



One line pitch:

"Kallistem's objectives are to anticipate and treat male infertility by innovative cell culture production methods".

Market Analysis:

Kallistem addresses two types of market through its technology for male infertility anticipation and treatment: - industrial companies who are looking for a technology licence to complete their cell therapy or male infertility treatment. - public or private reproduction centers where patients are treated. The total market (paediatric and adult) is estimated at 2.525 billion € for a minimum of 155 000 existing patients today worldwide with an annual renewal of 750 Million € for 50 000 patients worldwide. In addition Kallistem can perform mechanistic studies for testicular toxicology.

Business Proposition:

The technology enables the male germ cells to become fully matured spermatozoa in vitro, from patient biopsies. The biopsies are frozen so they can be shipped to a GMP (good manufacturing practice) cell culture center. The culture's maturation process lasts for 72 days. The spermatozoa are then cryopreserved and stored in a cell banking center. Kallistem provides the kit for the biopsies and the cell culture media. If the technology is sold, the bioreactor (consumable) necessary for each sample is included. Alternatively Kallistem can perform the culture's maturation as a service provider.

Competitive Advantage:

The technology is robust and requires consumables which are already validated. It is also considered as a process of Reproductive Biology with a medical device for the bioreactor. The regulatory agencies require the full maturation of male germ cells and this is the only technology currently available to achieve this crucial step. The competitors have worked on germ cells production with somatic rederivation and have not worked on improving the lifespan of the culture to reach a complete spermatozoa with a production compatible with GMP expectations.

Investment Attractiveness:

Preclinical studies will bring an increase of the company's worth and can be achieved in a reasonable period of time with a limited amount of cash. Commercialisation delays are short as this technology is classified as a medical device and a Reproductive Biology process. This the company's first fundraising campaign as up to now the company was being funded by contract service. The project's societal impact and the market trend around fertility preservation and restoration is important. Kallistem is working with academic, institutional and clinical partners.

IP Situation:

Kallistem's copyright protection strategy has involved the acquisition of exclusive know-how and patent licenses from the UCBL as well as filing for an Artistem® patent in Europe, in December 2013 (Lavoix firm in Lyon). The Artistem® patent was filed by Kallistem in joint ownership with the INRA, the CNRS and the UCBL in December 2013 to cover the procedure for in vitro spermatogenesis. Moreover, Artistem® technology is directly dependent on a bioreactor for which the manufacturing procedure has been patented by Lyon's Claude Bernard University. Kallistem has the exclusive license for this for its spermatogenesis procedure. The development strategy of intellectual property rights will depend on the bioreactor's development and procedural improvements.

COMPANY PROFILE

- **Website:**
www.kallistem.com
- **Activity:** Biotech
- **Contact:**
ISABELLE Cuoc
isabelle.cuoc@kallistem.com
- **Location:**
ENS 46 allée d'Italie
69 007 LYON
France
- **Founded in:** 04/04/2012
- **Employees:** 6
- **Management:**
Cuoc Isabelle
President
Durand Philippe
General Director and VP
Sciences
- **Financial information (€):**
 - **Company stage:**
 - **Capital raised to date:**
 - **Monthly burn rate:**
50 000
 - **Capital seeking and date:**
3 Millions - 1 Million/year
- **Investors:**
- **Referred by:**
Yves Butruille Fondation
Université de Lyon