn more at: [spj.sciencemag.org/bmef](http://spj.sciencemag.org/bmef)

ARTICLE PROCESSING CHARGES WAIVED UNTIL 2021

# Get A Great Assay

Go from good to great by following  
our ELISA guide



**DOWNLOAD**  
The ELISA Guide

Learn more at [rndsystems.com/elisa](http://rndsystems.com/elisa)