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Meeting Growth Challenges Roundtable Panel Part 1: Laying The Foundation For A Sustainable Business

*Thought Leadership In Association with Freyeur & Trogue, Impactiv
BioConsult, and rbb Communications*

by **Mike Ward**

Starting up life science companies has probably never been easier. Our understanding of disease biology continues to grow, the pool of experienced biotech executives with the battle scars of entrepreneurship has never been deeper, and the cash pile to bankroll their development continues to grow. The challenge these days is what do company executives have to do to ensure they can translate their ground breaking ideas into sustainable businesses that develop products that make a meaningful difference to patients.

Developing products that are clinically meaningful requires more than a novel approach to an unmet medical need. A panel of biotech executives and venture investors discuss how to meet the challenges of building a sustainable business from day one.

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Scrip spoke with Gil Van Bokkelen, chairman and CEO of Athersys, Inc., Daniel R. Orlando, chief operating officer of Vericel Corporation, Robert McNeil, general partner and managing director

of Sanderling Ventures and CEO of Dalcour Therapeutics, Ali Fattaey president and CEO of Curis, Inc., Mei Mei Hu, co-founder and CEO of United Neuroscience, Inc., Gregory Hanson, CFO of MabVax Therapeutics Holdings, Inc., and Dennis Podlesak, partner at Domain Associates LLC, in a roundtable interview about the challenges company executives face as they try to build their business. Sponsored by Freyeur & Trogue, Impactiv and rbb Communications, the roundtable took place during the J.P. Morgan Healthcare Conference in San Francisco.

Focus on clinically meaningful outcomes

One of the strongest foundation stones life science entrepreneurs can lay when starting to build a company around an idea they have is a thorough understanding of the indication they are targeting and develop a way to dramatically change the treatment paradigm.

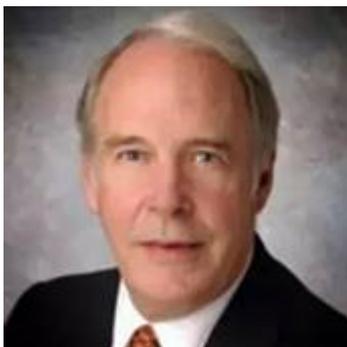


ALI FATTAEY PRESIDENT AND CEO OF CURIS, INC.

“Until 10 years ago, if a drug was approved, the general sense was it could have an important role in treating patients and that would be seen as a success. If you look at how the landscape has changed over time no entrepreneurs or business leaders would invest either time or money unless the treatment has the potential to be truly differentiated,” warned Domain’s Podlesak.

“Venture firms and companies both look at how the to grow the business. Unless they can dramatically change the treatment paradigm they tend not to be able to attract capital,” he added.

An example of a paradigm-shifting approach in the Domain portfolio is Adynxx, a San Francisco-based biotech that is testing brivoligide, a molecule that inhibits EGR1, a transcription factor that plays a critical role in establishing and maintaining pain following injury or trauma, as a potential non-opioid, disease-modifying therapeutic for post-operative pain. The drug is in a second Phase II trial. If it works it would be the first drug to actively prevent chronic pain.



ROBERT MCNEIL, GENERAL PARTNER AND MANAGING DIRECTOR OF SANDERLING VENTURES AND CEO OF DALCOR THERAPEUTICS

“Given the prevalence and severity of chronic pain following surgery, combined with the lack of safe, effective and non-addictive treatment options, we believe it can fundamentally transform the treatment paradigm for post-surgical pain. It is an example of how the bar can be raised,” added Podlesak.

The challenge comes when the indication has historically been intractable or the endpoints for the clinical trial is not obvious.

“Stroke is a perfect example. Everyone is aware that it is one of those areas where there has been a lot of disappointments – outright failures. Current practice is to either give the patient a thrombolytic like tissue plasminogen activator or take one of the recently developed surgical procedures. Both require treating the patient in the first few hours of the stroke and the clinical reality of that is only a small percentage of patients – roughly 8% -- will benefit,” noted Athersys’ Van Bokkelen.



DANIEL R. ORLANDO, CHIEF OPERATING OFFICER OF VERICEL CORPORATION

Athersys is developing an approach that will buy clinicians and patients more time testing MultiStem, a proprietary stem cell product manufactured from human stem cells obtained from

adult bone marrow or other non-embryonic tissue sources, in the treatment of multiple distinct diseases. The company is currently evaluating in a Phase II study the administration of MultiStem therapy to patients who have suffered a heart attack, or acute myocardial infarction.

“Our clinical data show that we can effectively treat patients up to 36 hours after a stroke has occurred. It’s a very simple procedure that involves an intravenous drip. We believe it will dramatically improve clinical outcomes,” added Van Bokkelen.

A lack of meaningful endpoints has been a major stumbling block for companies in the neuroscience space. “That is what has been holding back neuroscience for so long – it’s a chicken and egg situation – we needed to figure out the outcomes that we could measure against. It is also a regulatory challenge as the endpoints we have are a bit fuzzy,” explained United Neuroscience’s Hu. As neurodegeneration takes place over years it is difficult to identify objective and clean endpoints.



DENNIS PODLESAK, PARTNER AT DOMAIN ASSOCIATES LLC

United Neuroscience’s lead program is UB-311, its novel synthetic peptide vaccine targeting beta amyloid in the treatment of Alzheimer’s disease. So far, the company has reported from an ongoing Phase II study that UB-311 was able to generate antibodies to specific beta amyloid oligomers and fibrils with no decrease in antibody levels in patients of advanced age. Moreover, amyloid PET imaging and genetic screening for APOE4 status demonstrated an efficient method to identify subjects with mild Alzheimer’s for disease modification trials in early-to-mild Alzheimer’s.

Predictability As Valuable As Clinical Outcome

Oncology is one of the areas where the outcomes are more clearly defined and standard clinical trial endpoints are already well established. Emerging oncology companies, however, have to look beyond those endpoints – which normally revolve around durability of the clinical benefit. “It is more important that you can enhance the predictability of choosing the right patients – knowing who may or may not benefit,” noted Curis’ Fattaey.

Being able to identify the best patients for a particular treatment clearly not on benefits patients, it helps payers, investors and the companies too. “For us, it impacts our way of thinking about how we grow. Do we have enough infrastructure and technologies to be able to tell who is going to benefit or not,” Fattaey added.



MEI MEI HU, CO-FOUNDER AND CEO OF UNITED NEUROSCIENCE, INC.

Curis’ lead program, CUDC-907, an orally-available, small molecule inhibitor of HDAC and PI3 kinase enzymes, is currently in a Phase II, open-label, multicenter trial designed to evaluate its efficacy and safety in subjects 18 years and older with relapsed/refractory (RR) MYC-altered diffuse large B-cell lymphoma (DLBCL). Patients with RR DLBCL are eligible for treatment with CUDC-907, as long as they have tumor tissue available that can be tested for MYC-altered disease.

Marrying assets that help improve the predictability of outcome, according to MabVax Therapeutics’ Hanson, are probably more important for building a business than the market opportunities or intellectual property.

“We are in pancreatic cancer, an area that many companies have failed when trying to come up with effective treatments. Why would we want to go after it? It just so happens our antibody targets a particular antigen that is expressed on more than 90% of pancreatic tumors and so has a high probability of success,” he added.

MabVax Therapeutics’ approach was to develop the HuMab-5B1 antibody, which was discovered from the immune response of cancer patients vaccinated with an antigen-specific vaccine during a Phase 1 trial at Memorial Sloan Kettering Cancer Center and subsequently in-licensed, as a therapeutic. Moreover, noting that the HuMab-5B1 antibody has excellent tumor targeting capabilities, as well as being internalized by pancreatic cancer cells, the company created a tumor-targeting platform.

The company conjugated the antibody, MVT-5873, with the radiolabel zirconium 89, to create

MVT-2163, a PET agent as an important tool to aid in the diagnosis, monitoring and assessment of pancreatic cancer patients as well as an attractive companion diagnostic for the MVT-5873 therapeutic product.



GIL VAN BOKKELEN, CHAIRMAN AND CEO OF ATHERSYS, INC.

“The problem with pancreatic cancer is by the time it is discovered it’s too late. Your life expectancy is such that you would be lucky to get beyond a year. So by being able to identify the metastatic sites you can know whether the patient is suitable for surgery or not. This is a new paradigm because many surgeons find out after that surgery was not a good decision. We feel that we are going to do something that has not been possible before,” he added.

MabVax Therapeutics is testing both MVT-5873 as a monotherapy or in combination with the current standard of care chemotherapy regimen in subjects with metastatic pancreatic cancer and MVT-2163 in the diagnosis, monitoring and assessment of pancreatic cancer patients and as a potential companion diagnostic for the MVT-5873.

Investors are particularly keen on sifting out the probable from possible. “One way of thinking about it – a lot of our job becomes sorting out what is more probable. You are looking for things that are disproportionately more likely to succeed,” noted Podlesak.



GREGORY HANSON, CFO OF MABVAX THERAPEUTICS HOLDINGS, INC.

One way of increasing the probability of success is to take under-appreciated and under-performing assets and revive them. In 2014, Vericel, created when Ann Arbor, Mich.-based Aastrom Biosciences bought Sanofi's cell therapy and regenerative medicine business, a holdover from Sanofi's 2011 acquisition of Genzyme Corp. Vericel paid \$4m in cash plus a \$2.5m promissory note to get access to Carticel and MACI cell therapy products for the treatment of cartilage defects in the knee and Epicel (cultured epidermal autografts) a permanent skin replacement for the treatment of patients with severe deep-dermal or full-thickness burns, a business with about \$44m in annual revenue. In the first nine months of the current year, these products posted net revenues of just under \$41m.

At the time Aastrom was a struggling company but the acquisition of the cell therapy portfolio, the name change the shift of its headquarters to Cambridge were, according to Vericel's Orlando crucial steps in the transformation of the business from a clinical-stage company to a fully integrated, commercial-stage specialty biologics company. "We believed with the right attention we could get leverage more of the potential of the products we had acquired," he added.

This is the first installment of a multi-part coverage of the Meeting Growth Challenges Roundtable, sponsored by Freyeur & Trogue, Impactiv and rbb Communications, conducted during the J.P. Morgan Healthcare Conference in San Francisco.

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