



The Importance of Intellectual Property in Life Science Ventures and How It Impacts Capital Raising

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By: *N. Mitchell*

The life sciences sector is one of the fastest growing and most important industries in the global economy. “Life sciences refer to the scientific study of the living world as a whole. It’s a new synthesis of several traditional disciplines, including biology, zoology and botany with newer, more specialised areas of study, such as biosciences, biochemistry, biotechnology, bio-informatics, genetics, pharmaceutical studies, food science and technology and environmental science”ⁱ. According to the [PWC Moneytree Venture Capital Survey](#), the life sciences sector, composed of biotechnology and medical devices companies, attracted 28% of all venture capital investment in 2005 – \$6 billion in 608 dealsⁱⁱ.

Investing in life sciences companies is fraught with risks but also offers the potential for spectacular returns. Dr. Lorenzo Pellegrini, Principal of [Care Capital](#), which invests in life science companies, with a particular focus on later stage pharmaceutical and biotechnology companies, explains the pros and cons of investing in life sciences. “The investment life cycle is very long and is dictated by the regulatory approval process. Volatility is very high and dictated by achieving certain clinical milestones and endpoints. However, the inflow and outflow of capital are more stable than in technology venture investments – this is due to the high barriers to enter as you need specific, hard-to-find expertise to be able to understand pharmaceutical development (combination of science, medicine and business knowledge). This ultimately protects returns.”

The life science companies that have the greatest prospects for attracting funding from venture capitalists are those with high quality management, a disruptive technology or product with a sustainable competitive advantage that meets a large, unmet market need, and a solid intellectual property strategy.

A strong intellectual property portfolio is of enormous value to life science companies since much of their value is derived from the intellectual property rights, particularly patents, they possess. “Intellectual property is defined as the patents, trademarks, copyrights and trade secrets owned by a corporation or an individual. It is an asset legally protected on a national basis. As a protected asset, intellectual property has an economic value, similar to real and personal property. It can be sold, licensed, exchanged or gifted. Its owners can prevent its unauthorised use or sale.”ⁱⁱⁱ

Patents are commonly seen as the most important intellectual property (“IP”) right for life science companies. “A patent for an invention is the grant of a property right to the inventor. Generally, the term of a new patent is 20 years from the date on which the application for the patent was filed in the United States. The right conferred by the patent grant is, ‘the right to exclude others from making, using, offering for sale, or selling’ the invention in the United States or ‘importing’ the invention into the United States.”^{iv}

This ‘right to exclude’ others has traditionally been used by life science companies to erect a significant barrier of entry to its competitors into the marketplace. But it is also a way of

developing valuable strategic alliances and joint ventures, as the intellectual property protection can increase the value of the technology or products and improve a company's ability to attract investment and partners.

Life science companies can strategically use their intellectual property assets to generate revenue in a number of different ways including licensing their IP and developing joint ventures and strategic alliances. Venture capitalists place a high value on strategic alliances and joint ventures as they provide an opportunity to demonstrate the validity of the science and its commercial potential.

Venture capitalists will conduct an intellectual property due diligence audit to evaluate a company's intellectual property portfolio, before making a decision about whether to invest. The audit will involve an examination of the nature, scope and strength of the IP held by the company, as well as an assessment of any potential infringement issues, by conducting a freedom to operate analysis. A freedom to operate analysis is particularly important when a company is looking to introduce a new technology or product to the market. "Freedom to operate" means "being able to commercialise a product without infringing the intellectual property rights of others."^v. A company needs to identify any third party patents early on that may have claims to its proposed technologies or products that would impact its ability to bring them to the marketplace. An infringement could be disastrous, resulting in expensive patent litigation and disruption to a company's operations.

The cornerstone of a life science company is its intellectual property. A life science company that cannot demonstrate the ability to bring its technology or products to market will find it very difficult to raise venture capital. A strong IP strategy leads to higher returns for venture capitalists and so they look for companies that have a solid IP strategy focused on building a high value IP portfolio, and that can leverage those IP assets effectively into new revenue streams and markets.

ⁱ S. Bizzozero 'Life sciences are alive and kicking' 06/25/02, *The Guardian* newspaper

ⁱⁱ PWC Moneytree Venture Capital Survey Full Year and Q4 2005 results

ⁱⁱⁱ Intellectual property: The driving force for growth and funding - Judith E Schneider. *Journal of Commercial Biotechnology* London:Spring 2002. Vol. 8, Iss. 4, p. 320-324 (5 pp.)

^{iv} Patent section - United States Patent and Trademark Office

^v New Product Launch – Evaluating your freedom to operate –WIPO – E. Burrone