

# ENABLING LIFE SCIENCE RESEARCH



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Dr. Allen Eaves, CEO and Founder of STEMCELL Technologies

## **Scientists Helping Scientists**<sup>™</sup>

As a team of Scientists Helping Scientists, STEMCELL Technologies is dedicated to improving lives through scientific research.

We are passionate about the pursuit of scientific knowledge and maintain strong links to academia and industry to remain at the forefront of innovation and discovery. To facilitate the advancement of scientific research around the world, we offer the highest quality products coupled with our scientific expertise via training courses and personalized technical support.

Our vision, simply, is to be in every lab—to have meaningful and productive relationships with scientists around the world who are doing research where our products, services, and expertise can add value.

Browse this brochure to gain an overview on how we support a broad range of research areas with our diverse product lines and services for cell isolation and cell culture. You'll also find more information at the end on our commitment to quality and company history.

To explore our full product listing and wide collection of educational and scientific resources, visit www.stemcell.com.

# Enhance Productivity with Efficient Cell Separation Technologies

Easily and efficiently isolate virtually any cell type with either immunomagnetic or immunodensity cell separation technologies.

- Mononuclear Cells
- Lymphocytes
- Myeloid Cells
- T Cells
- CD4<sup>+</sup> T Cells & Subsets
- Regulatory T Cells

- CD8<sup>+</sup> T Cells & Subsets
- B Cells & Subsets
- NK Cells
- Monocytes
- Dendritic Cells & Subsets
- Granulocytes & Subsets

- Innate Lymphoid Cells
- Hematopoietic Stem & Progenitor Cells
- Mesenchymal Stromal/Progenitor Cells
- Circulating Tumor Cells
- Mammary Epithelial Cells
- and many more

#### Immunomagnetic Cell Separation Products

Achieve more in less time with fast, easy, and column-free immunomagnetic cell separation technologies.



#### EasySep<sup>™</sup>

A Smarter, More Efficient Way to Isolate Cells

Isolate highly purified cells in as little as 8 minutes from a variety of species and sample sources, including whole blood. Isolated cells are immediately available for downstream applications.



#### RoboSep™

Fully Automated, Walk-Away Cell Isolation

Streamline your cell isolations with RoboSep<sup>™</sup> instruments, while retaining the speed and simplicity of EasySep<sup>™</sup> with as little as 5 minutes of hands-on time.

#### Immunodensity Cell Separation Products

Isolate cells easily with hassle-free immunodensity-based cell separation techniques.



#### **RosetteSep**<sup>™</sup>

#### Cell Isolation Directly from Whole Blood

Isolate untouched cell subsets from whole blood during your standard density gradient centrifugation step. Available for a wide range of cell subsets.



#### SepMate<sup>™</sup>

Hassle-Free PBMC Isolation in Just 15 Minutes

Say goodbye to slow and laborious sample layering over density gradient medium with SepMate<sup>™</sup> tubes that reduce PBMC isolation to just 15 minutes. Combine SepMate<sup>™</sup> with RosetteSep<sup>™</sup> to isolate specific cell subsets.

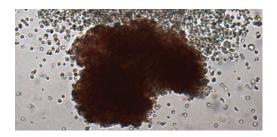


#### Lymphoprep<sup>™</sup>

Isolate mononuclear cells with density gradient medium compatible with SepMate<sup>™</sup> and RosetteSep<sup>™</sup>.

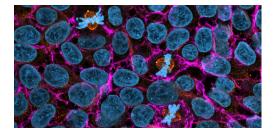
## Standardize Cell Culture Conditions with Specialized Media

Ensure the quality of your cell cultures with specialty media and supplements designed and optimized to fit seamlessly into every step of your research. Here are just some examples of the media we offer and the research areas they support.



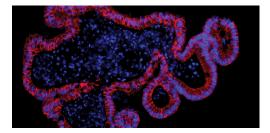
#### Hematopoietic Stem & Progenitor Cells (HSPCs)

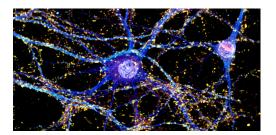
- **MethoCult™:** Quantify hematopoietic progenitors with the "Gold Standard" methylcellulose-based media for colony-forming unit (CFU) or cell (CFC) assays.
- StemSpan<sup>™</sup>: Expand HSPCs or stimulate their differentiation into mature cells using serum- and/or animal-free media and supplements.
- **MyeloCult™:** Culture hematopoietic progenitor cells long term in association with adherent stromal cells.
- MegaCult™: Quantify megakaryocytic progenitors in collagen-based medium.
- **STEMdiff™:** Generate functional hematopoetic progenitor cells from hPSCs with a robust, user-friendly protocol.



#### Human Pluripotent Stem Cells (hPSCs)

- **TeSR™**: Reprogram, maintain, and differentiate hPSCs with the TeSR™ family of culture media, including mTeSR™ Plus with enhanced buffering for truly versatile maintenance.
- **RSeT™ Feeder-Free:** Revert primed hPSCs to a naïve-like state in feederfree media without bFGF.
- **mFreSR™:** Cryopreserve hPSCs in a complete, serum-free formulation for higher thawing efficiency.
- **CloneR™**: Use this supplement to increase cloning efficiency and single-cell survival of hPSCs, without single-cell adaptation.
- **STEMdiff<sup>TM</sup>:** Differentiate hPSCs to specialized cell types of all three germ layers with efficient, user-friendly protocols for multiple cell lines.



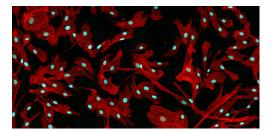


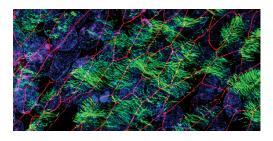
#### Organoids

- IntestiCult<sup>TM</sup>, HepatiCult<sup>TM</sup>, PancreaCult<sup>TM</sup>, and PneumaCult<sup>TM</sup>: Add dimension to your research with media optimized for robust organoid growth from adult stem cells.
- **STEMdiff<sup>TM</sup>**: Differentiate and culture hPSC-derived cerebral, kidney, or intestinal organoids with efficient, easy-to-use kits.

#### **Neural Cells**

- **BrainPhys™:** Culture primary and hPSC-derived neurons in a medium that supports synaptic activity.
- **NeuroCult<sup>TM</sup>:** Expand and differentiate neural stem and progenitor cells, and culture primary neurons with a comprehensive line of media and supplements.
- **STEMdiff<sup>TM</sup>:** Generate, expand, and store hPSC-derived neural progenitors, and differentiate to 2D and 3D neural types with specialized differentiation media.



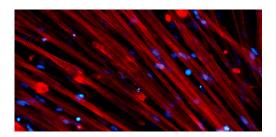


#### **Mesenchymal Stromal Cells**

- **MesenCult™:** Derive, expand, differentiate, and cryopreserve mesenchymal stromal cells using standardized protocols and animal component-free media.
- **STEMdiff<sup>™</sup>:** Generate mesenchymal progenitor cells from hPSCs using a complete, animal component-free workflow.

#### **Epithelial Cells**

- **PneumaCult<sup>TM</sup>:** Recapitulate key features of the in vivo airway by culturing human airway epithelial cells at the air-liquid interface or as airway organoids.
- IntestiCult<sup>™</sup>: Add human and mouse intestinal organoids to your research with complete media optimized for robust organoid growth.
- HepatiCult<sup>TM</sup> and PancreaCult<sup>TM</sup>: Establish and maintain mouse hepatic progenitor organoids or pancreatic exocrine organoids in dome or suspension cultures.
- **EpiCult™ and MammoCult™:** Culture tumorspheres as well as mammary, prostate, and other pseudostratified epithelial tissues from human or mouse in serum-free cell culture media.
- STEMdiff<sup>™</sup>: Generate definitive endoderm cells as well as downstream tissue models for intestine, pancreas, and lung with efficient, robust media systems and protocols.



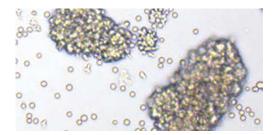
#### Myogenic Stem and Progenitor Cells

- **MyoCult™**: Derive, expand, and differentiate skeletal muscle progenitor cells with standardized media that reduce culture variability.
- **STEMdiff<sup>TM</sup>**: Generate and maintain functional cardiomyoctes from hPSCs with a complete and standardized workflow.



#### Hybridomas or Transfected Cells

• **ClonaCell™**: Select, clone, and expand hybridomas, CHO cells, and other cell lines using liquid or methylcellulose-based media.

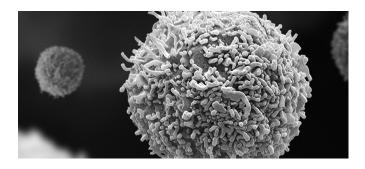


#### **Immune Cells**

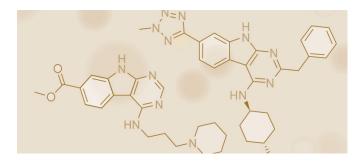
- ImmunoCult<sup>™</sup>: Activate, expand, and differentiate immune cells with media, activators, and supplements optimized for consistent, reliable results.
- **StemSpan™:** Differentiate human CD34<sup>+</sup> hematopoietic progenitor cells to immune cell subsets.

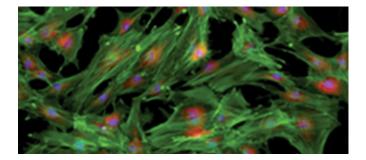
## **Other Products**

In addition to cell separation technologies and specialty culture media, choose products that complement and complete your research workflow. The following is a selection of our most popular categories and products.









#### Human Primary Cells\*

Access fresh and cryopreserved primary cells from cord blood, peripheral blood, mobilized peripheral blood, and bone marrow.

\*Certain products only available in select territories

#### Genome Editing & Molecular Tools

- ArciTect<sup>™</sup>: Perform high-efficiency genome editing within your own lab using ribonucleoprotein (RNP)-based CRISPR-Cas9.
- Molecular Biology Tools & Reagents: Complete your workflow with reliable qPCR arrays, PCR and molecular cloning reagents, and DNA and RNA purification kits.

#### **Small Molecules and Cytokines**

- Small Molecules: Target key signaling pathways in immunology, cancer biology, and stem cell biology.
- Cytokines: Choose from over 200 human, mouse, rat, and recombinant animal component-free cytokines, in a variety of sizes.

#### **Cell Storage Media**

Maintain high cell viability and function of numerous cell types by using animal component-free and/or serum-free cryopreservation and cell storage media, such as mFreSR<sup>™</sup>, CryoStor<sup>®</sup>, and HypoThermosol<sup>®</sup>.



#### Instruments

Embrace efficiency through automation, with RoboSep™ instruments for cell separation or STEMvision™ for standardized hematopoietic colony counting in the CFU assay. Our instruments are designed and built in Canada at STEMCELL's facilities and supported by regular software updates and warranty and service packages.

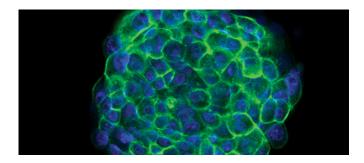
#### Antibodies & ELISA Kits

Take the guesswork out of cell analysis. Choose antibodies verified for use with STEMCELL products, then accurately quantify analytes with highly sensitive ELISA kits.



#### Cell Dyes & Stains

- **GloCell<sup>TM</sup> Fixable Viability Dyes:** Validate cell viability with ease in applications such as flow cytometry.
- ALDEFLUOR<sup>TM</sup>: Identify, evaluate, and isolate stem and progenitor cells based on their expression of aldehyde dehydrogenase enzyme.





#### **Plasticware & General Supplies**

- **AggreWell™:** Generate 3D spheroids in AggreWell™ plates for more physiologically relevant cell-based cancer models.
- SmartDish<sup>TM</sup>: Achieve more accurate counting in CFU assays for hematopoietic colonies with meniscus-free cultureware.
- Cultureware & General Supplies: Complete your workflow with a range of cultureware, including trusted brands like Corning<sup>®</sup> and Axygen<sup>®</sup>, for use with our cell isolation kits, cell culture media, genome editing tools, and molecular biology reagents.

### **Services**

#### **Expert Support and Training**



As scientists ourselves, we know that many factors besides quality tools and reagents can affect achieving optimal and consistent results. These include access to technical training, proficiency testing, and product support. Through our extensive educational programs, STEMCELL provides in-person and online training courses on protocols and assays to researchers and technicians around the globe. Customers are also able to connect directly with our Product and Scientific Support Specialists via email, LiveChat, or telephone support.

#### www.stemcell.com/education

#### **Contract Assay Services**



As your contract research partner, Contract Assay Services combines the power of specialized STEMCELL media and reagents with the practical knowledge of our scientists to provide both standardized and customized assay services. Choose from a portfolio of characterized assays using pre-qualified primary stem cells or discuss your drug discovery and development needs with our in-house experts. Since 2000, Contract Assay Services has performed studies for over 200 pharmaceutical, biotechnology, government, and academic life science organizations worldwide. We provide exceptional service through frequent communication, quality products, and extensive expertise.

www.contractassay.com

#### Science Communication

As Scientists Helping Scientists, we keep you connected and up to date with several free services. You can connect with the scientific community in the following ways:





#### The Stem Cell Podcast

Stay connected and up to date—listen to conversations with field experts in stem cell science for career insights, mentorship moments, policy commentaries, and more.

#### www.stemcellpodcast.com

#### STEMCELL Science News

Save time and keep current with free, weekly tissue-specific science newsletters covering the latest research, industry news, policy updates, events, and jobs in a variety of immunology and cell biology fields.

#### www.stemcellsciencenews.com

## About Us

#### Our Commitment to Quality

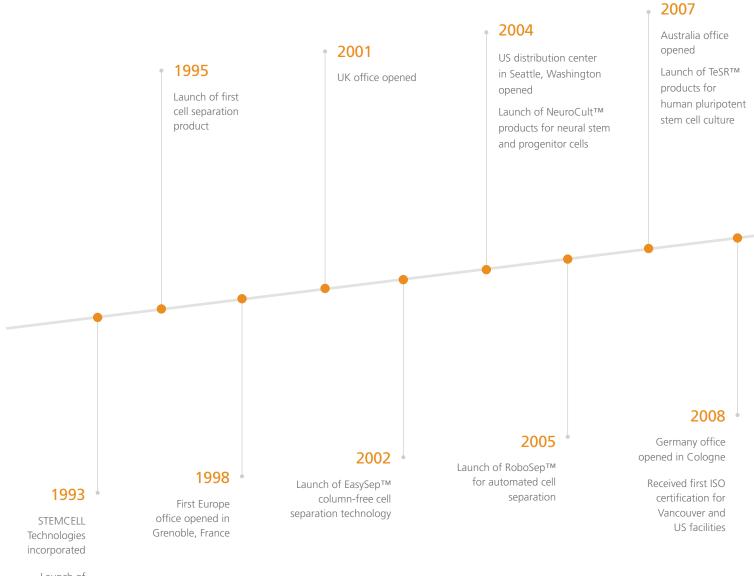
STEMCELL Technologies is dedicated to quality—from product development and manufacturing to customer support. Our focus on standardization, not only for a single product, but also within our network of products, is the foundation upon which we have built our reputation. To drive innovation and improvement of our products, all profits are reinvested into Research and Development and company infrastructure. We are also committed to listening to customers, who expect our products to provide high performance with extremely low bottle-to-bottle or batch-to-batch variability in performance.

STEMCELL's Quality Management System is certified to ISO 13485:2016 Medical Devices and ISO 9001:2015. This global certification is a key example of our commitment to exceeding customer expectations for high-quality, innovative products and services. For more information on quality at STEMCELL, visit www.stemcell.com/compliance.

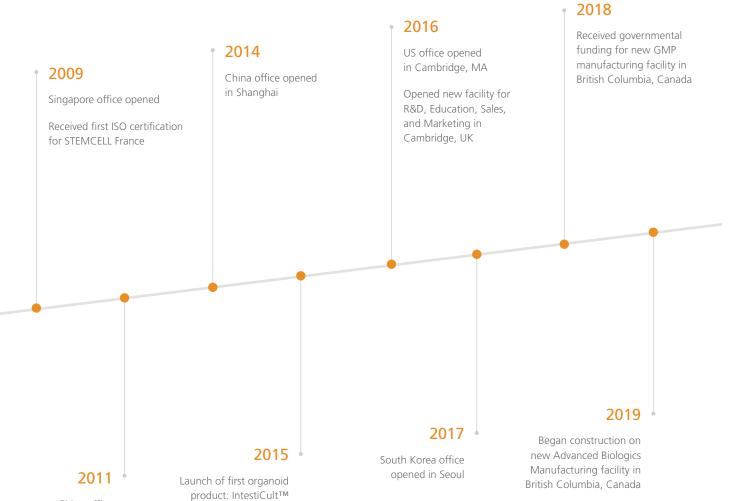


#### **Our History**

STEMCELL was founded in 1993 as an independent company by Dr. Allen Eaves, then a hematologist and cancer researcher heading the Terry Fox Laboratory (TFL) and Department of Clinical Hematology at the University of British Columbia. Unsatisfied with commercially available cell culture media for growing blood-forming stem cells, Dr. Eaves' research group at the TFL began making their own standardized cell culture media from the highest quality materials they could find. This media, MethoCult<sup>™</sup>, would become the world standard for studying normal and leukemic blood-forming stem cells.



Launch of MethoCult™ media for hematopoietic stem cells



China office opened in Beijing

Launch of STEMvision™ for automated scoring in the CFU assay



STEMCELL Offices

#### Supporting Scientists Worldwide

STEMCELL is the largest biotechnology company in Canada and has expanded to include facilities in eight other countries: the United States, the United Kingdom, France, Germany, China, Korea, Singapore, and Australia.

Our growing global network currently supports and serves life sciences researchers in over 120 countries. We now offer over 2,500 highquality products and services and continue to develop new tools to support the international research community and help advance research worldwide.

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## ENABLING LIFE SCIENCE RESEARCH



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