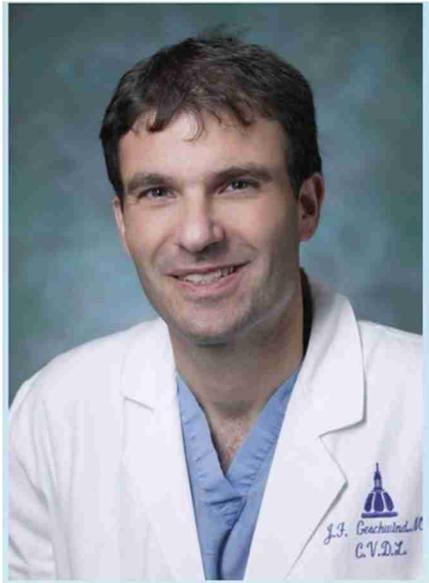


A Developmental Stage Bio-Pharmaceutical Company, PreScience Labs is Focused on Developing Anti-Cancer Drugs with the Successful Completion of Preclinical Mechanistic, In Vitro and Animal Testing of the Proprietary Drug PSL-001

**Healthcare
Oncology, Biotechnology**

**PreScience Labs
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**Jean-Francois Geschwind, M.D.
Founder, CEO**

BIO: Professor of Radiology, Surgery and Oncology and the Director of the Division of Vascular and Interventional Radiology at the Johns Hopkins University School of Medicine; Chief of Interventional Radiology Research at the Johns Hopkins Hospital and the Director of the Interventional Radiology Center at the Johns Hopkins Hospital.

Dr. Geschwind received his medical degree from Boston University School of Medicine in 1991. He completed

residency training as a Research Scholar (sponsored by the National Institutes of Health) in Diagnostic Radiology at the University of California at San Francisco (UCSF) in 1996, where his research focused on cardiac magnetic resonance imaging (MRI). Dr. Geschwind completed his training in Vascular and Interventional Radiology at Johns Hopkins and joined the faculty in 1998. In 2002, he was appointed to his current position, and in 2007 was promoted to Professor of Radiology, Surgery and Oncology at the Johns Hopkins University School of Medicine.

Authored or co-authored more than 350 published scientific articles and abstracts on interventional oncology and specifically the treatment of liver cancer and delivered over 200 keynote speeches at scientific assemblies, annual meetings and symposia. In addition, Dr. Geschwind has co-authored the first book dedicated to interventional radiology entitled, *Interventional Oncology: Principles and Practice*. Dr. Geschwind is currently co-editing the Abrams Angiography: Interventional Radiology book.

Served as Principal or Co-Investigator in over 40 clinical trials with a focus on treating hepatic cancer and other malignancies.

Dr. Geschwind has received numerous national and international awards, including the Alexander Margulis Society Excellence in Research Award from UCSF in 1995, the Annual Memorial Award from the Association of University Radiologists in 1994 and the Dr. Gary J. Becker Young Investigator

Award from the Society of Interventional Radiologists in 2000. In 2001, he was named American Roentgen Ray Society Scholar, and he received the Society's 2003 Certificate of Merit. More recently, he was awarded the Merit Award from the American Society of Clinical Oncology for pioneering work in the field of drug delivery for liver cancer. Dr. Geschwind has been invited by the European Society of Radiology to deliver the Wilhelm Roentgen Honorary Lecture entitled, "Interventional Oncology: the Era of Molecular Targeted Therapy" at ECR 2013.

Dr. Geschwind serves as Consultant to the Editor of the *Journal Radiology*, and is on several Editorial Boards including the main interventional radiology journal *Cardiovascular and Interventional Radiology*. He is a founding member of the International Liver Cancer Association and is an active member of the American Society of Clinical Oncology, the American Association for Cancer Research, the Eastern Cooperative Oncology Group, the Radiology Society of North America, the Society of Interventional Radiology, the American Roentgen Ray Society, the Association of University Radiologists and the Cardiovascular and Interventional Society of Europe. Serves on Advisory Boards of various companies including Bayer, Biosphere Medical, Biocompatibles and Philips Medical Systems.

About PreScience Labs:

PreScience is a developmental stage bio-pharmaceutical company focused on developing anti-cancer drugs. It has successfully completed preclinical

mechanistic, in vitro and animal testing using intra-arterial delivery of its proprietary drug PSL-001. In January 2013, the FDA approved immediate enrollment of a Phase I study, which PreScience intends to initiate at leading US cancer centers in 2014. The study will recruit primary and metastatic liver cancer patients.

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

CEOCFO: Dr. Geschwind, why did you start PreScience Labs?

Dr. Geschwind: It is actually a pretty long story that started 14 years ago when we decided to focus on finding a way to target tumor glycolysis for therapeutic purposes. After initial experiments in vitro, and a limited drug screen, we identified a compound that we later tested in a number of preclinical animal models of cancer, including liver cancer. We found that the compound was extremely effective against liver cancer. Based on these surprising results, we filed a patent application and subsequently published a number of manuscripts in scientific journals that then led to editorials and articles written about the potential use and promise of the drug. One day, because of my recognized expertise in liver cancer, I was invited to participate in a type of tumor board meeting for VIPs. This type of meeting is designed to gather the experts in the world on a specific disease seeking their recommendation for therapy. The clients are generally wealthy individuals. They are organized by a colleague of mine who is a very well known medical oncologist at Johns Hopkins. As I am a professor at Johns Hopkins in radiology, oncology, and surgery, I knew him well and he asked me to join a tumor board as a panelist in New York. There, I met a person from the Middle East who was trying to find a new treatment for his brother who was dying of liver cancer. At that meeting, we discussed the drug I was developing, and devised a compassionate use treatment plan for the patient. After treatment, the patient's

brother, now a close friend, and also CEO of a large investment bank and believer in the promise of the drug, compelled me to create a company. This is when PreScience Labs was born, five years ago, and he personally funded the effort through an angel investment.

CEOCFO: What are you specifically working on today?

Dr. Geschwind: After the initial excitement and pre-clinical results, we have focused our attention on the mechanism of action of the drug. We are also focusing on some very important issues such as the selectivity of the drug and sensitivity of cancer cells to the drug, as well as the apparent lack of toxicity. At the same time, we are trying to find a way to make the compound deliverable systemically. Until now, because of my clinical ex-

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- Jean-Francois Geschwind, M.D.

pertise in the field of loco-regional therapy for cancer, we focused our therapeutic approach on some form of local regional delivery of the drug—either percutaneously directly to the tumor, or via the arterial blood supply which often supplies blood flow to the tumors especially in the liver. Recently, we have shifted our focus on finding a suitable way to deliver the drug systemically (intravenously) like other chemotherapeutic agents.

CEOCFO: What does your compound do differently than others?

Dr. Geschwind: It is the first in its class to target tumor glycolysis, one of the key hallmarks of cancer cells, and one which has not been effectively targeted until now. What is unique to our approach is that we have a drug candidate that directly disrupts tumor glycolysis. This approach is distinguished from other approaches to tu-

mor metabolism, because it capitalizes upon fully accepted and proven scientific principles. Our drug targets GAPDH, the enzyme that catalyzes the sixth step of glycolysis. By binding to GAPDH, glycolysis stalls, and tumor cells fail in their conversion of glucose to usable energy, all leading to cell death. GAPDH's role in glycolysis is fundamental and unequivocal and there have been over twenty scientific publications describing the drug's role in blocking GAPDH's function. And unlike other alkylating agents, our drug has demonstrated tremendous specificity for molecular targeting cancer cells, enforcing its anti-tumor effects by promoting energy depletion, disruption of redox balance, and induction of intracellular stress in a concurrent fashion. This is all extremely promising because of the tumor selectivity and ability to promote a multipronged anti-tumor effect.

CEOCFO: Would you explain what glycolysis?

Dr. Geschwind: It is the process of the metabolism or digestion of glucose, which is unique in cancer because unlike normal cells that generate energy through a mitochondrial process called the Krebs Cycle, cancer cells rely on the me-

tabolism of glucose to generate energy. What is interesting is that even though this process is much less effective than oxidative phosphorylation in normal cells, it can occur in less oxygenated areas, which is pervasive in the environment of cancers. It also does it so rapidly that it generates many more ATPs or more energy than it would if it was going through the normal cell process. That phenotype is maybe 120 fold elevated in cancer cells, so it is a natural way to selectively target cancer cells. This phenotype, known as the Warburg Effect, was discovered by the German scientist Otto Warburg three decades ago, and has been used for diagnostic purposes with imaging - specifically positron emission tomography (PET) imaging - for cancer detection. It is one of the most important phenotypes exhibited in cancer. It has never really been used for targeting and therapeu-

tic purposes, so we are taking advantage of the natural distinction between normal cells' energy requirement and energy generation and that of cancer cells.

CEO CFO: Where are you in the process of development today?

Dr. Geschwind: We have completed the chemistry, manufacturing and controls process, the toxicity studies in animals, we filed an IND, and the FDA accepted the IND, allowing us to proceed with the Phase One Study. This Phase I study is a key next step which will allow the company to determine the maximum tolerated dose, and confirm the clinical efficacy that has already been experienced in a variety of animal studies, tumor models and compassionate human cases. What we are doing now is trying to raise the remaining money to complete the study.

CEO CFO: Is the medical community in general interested paying attention, or is it still too early for them?

Dr. Geschwind: Yes, there is growing interest. At a conference last year in Boston, which was on tumor glycolysis and tumor metabolism, there was significant interest in this approach. However, it is still early because the concept is so new and people are resistant to change. It is definitely coming along though. More companies are evaluating this area, for instance, Agios is focused on tumor metabolism - not exactly what we are doing, but similar. It just went public with the doubling of the share price in one day, which is quite telling. I think there is a growing interest in the field. Although at the early stages of clinical development, the underlying research, proof of concept, and fundamentally accepted scientific principles upon which PreScience and the drug are based, positions the company in a relatively advanced position, and our Phase One program will be key for furthering belief in the technology.

CEO CFO: What is in the pipeline for you? You mentioned that your first area of focus is liver, but what might come next and how do you decide where to focus?

Dr. Geschwind: It is driven by the data that we have, and the data is actually incredibly good on the pancreas, so that will probably be our next area of interest. We also have promising pre-clinical data for breast cancer and are exploring use in the anti-bacterial setting.

CEO CFO: How are you reaching potential investors and how do you reach the medical community to keep them apprised of progress at PreScience Labs?

Dr. Geschwind: We are reaching investors through personal contacts and sophisticated research to look for people savvy in the field who have either invested in tumor metabolism before or are knowledgeable of this pathway. It is actually quite a large group of potential investors. And we are reaching the medical community through publications and lectures. I have been invited to give many lectures on the topic and it is a growing interest. We published a number of papers in the last five years, and there have been reviews in some of the medical oncology journals like Cancer, Anticancer Research and Drug Discovery Today, and others like that. Those are able to penetrate the oncology market and the oncology practitioners.

CEO CFO: At what point might you consider partnership or joint ventures?

Dr. Geschwind: We are considering it. I think it may be that we are a slight leap early for a true partnership with a larger drug company, but a smaller company would be very appropriate. We are looking into that as well and all options are open.

CEO CFO: Would you tell us a little bit about the business sense? How is your team equipped to not only handle

the medical side but the business side as well?

Dr. Geschwind: We are learning as we go. We have been very careful about spending every dollar for the development of the drug and having low superfluous expenditure. I am very proud of that - the money was given to me as a gift and I wanted to make sure that it was spent appropriately. We are learning, and I am especially. I am a physician scientist, and this is why six months ago when the situation became more difficult for me because we had to go raise money, I hired Jason Rifkin who you have been in touch with. He is very savvy and good, and he is the one who is physically acting on behalf of the company to raise the money. I think that a lot of the business side comes from him, but I have had to learn as well. I have been involved in this now for five years and it is a learning process.

CEO CFO: Why should people in the business and investment community pay attention to PreScience Labs?

Dr. Geschwind: It is the novelty of the approach and the potential use of a compound that targets all cancers, even lymphoma. I think that the sky is the limit and if we are able to show a benefit in one cancer, it is very likely that it is going to be applicable to all. It is the common, key signature, and unique feature of cancer cells. We are targeting the same way all cancer cells generate energy to survive. If you disrupt that process, there is no way out. I think this is an exciting approach because you can target all cancers and you can do it in different ways. You can do it systemically and you can do it in a local, regional fashion. I do not know that there are many opportunities like that, which is exciting.



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