

## Enabling Endothelial Cell Cultures for Academic and Industrial Clients

### Healthcare

**Angiocrine Bioscience, Inc.**  
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www.angiocrinebio.com



**Dr. Geoffrey Davis**  
CEO

### BIO:

C. Geoffrey Davis, Ph.D. is Chief Executive Officer at Angiocrine Bioscience. Dr. Davis was a founder and the Chief Scientific Officer for Abgenix, Inc. in Fremont, California. He led the development of the XenoMouse technology, which provided the basis for Abgenix to grow from a Cell Genesys spinout and be acquired by Amgen. During this time, he advanced three antibody product candidates into clinical trials and was instrumental in identifying, structuring, and managing over 30 corporate partnerships. To date, these partnerships have resulted in 11 antibody product candidates derived from XenoMouse technology entering clinical trials and two being approved for the market. Dr. Davis received his Ph.D. from the University of California, San Francisco and completed his postdoctoral work

in the laboratory of Nobel Laureates Joseph L. Goldstein and Michael S. Brown at The University of Texas, Southwestern. Prior to founding Abgenix, Dr. Davis was a faculty member at UCSF, an investigator with the Howard Hughes Medical Institute, and Director of Immunology at both Repligen Corporation and Cell Genesys, Inc. He also consults for several biotechnology/pharmaceutical companies and serves on the Board of Directors for four companies.

### About Angiocrine Bioscience, Inc.:

Endothelial cells naturally form distinct niches for the stabilization and expansion of tissue-specific stem cells *in vivo*. Angiocrine Bioscience has developed the VeraVec™ endothelial cell platform for amplifying stem and progenitor cells, in both human and mouse models, by recapitulating the proliferative stimulation of the *in vivo* vascular niche *in vitro*. The expansion capacity is on an unprecedented scale when compared to any other technology, and it is achieved without the requirement for tremendous volumes of costly media additives. This process can meet the needs of a broad range of therapeutic, diagnostic, and research applications.

**Interview conducted by:**  
**Lynn Fosse, Senior Editor**  
**CEOCFO Magazine**

**CEOCFO:** Dr. Davis, what is the concept behind Angiocrine Bioscience?

**Dr. Davis:** We have built a company based on technology coming from the laboratory of Shahin Rafii, a professor at Cornell Medical Center. We have a unique way of enabling a culture of endothelial cells, both from mouse and human, such that they will

proliferate much better and through many more passages than standard endothelial cells. We are providing these cells to academic and industrial clients. The idea is that these cells will enable vascular research but also are a foundation for proliferating stem cells in culture in a much more natural way than has been possible before.

**CEOCFO:** In layman's terms, what is the science you understand that perhaps others do not?

**Dr. Davis:** The trick is that there is a gene derived from a virus called E4ORF1. When you introduce this gene into endothelial cells it enables the cells to proliferate much more robustly and stably in cell culture.

**CEOCFO:** Where are you in the development and/or commercialization process?

**Dr. Davis:** The company started just in March of 2013 and we are already offering products on our website. These are both human and mouse endothelial cells derived from a spectrum of different tissues. We will continue to build our portfolio on a monthly basis, offering more and more products as we go along.

**CEOCFO:** Would you explain some of the different products you will be offering?

**Dr. Davis:** We are currently focused on expanding the range of tissues from which the mouse endothelial cells are derived. Looking forward, you can plan on seeing endothelial cells derived from human tissues and organs as well and also from tumors, both mouse and human. We will also have a range of modifications for these cells available. For instance, we should have fluorescently labeled cells available in short order. We also

are going to be deriving cells from knock out mice. These are mice that have genes knocked out that are known to be important in the vascularization process.

**CEOFCO:** How do you decide what to develop first?

**Dr. Davis:** We start with the foundation. The first products are going to be the fundamental endothelial cells themselves. From that point on we will be building out layer upon layer, getting into new areas of product offering that are not available from other companies.

**CEOFCO:** Has the scientific community been looking for a better endothelial cell? Or is it that they will be happy to know that it exists now?

**Dr. Davis:** The scientific community has been aware for some time that primary endothelial cells do have their shortcomings. They are not very stable in culture and overall are hard to work with. The cells that we are providing offer a major advance in terms of simply facilitating research in this area. Clearly we need to be getting the word out there and so we are attending a number of scientific meetings in order to make the community more aware of what we have to offer and what our technology can do to advance their research.

**CEOFCO:** This is certainly not the first venture that you have been involved with. What have you learned in prior experiences that is most helpful as you grow and develop your company and as you roll out your products?

**Dr. Davis:** To tell you the truth, this is somewhat of a new area for me. My past experience has been more in the area of therapeutics. I think that the lesson that holds true from that

experience and also holds true here is to have an exciting offering and to make sure to develop that offering in such a way that you can deliver on promises. That is what we intend to do here.

**CEOFCO:** Are you funded for the steps you would like to take next?

**Dr. Davis:** We did have an initial round of funding to launch the company. We do have aspirations to expand beyond being a provider of research tools which is the mode that we are in now. When we move on to those new areas, we will most likely be seeking additional funding.

**CEOFCO:** Is your area of endeavor in favor these days with the investment community?

**“We feel that we are really going to revolutionize endothelial cell and stem cell biology with our research product offerings.” - Dr. Geoffrey Davis**

**Dr. Davis:** We think that we are in a good position in terms of timing. Clearly stem cell biology is an area of intense focus and has been for some time. We are going to be providing a means to further enable stem cell research. I think that focus is here to stay.

**CEOFCO:** Would you explain a little bit more of how what you developed makes a difference in stem cells?

**Dr. Davis:** There is a concept of a vascular niche. Basically, that is that the vasculature really enables the proliferation of cells in an organ specific fashion. What the work in Dr. Rafii’s lab has determined is that the endothelial cells really provide all the factors that are necessary for stem cell proliferation. To translate that to *in vitro* culture, you can culture the stem

cells on these endothelial cells without the inordinate addition of exogenous factors such as serum. That enables the stem cells to proliferate in a more natural way and to maintain their phenotype.

**CEOFCO:** On a competitive landscape, are people looking to replicate what you have done?

**Dr. Davis:** There are other companies that offer endothelial cells and various types of stem cells as research products. We feel that our technology can really be differentiated from the competition. We do have a proprietary position on our fundamental technology and so we look to make an impact in the future.

**CEOFCO:** Your website indicates that you are hiring; what types of personnel are you looking to add for the company?

**Dr. Davis:** At this point we are still building the research team. We are looking for individuals with experience in both stem cells and biochemistry.

**CEOFCO:** Put it all together for our readers, why pay attention to Angiocrine Bioscience?

**Dr. Davis:** We feel that we are really going to revolutionize endothelial cell and stem cell biology with our research product offerings. You can look to see those offerings expanding on a regular basis. I encourage the readers to pay attention to our website and to our advertising. Beyond that, we also look to make an impact on human health, both from development and diagnostic approaches as well as therapeutics approaches. We think we are a company with a long term future and evolving business plan.

