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AxoGila (Luxembourg)

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AXOGLIA

Introduction

When Djalil Coowar was a young lad growing up on the picturesque beaches of Mauritius, he had no idea that one day he would help establish a biotech company in the world's richest country, Luxembourg. Djalil's company, AxoGlia Therapeutics, was actually conceived in a small University laboratory in France, but Djalil had the opportunity to move to Luxembourg, and implemented it in the Grand Duchy. Like most start-ups, AxoGlia Therapeutics was facing new challenges every day. Until now it had kept pace with the expectations of its founders and had grown beyond the initial vision that led to its creation, the prospects of a single drug candidate, to become a high productivity biopharmaceutical therapeutic molecule discovery engine with great strength and depth. Its progress and standing, so far, was arguably the result of hard work, focus and networks. However, the initiator and current Chief Scientific Officer (CSO) of AxoGlia, Djalil Coowar, realized that the company was approaching a critical point in its history. To achieve strong economic independence and wealth, the development and growth of the biotechnology industry had become a top priority for the Luxembourg Government as an alternative to the strong financial sector, and so the current issue of funding for the next stage of development for the company was important to external stakeholders also. With a promising range of IP patents that would help cure Multiple Sclerosis, Alzheimer's disease and other degenerative diseases of the central nervous system, Djalil was hoping that AxoGlia would be able to make a quantum leap and overcome the challenges facing his company. However, he must first address the issue of funding and evaluate the options available to raise the necessary funds to take the company to the next stage. Producing a winning Business Plan for the 'Creative Young Entrepreneur and Leader Award' might be one thing, but converting the business plan into a profit-generating enterprise of scale is quite another.

Setting the Background

Over the past decade, the biotechnology sector has created significant opportunities globally in the fields of medicine, pharmacy, material science, forensic science, food preparation,

agriculture, fuel production, industry, information technology, forestry, military, etc. with a compounded annual growth rate (CAGR) of 17.51 % in the last 10 years. Indeed, governments around the world are now embracing biotechnology as the next major technological driver of economic growth. But the truly expensive part of biotech is research as such work takes years and substantial investments in promising ideas before reaching a conclusion, which very often can be a dead end. Some desk research that Djalil undertook found that the market size of the US was almost 70 % of the world market which was largely attributable to the existence of large markets in the US for biotech products. He found it interesting to note that from 1998 to 2003, revenues of public US biotech companies increased by only 115% compared to 754% in Europe and 246% in Canada, which showed a net profit of \$390 million in 2003. Furthermore, he found that the worldwide biotechnology industry accounted for US\$540 billion in 2004, and had been estimated at US\$600 billion for 2005 and as much as US\$1 trillion for 2010.

The efforts and initiative Luxembourg government to nurture the biotech sector was intended to reinforce Luxembourg's role as a hub for venture capital funding, and to encourage the growth of research and development as well as commercial biotech activity in the Grand Duchy. In 2009, the government of Luxembourg unveiled a strategic partnership involving three world-leading US research institutions alongside some of the country's public research centres, as well as the University of Luxembourg. The partnership was focused on molecular diagnostics and was seen as the key to personalized medical treatment based on each individual's genetic and biological characteristics. It included the establishment in Luxembourg of a so-called 'biobank' that would collect and analyze biological material such as tissue and blood samples, and make data available to support work in areas such as cancer research. The government of the Grand Duchy of Luxembourg announced its commitment to invest up to €140 million over five years in three research projects on personalized medicine. One objective of the investment program, beyond its prime motivation of healthcare and research, was to trigger the development of a life sciences cluster in Luxembourg and to help diversify the country's economy.

Luxinnovation was established as the National Agency for Innovation and Research and the first-stop shop for research and innovation in Luxembourg. It was composed of six private and public-sector partners in Luxembourg including the Ministry of Economy and Foreign Trade, and the

Luxembourg Chamber of Commerce. Luxinnovation had the mission to educate, inform, encourage, advise and support companies (as well as public and private research organizations) and talents in order to stimulate their creativity, their Research, Development and Innovation (RDI) activities and the transfer of their RDI results. It contributed to increasing competitiveness and productivity, boosting the diversification and the creation of new activities and innovative companies, and enhancing the sustainable development of the economy and the well-being of people in Luxembourg. By implementing the policies, programmes and initiatives of the government and responding to the needs of its target groups, Luxinnovation facilitated the access to knowledge, funding, technology, equipment, infrastructure, networks, markets and business opportunities through a portfolio of coherent services. It intervened at national, interregional and international level to strengthen collaboration and networking. Luxinnovation also carried out awareness-raising activities in order to promote creativity and RDI and helped to improve the territorial attractiveness and the visibility of Luxembourgish economic actors and researchers, particularly abroad.

Focus of AxoGlia

AxoGlia was a spin-off from a research collaboration program between the University of Luxembourg and the French National Centre for Scientific Research (CNRS), and the company was based in Luxembourg so as to benefit from an advantageous taxation regime for its Intellectual Property (IP) revenues. AxoGlia Therapeutics was a biopharmaceutical company that specialised in the discovery and development of innovative drugs for the treatment of neurodegenerative and neuroinflammatory diseases such as Alzheimer's Disease (AD) and Multiple Sclerosis (MS). AxoGlia had built-up a portfolio of regenerative and anti-inflammatory molecules that facilitated Central Nervous System (CNS) repair. AxoGlia also developed natural and synthetic compounds that demonstrated disease modifying activity with a unique combination of anti-inflammatory and tissue regeneration properties that could be used in effectively curing AD, MS, as well as other CNS degenerative diseases. These diseases affected a widening number of individuals worldwide, and the opportunities for successful pharmaceutical treatments were significant. In the US, Japan, Germany, France, UK, Italy and Spain, the medication market for MS and AD was estimated at €4.7 billion and €2.1 billion respectively for 2009. However, no medication marketed or close to market approval had yet

demonstrated a curative (regenerative) effect for either pathology. AxoGlia's innovative compounds demonstrated a strong potential to become high value drug candidates in their own rights, given sufficient funding.

Entrepreneurial Beginning

Djalil was born in 1975 in Quatre-Bornes, Mauritius, in a family of two children, and was the younger of two brothers. He had modest beginnings growing up under the care of his mother who worked as a mid-wife, and his father, a laboratory technician/pharmacist. From early childhood he saw his father intrigued by chemical engineering and knew that this was what he wanted to do when he 'grew-up'. It was during these formative years that he heard so much about medicine and developed an interest to help cure people's diseases. In a country where 5 percent of the people get a high-school degree or Baccalaureate equivalent, he was among the few who chose to go abroad for higher education. This was not a common path taken by many Mauritians. Djalil decided to go to France as there was no University in Mauritius in his area of interest, which was chemical engineering (Mauritius was a small country with only one University). Djalil got excellent results in his examinations and earned a scholarship to study abroad. He did his Bachelor Degree and then went on to complete his Masters Degree in Chemistry at the University of Louis Pasteur, Strasbourg, France, followed by a PhD in Medicinal Chemistry. It was difficult for Djalil to have to move so far from his family for his education, but his family paid for his education and were very proud of him for becoming the first member of the family to complete a Doctorate. Djalil had furthered his interest in research and completed an internship at the laboratory in Strasbourg University.

There were no entrepreneurs in his family and he never dreamed of being a 'businessman', he was simply passionate about chemical engineering and curing diseases. Djalil personified the thinking of two classical entrepreneurship theorists, the French economist Jean Baptiste Say, and the Austrian Professor at University of Harvard, Joseph Schumpeter. Jean Baptiste Say distinguished three economic activities of entrepreneurs: research – generating knowledge; entrepreneurship – applying this knowledge to useful products by combining the means of production in new ways; and manufacturing. Meanwhile Joseph Schumpeter argued that innovation was the critical function for the entrepreneur. Research and innovation were the two

strong drivers for Djalil in his journey leading to an entrepreneurial venture. It was at the University of Strasbourg that Djalil met Doctor Bang Luu, who was working on an interesting project of regenerative medicine using natural products to produce neurostem cells that could be used for the regeneration brain cells. In simple terms, the project had a goal of protecting the brain from aging. Inspired by Doctor Luu's work, Djalil wanted to go further and develop new and synthetic compounds derived from natural ones, and consequently completed his PhD on this field (Doctor Luu was his thesis supervisor). Djalil's doctoral work was revolutionary and represented a breakthrough in the field. As opposed to just developing new compounds with regenerative properties, he was able to develop ones that combined both anti-inflammatory and regenerative properties. It was during his time at the University that Djalil built his networks and laid the foundation for the establishment of AxoGlia. Djalil's work was so innovative that he was offered space in the City of Strasbourg's incubator centre to further his work and to entice him to think about creating a company. Djalil and his project were, in essence, incubated even though his future company had not yet been set-up. In the incubator, Djalil had his first experiences as a 'future entrepreneur'. He also started 'learning the ropes' of how to establish and develop a company. During the time period between December 2003 and November 2005, Djalil continued his research and continued to make progress on the innovation of his compounds. However, he was hit by financial problems, as is similar in many other biotech startups (technically he was still in project mode and not incorporated), where during the initial years there is only an outflow of cash with no sales or revenues. Eventually, the initial sources of (enticing) funds started to dry-up.

An Opportunity Seized

During the course of a collaborative project between the University of Strasbourg and the University of Luxembourg, Djalil discussed his project with Professor Paul Heuschling, Dean of Faculty of Sciences at the University of Luxembourg. Raising seed capital from the French Government and / or VCs was extremely problematic, despite Djalil's efforts and the excellent promise of his project and incubation. Djalil was faced with the dilemma of either transferring his technology to someone else for development, or to find a solution to create a company to develop the technology and commercialise its products. As one thing led to another, an opportunity arose where Doctor Luu, Professor Paul Heuschling and Djalil, met with

Luxinnovation, and it resulted in an opportunity for Djalil and his project to move to Luxembourg, start it up, and obtain subsidies from the Ministry of Economy. Among the conditions for the subsidies, Djalil and his partners had to register, create, locate and operate a start-up biotech company in Luxembourg. Djalil seized the opportunity and moved to Luxembourg which was just across the border from Strasbourg.

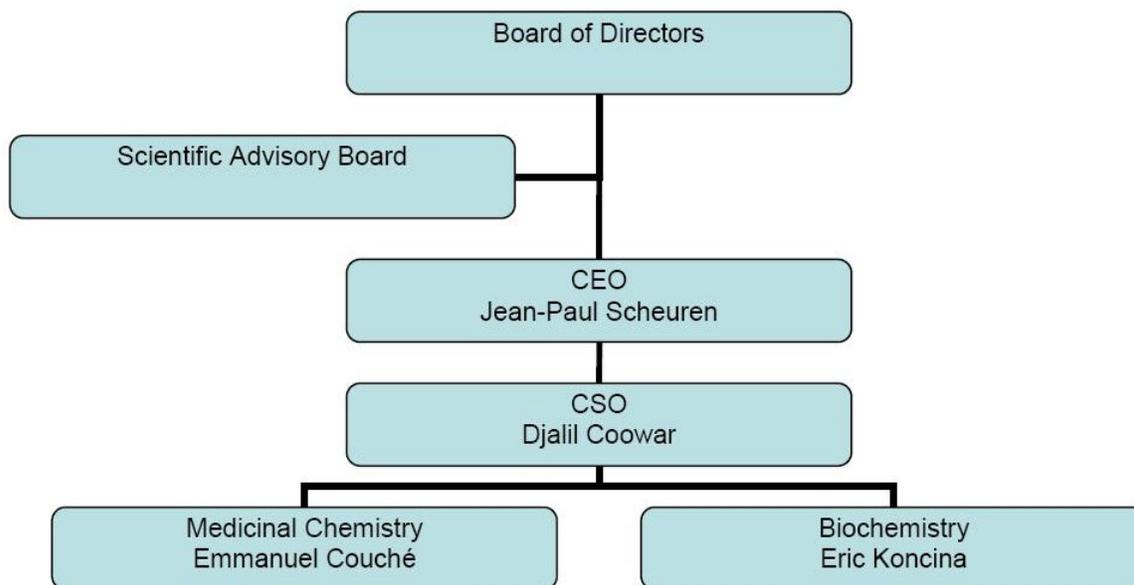
AxoGlia was launched on the basis of research cooperation between the teams of Prof. Paul Heuschling in neurobiology and Dr Bang Luu in organic chemistry. The company was founded in February 2006 and started operations in November 2006 (see Table One for funding details). Djalil held a 10 percent stake in the company’s start-up capital, and a majority of equal shares was held between Prof. Heuschling and Dr. Luu. AxoGlia was housed in the University of Luxembourg and was provided with a well-equipped modern laboratory (this was equivalent to soft funding). From the outset, Djalil knew that he could not be the CEO and still concentrate on his research. A decision was taken between the three founders to bring in a CEO, Jean-Paul Scheuren, who would run the company and help raise capital while Djalil pursued his research. AxoGlia was founded as a private limited company, with major decisions to be taken by a Board. The first breakthrough for the company came in mid-2007 in the form of €1 million of seed financing. When the first €250,000 came from private investors, it raised the hopes of the founders that this could be the turning point for AxoGlia. It was at this time that Djalil was designated as the Chief Scientific Officer and recognized as one of the first employees.

Table One: Funding

€1,095,000 of Funding has been Raised to date, including €53,000 of Start-Up Capital:
- € 795,000 of State Funding, comprising:
- €545,000 of subsidies from the Ministry of the Economy;
- €250,000 from the SNCI through the CRP-UL facility.
This is a loan facility with subsidised interest rates and a 10 year maturity.
€ 300,000 from 20 private investors, who have contributed between €3,000 and €50,000 each.

AxoGlia’s founding team was comprised of Professor Paul Heuschling, expert in Neurobiology, Doctor Bang Luu, expert in Organic chemistry (both were active members of AxoGlia’s Board of Directors and Scientific Advisory Board), Jean-Paul Scheuren, a seasoned business developer and manager with prior entrepreneurial and fundraising experience, and Djalil Coowar, who was instrumental in the development of the ‘know-how’ and establishment of AxoGlia Therapeutics SA. AxoGlia’s Board of Directors combined scientific and managerial competencies, including a former vice-president of Lundbeck A/S (Denmark) who had expertise in business development, licensing and market access. The Board was focused on driving AxoGlia towards a leadership position in terms of innovation and value creation in its target markets. AxoGlia’s management team combined the scientific competence and know-how of the CSO, Djalil Coowar, with the management experience of the CEO, Jean-Paul Scheuren. A strong Scientific Advisory Board advised on technology and methodology needed to develop successful products.

Figure One: Organisational Chart of AxoGlia



Source: AxoGlia

The members of the Board of Directors were Jean-Paul Scheuren (CEO), Djalil Coowar (CSO), Paul Heuschling (Dean of the Science Faculty of the University of Luxembourg), Bang Luu, (former CNRS research director at the University of Strasbourg), Eric Tschirhart (Administrative Director of the University of Luxembourg), Mondher Toumi (former VP of H. Lundbeck A/S,

consultant at Creativ Ceutical), Joel Schons (liberal profession), Patrick Moes (liberal profession), and Jos Bourg (liberal profession). The members of the Scientific Advisory Board were: Paul Heuschling, Bang Luu, Marcel Hibert, Jacques Mallet and Eric Tschirhart. Meanwhile, the company employed four people and the projected number of employees was expected to increase over the coming years (see Table Two below).

Table Two: Headcount Forecast 2009-2012 for AxoGlia

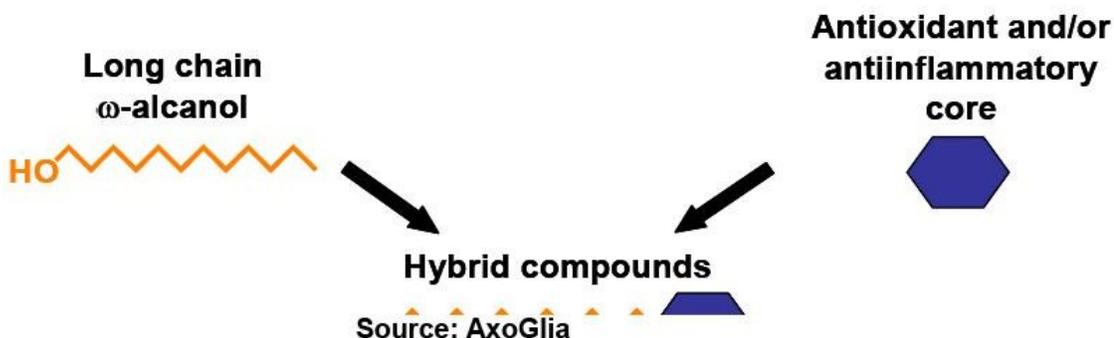
Axoglia Headcount		2009	2010	2011	2012
CEO		1	1	1	1
CSO		1	1	1	1
Biochemistry	Executive	1	1	2	2
	Technical Staff		1	1	2
Pharmacolgy	Executive		1	1	1
	Technical Staff				
Medical Chemistry	Executive	2	2	2	3
	Technical Staff	1	2	2	2
Administration	Marketing and sales		1	1	1
Total Headcount		6	10	11	13

Source: AxoGlia

The Product

The corner stone of AxoGlia’s product development history was a family of innovative chemical compounds derived from the combination of a long chain ω -alcanol and an antioxidant core (see Figure Two below).

Figure Two: AxoGlia’s Molecule Synthesis Process



One of these molecules, TFA12 (AGT0048), had demonstrated very promising neurotrophic properties, enhancing the survival and maturation of nervous cells. In addition, this molecule demonstrated anti-inflammatory effects by modulating the activation of glial cells involved in the inflammatory process. TFA12 was the first molecule on which AxoGlia conducted research for multiple sclerosis. In addition, further drug candidates from the same family of compounds were being developed and tested in parallel, should TFA12 not perform as expected after further clinical evaluation. The preclinical test results in animal models for MS were very positive. Treatment of MS with TFA12 had led to a remission of the progressive motor deficiencies in mice. These results indicated a high potential for TFA12 in the treatment of neurodegenerative and inflammatory diseases of the Central Nervous System. Multiple Sclerosis and Alzheimer's Disease were the indications targeted in priority by AxoGlia, although others may also be pursued at a later stage as the properties of the compound give it a multi-use potential. AxoGlia intended to develop its current drug candidates to Phase II for Multiple Sclerosis and then license them out to major pharmaceutical partners. Phase II was typically the stage of development at which the value creation potential was optimised for emerging pharmaceutical companies wanting to license out their drug candidates.

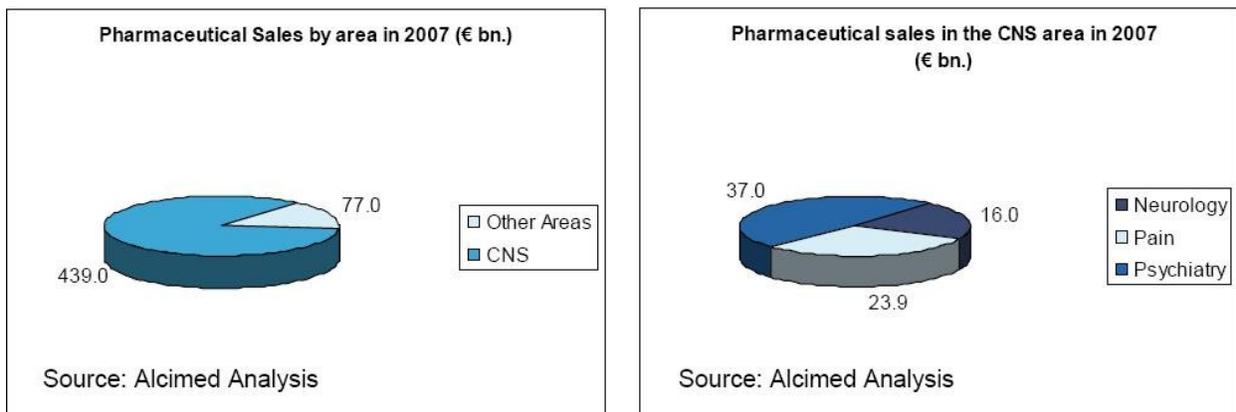
AxoGlia acquired an exclusive license for TFA12 (AGT0048) in April 2005 which was covered by the French Patent FR2860233. The Freedom to Operate study performed in 2004 had raised no substantial objections to the technological application of the patent for the treatment of neurodegenerative diseases. The international extension of the patent was completed in 2006. Two additional patents for other molecule types were filed in April 2008 and May 2009, demonstrating AxoGlia's ability to create valuable intellectual property. AxoGlia expected its patent portfolio to reach a dozen patents by 2012, due to its on-going efforts to discover and select promising new drug candidates. AxoGlia focused on discovering and developing new compounds through superior scientific know-how in selected areas of expertise to become promising new drug candidates. In the medium term, the company aimed to bring at least two compounds to preclinical and clinical stages every year. The feasibility of this goal was supported by the proven potential of the families of compounds researched, as well as the highly efficient compound selection processes developed by the company. The company's priority at this time was to continue targeting neurodegenerative diseases as the principal application area.

At a later stage, AxoGlia would consider the development of products for alternative areas where the proven properties of its compounds could prove useful. Anti-ageing and cosmetic products were obvious alternative applications to target given the tissue regeneration properties of the company's compounds. This further exploitation of its intellectual property could be achieved through in-house development work or through collaborations with partners depending on relevant competencies and commercial priorities. AxoGlia was progressing with the clinical development of TFA12 (AGT0048) which had demonstrated regenerative effects on neural cells for multiple sclerosis. The goal was to develop the compound to a stage where out-licensing terms were optimised for the company.

Competitors and Market Analysis

The CNS market represented 15 percent of worldwide pharmaceutical sales across all therapeutic areas in 2007. Within the CNS market, the Neurology area represented €16 billion of sales or 21 percent of CNS sales. Neurology was the fastest growing CNS area with 12 percent growth in 2007. There were no therapies or drugs that treated and cured the cause of MS and AD (i.e. the loss or neurotransmitter cells); existing therapies and drugs treated the effects and symptoms that resulted from the loss of the neurotransmitter cells and tried to compensate their absence and allow patients to function with some normality. However, there were no treatments that regenerated the neurotransmitter cells that would replace the dead or damaged ones.

Figure Three: Pharmaceutical Sales

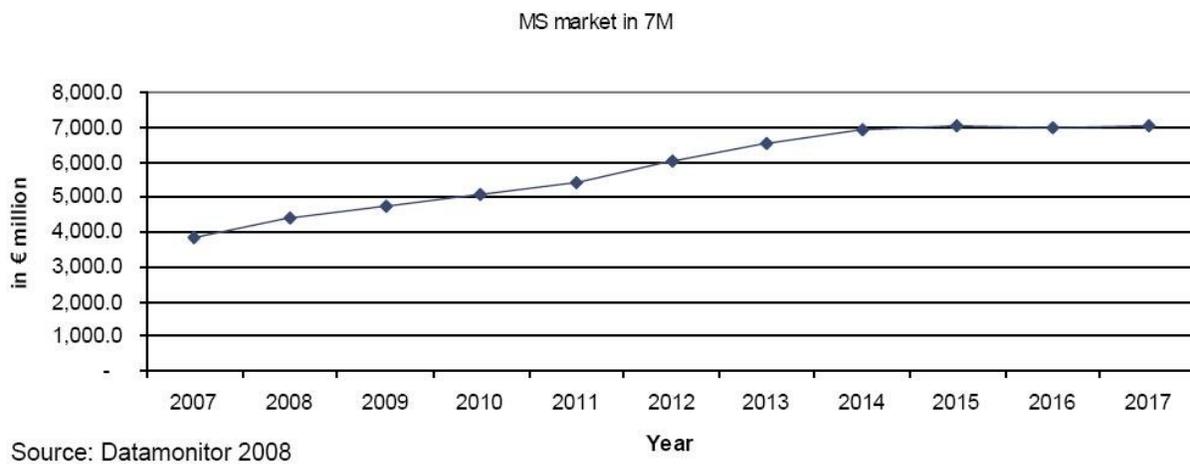


Currently AxoGlia targeted the market for neurodegenerative diseases with two main indications: Multiple Sclerosis and Alzheimer’s Disease. The medication markets for both were growing steadily and were expected to continue expanding in the future.

Multiple Sclerosis

Research by the company indicated that Multiple Sclerosis (MS) affected an estimated 2.5 million people worldwide. The pharmaceutical market for MS was estimated to be €4.7 billion in the seven major markets internationally (US, Japan, Germany, France, UK, Italy and Spain) in 2009, with 20 percent growth in 2008. As a rough rule of thumb, an estimate for the global market opportunity could be calculated as twice the market size for the above seven countries.

Figure Four: Growth of MS in the Seven Main Countries

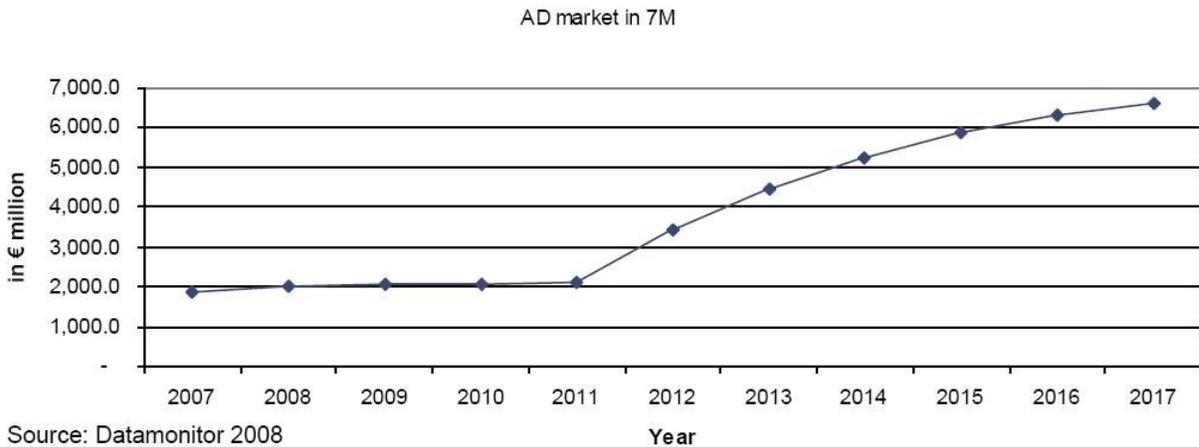


Alzheimer’s Disease

Alzheimer’s Disease (AD) was a condition associated with age and additional research undertaken by the company indicated that the global population with AD was continuing to grow and so also was the market for relevant pharmaceuticals. The pharmaceutical market for AD was estimated to be €2.1 billion in the seven main countries in 2009, with 5 percent growth in 2008. Again, as a rough rule of thumb, an estimate for the global market opportunity could be calculated as twice the market size of the seven main countries. In developed countries, 10 percent of people over 65 and 50 percent of people over 85 were estimated to be affected by Alzheimer’s Disease. With populations ageing worldwide due to longer life expectancy, the

prevalence of the disease was expected to increase dramatically over the next decades and so the opportunity for AxoGlia in this market for potentially enormous as can be seen from the projected numbers in Figure Five

Figure Five: Expected Market Growth in Alzheimer’s Disease



Preparation for Investment Proposal - Funding High-Value Creation

Since its establishment, AxoGlia had won several prizes in Business Innovation and Venture Capital competitions. In 2005, AxoGlia won 4th prize in the Luxembourg ‘1,2,3 Go Contest’. In 2009, it was the semi-final winner of the Eurecan European Venture Contest, Luxembourg, in the Life Sciences category, and qualified for the final in Barcelona. It also received the Best Luxembourg Company Strategy Award. In 2010, it was winner of the Creative Young Entrepreneur Luxembourg award organized by Junior Chamber International. But in order to gain from the publicity of these awards, maximise the value of its intellectual property, and develop its lead compound or its main back-up to Phase IIa by 2012, AxoGlia was seeking financing of €5.5 million for 2010 and 2011 as the first tranche of a €12 million investment program to develop the company until its lead compound reached Phase II. The funds would be used to continue the development of the leading drug candidates, support the continued generation of new patentable drug candidates to fill the pipeline, and for the recruitment of selected key people for the company’s next stage of growth.

Being the first biotech company in Luxembourg, AxoGlia had found it difficult to explain to governmental administration that a biotech company works differently from other companies that normally get established in the country. There had been no sales to date and the company was still in need of funding from Venture Capitalists who understood that a return on investment in the biotech industry was usually received after a significantly long period of time, if at all. Since the sector was relatively new in Luxembourg, there were not a lot of skilled people who were knowledgeable about this industry, although recently Luxinnovation had hired a new person for the biotech cluster who was quite knowledgeable about biotech industry. However, if AxoGlia was unable to raise the required capital, the company would have to wind up next year. The market in Luxembourg was missing a life sciences VC that could help both the biotech industry and AxoGlia.

Looking to the Future

It had now become a critical time for the AxoGlia and Djalil's personal motivation had evolved from scientific research to the commercial sector of this industry:

“If I had to do it over again, in terms of research, I would have taken more decisions based on commercial implications, too much of my time in research has been spent on things that are not necessary. Although I have no thought of quitting, this is a good project, and if we receive the right funding we can obtain significant sales.”

Djalil felt that as the CSO he must do more to help with drug development and sales. He brought his wife, Fetzler Ludivine, into the company as PhD student in 2009, and he had invested substantially personal stakes in the company. AxoGlia had hired external consultants to help raise funds from other countries in order to meet the challenges of the future and to take AxoGlia forward. They saw that AxoGlia had targeted a specific niche in the biotech industry (brain diseases), and that it was the first company in the world to develop integrated anti-inflammatory and regenerative molecules for this specific purpose. With the next board meeting a month away, the consultants had asked him to come up with his list of options concerning the future of the company. As Djalil contemplated the possible options and what strategy should they adopt in order to motivate the VCs, Djalil knew that AxoGlia was at the crossroads, and that urgent VC funding was necessary to enable the firm to continue.

Appendix One

Biographies of selected members of the Board of Directors

Jean-Paul Scheuren is the CEO and co-founder of AxoGlia Therapeutics SA. He has more than 15 years experience in finance and management. He has been the director of several companies and has served as CEO of AxoGlia Therapeutics since its inception. He has successfully raised €1.1 million of private funding and government subsidies, up to 2007.

Djalil Coowar is the CSO and co-founder of AxoGlia Therapeutics SA. He holds a PhD in medicinal chemistry from University Louis Pasteur (Strasbourg, France). He conducted his research in the design and development of small synthetic molecules with anti-inflammatory properties and acting as inducers of neural stem cell differentiation. He developed strong expertise in cell regeneration and neurogenesis. He is co-author of numerous patents and publications on the development of such molecules. Since his appointment as CSO of AxoGlia Therapeutics SA, he has managed the preclinical development of several lead compounds.

Paul Heuschling is co-founder of AxoGlia Therapeutics SA and Professor of Biology (cell and animal biology) at the University of Luxembourg since 2001. His research addresses the signal transduction pathways controlling the terminal differentiation of central nervous system, glial cells, as well as central and peripheral immunocompetent cells under inflammatory conditions. Paul Heuschling has expertise in cell biology, molecular biology, protein chemistry and immunocytochemistry applied to glial cells. He is the reviewer for several major international neuroscience journals and member of the European Task Force for Brain Research.

Bang Luu is co-founder of AxoGlia Therapeutics SA and was director of research at the CNRS until April 2007 before retiring. His research, at the Laboratoire de Chimie Organique des Substances Naturelles at the University Louis Pasteur of Strasbourg, was addressing the study of the biological activities of natural products. Having demonstrated the antitumor properties of medicinal mushrooms and certain insects in the Chinese Pharmacopoeia, he then devoted his work to studying compounds from Chinese medicinal plants having neurotrophic activities and affecting neurogenesis. Author of approximately 20 international patents including more than ten

on neurotrophic activities, he participated in the creation of two start-up companies in Strasbourg (Médafor and EntoMed). He has also developed relationships with many academic and industrial partners in the Far East.

Mondher Toumi is president and founder of Creativ-Ceutical and a Professor at University Lyon I, department of decision sciences and health policies where he is head of the Chair of market access. His field of expertise is business development, licensing, M&A, market access, pricing and reimbursement and competitive intelligence. Mondher Toumi is a M.D. by training, has a M.Sc. in Biological Sciences and a Ph.D. in Economic Sciences. He worked in the laboratory of pharmacology at the University of Marseille, where he joined the Public Health Department. In 1995 he started a career in R&D in the pharmaceutical industry and in 2000 was appointed Vice President of Lundbeck responsible for economics, pricing, market access, epidemiology, risk management and competitive intelligence. He was a member of the corporate management board at Lundbeck and was involved in several licensing and M&A projects. In 2008, he left Lundbeck to create Creativ-Ceutical, a consulting company dedicated to the life sciences industry. In 2009, he joined the board of AxoGlia Therapeutics S.A.

Marcel Hibert is director of the Department for Pharmaco-Chemistry and Cell Communications, director of the French National Chemistry Library and associate director of the IFR85 at the CNRS. He is head of the Medicinal Chemistry laboratory at the University of Strasbourg since 1997. He graduated as an organic chemist in 1980 from Guy Solladié's laboratory at the University of Strasbourg. After a post-doctorate in medicinal chemistry at C.G. Wermuth's laboratory, he joined the pharmaceutical industry and worked there for 16 years. He contributed to several research projects, mainly in the field of serotonin, leading to clinical candidates and to one drug on the market (Anzemet® by Sanofi-Aventis). Marcel also published, in 1991, the first detailed 3D models of G protein coupled receptors bound to their neurotransmitters (including dopamine, adrenaline, serotonin and vasopressin). With colleagues from the Illkirch Campus, he developed novel strategies and technical platforms in order to rationalize and accelerate the discovery of ligands acting on genomic targets. This contributed to the development of the Strasbourg Génopole 'from genes to drugs' and of national networks such as the Chimiothèque

Nationale. One more compound is currently in Phase 1 clinical trials for Alzheimer's disease (Minozac® by Neuromedix). He received the Silver Medal from the CNRS in 2006.

Jacques Mallet is Director of the Laboratory of Molecular Genetics of Neurotransmission of the CNRS, at the University Hospital Centre of the Pitié Salpêtrière (CHUPS) in Paris. Jacques Mallet graduated in physical organic chemistry at Harvard University. He created the Laboratory for Molecular Genetics for Neurotransmission and Neurodegenerative Processes (LGN) in 1980. This laboratory was responsible for the molecular cloning of the first enzymes of synthesis of the neuro-transmitters and the receptors of the nervous system. The laboratory is one of the pioneers in the development of gene therapy for the nervous system. Jacques Mallet is investigating the molecular and genetic mechanisms of psychiatric and neurodegenerative diseases.

Eric Tschirhart is professor for physiology at the University of Luxembourg. His areas of research include bronchial hyperreactivity delineation, endothelin receptor antagonist development at a US pharmaceutical research center for cardiovascular and pulmonary targets. As a group leader in the Centre de Recherche Public-Santé in Luxembourg, he focuses on elucidating the control of superoxide anion secretion by calcium ion fluxes in human immune cells. This endeavor spurred the technology of fluorescence measurement of biological and biochemical processes in live cells in vitro which allows a profound insight of cellular events and dynamics. Eric Tschirhart is acting Administrative Director of the University of Luxembourg since late 2007, Eric Tschirhart is also a member of the scientific advisory committee of the European Centre for the Validation of Alternative Methods (ECVAM) – Joint Research Center of the European Commission, a field editor for "Immunopharmacology & Inflammation" for *Fundamental & Clinical Pharmacology* and recurrent reviewer for international journals in physiology and pharmacology (including *Fund. Clin. Pharmacol.*, *Eur. J. Pharmacol.*, *Med. Chem. online*). Eric Tschirhart holds a PhD in Pharmacology & Physiology from the Université Louis Pasteur (1988) and a Master in Business Administration and Management from the Université Nancy II (1997).

**Appendix Two
Income Statement**

AxoGlia Therapeutics S.A. - Historical Income Statement

in €	FY06	FY07	FY08
Turnover	6,000.0	-	142,327.3
Variation in inventory	-	44,500.0	(40,750.0)
Other income	-	2,832.3	3,693.7
Total income	6,000.0	47,332.3	105,271.0
Operating charges	-	(44,500.0)	(173,761.1)
Staff costs	(9,478.0)	(83,877.0)	(176,760.4)
Other operating charges	(1,882.7)	(17,321.3)	(29,251.7)
Total operating costs	(11,360.6)	(145,698.3)	(379,773.3)
Depreciation & Amortisation	(761.4)	(10,904.0)	(11,165.6)
Financial charges	(219.3)	(281.2)	(1,589.7)
Profit for the year	(6,341.3)	(109,551.2)	(287,257.6)

Source: AxoGlia