The Second Decade of Crop Biotechnology: Private Investments in Biotechnology



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Jorg Riesmeier, General Partner

Background on LSP

> 20 years of life sciences investing in Europe

> Invested in 46 companies and realized 23 IPO's / trade sales

> Eight Partners with finance, science and industry experience

Expanded into the US in 2006

Prime position in Europe and the US

 \succ Top quartile returns with realized multiple > 3.5x

Raised \$ 500 million from top tier investors in Europe and USA



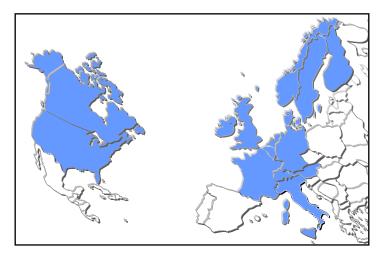
LSP's Reach

> US Office

- Located in Boston since 2006
- Invest along the agricultural based value chain
- Large US VC network
- A Value adding investor with deep domain expertise
- Lead-investor and Hands-on

European Offices

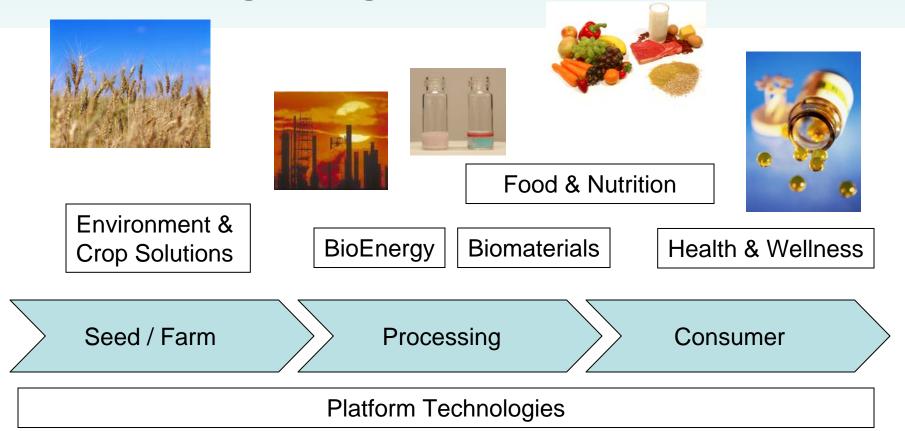
- LifeSciences investors with 17+ yrs experience
- Invest in early to late stage therapeutics and medical devices
- Offices in Amsterdam and Munich
- Top-five position in Europe,
- Lead investor and hands-on approach

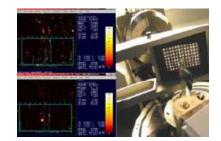


LISP Life Sciences Partners

LSP BIOVENTURES INC.

The BioVentures Strategy: Invest along the agricultural based value chain







LSP BIOVENTURES INC.

AgBioTech: Historical Perspective

➤ 1980's/1990's

- Crop protection companies buy seed companies and technology start-ups at high valuations
- New genomics, bioinformatics companies will usher new era
- Forecast growth from more crops, geographic expansion
- Output traits will lead next generation
- ▶ 1999 2007
 - Consolidation of crop protection industry $(12 \Rightarrow 6)$
 - Plant biotech divisions in turmoil after consolidation
 - Further consolidation through R&D alliances between Monsanto/BASF and Syngenta/Pioneer
 - Public perception problems for GMO in Europe continues
 - No real progress on output traits



Investor Perspective

- Few VC's know plant biotech space; even fewer are committed to invest in the space
- Early collaborations and license deals generate early cash-flow, but restrict the exit potential
- Time to exit tests the patience of VC's
- Few exit opportunities
 - IPO markets are not in favour of plant biotech companies
 - Limited number of potential M&A partners
 - Reactive acquisitions not necessary strategic
 - Auction situations are rare
 - Data points not trends (Verdia, Crop Design)
 - Timing is everything



Current Trends - Entrepreneurial Companies

Still need a viable business model

- Finance gap from discovery to royalties
- R&D alliances are important but don't guarantee financial security

- Some AgBio companies re-inventing themselves as biofuels / clean tech plays
 - Yield, nitrogen utilization become a biofuels/global warming traits
 - Opens up new strategic alliance options (e.g. BP)
 - VC money easy to raise; Much higher valuations
 - Still need a sustainable business model



Upcoming Innovations?

- Incremental yield improvements
 - New / better disease and weed control
 - Drought resistance
 - Nutrient efficiency
 - $_{\circ}$ and others

Output traits

- Biomaterials
- Nutritional quality
- Industrial raw materials

BioEnergy



BioEnergy: A Bubble or the Future for Crop Biotech

- In short-term the status of corn-to-ethanol and R&D timelines are not aligned.
- > Cellulosic ethanol may open mid-term opportunities.
- BioMaterials could be the winner
- Biomass improvements will be key



Thank You

Jorg Riesmeier (jriesmeier@lspvc.com)



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