

Opsona Therapeutics

“Sending the Right Signals to the Immune System”

**A small biotech’s perspective
in a big pharma marriage –
who wears the pants?**

Dr Mark Heffernan
CEO

OBJECTIVE

- **The parallels between marriage and Pharma-Biotech partnerships are astonishing**
- **Opsona's experiences in big pharma marriages**
- **Why do we get married?**
- **Finding that perfect partner:**
 - making yourself look attractive
 - Getting to the alter and consummating the agreement
- **Getting the perfect proposal**
- **Beyond that – Deborah is the expert in keeping the love alive**

OPSONA - ORIGINS

- **Spun out of Trinity College Dublin in 2004**
- **Scientific Founders:**
 - Prof Luke O'Neill – International KOL in innate immunity
 - Prof Dermot Kelleher – Head of School of Medicine
 - Prof Kingston Mills – Head of School of Biochem and Immunology
- **Over 20 employees:**
 - Dublin (Ireland)
 - Lausanne (Switzerland)

OPSONA - FOCUS

■ Innate immunity

■ OPN-305

■ mAb to TLR2

- A key driver in acute and chronic inflammatory damage
 - » Ischemia/Reperfusion damage (Transplantation, post-MI), MS, cancer metastasis

■ Inflammasome:

■ NCE to Nalp3

- Inhibition of IL-1b processing
 - » Gout, Diabetes, OA

■ Cancer and Infectious Diseases:

■ OpsoVac

- Significantly boosting the innate immune system to combat cancer and infection

OPSONA - MARRIAGES

- **Finance**

- Since 2005, Raised over €27m in private VC capital in two rounds:



Genentech, Inc.
In Business for Life.

Seroba Kernel.
Life Sciences



FOUNTAIN
Healthcare Partners



OPSONA - MARRIAGES

■ Licenses/Collaborations

- Three significant partnerships signed:

Wyeth

- Major TLR drug target and discovery collaboration
- 4 targets: mAbs and NCEs

CSL™

- A collaborative deal focused on the discovery of new vaccine adjuvants using Opsona's proprietary OpsoVac technology

sp Schering-Plough



- Opsona and Pharma industrial partners in new €10m centre for innate immunity and inflammation at TCD

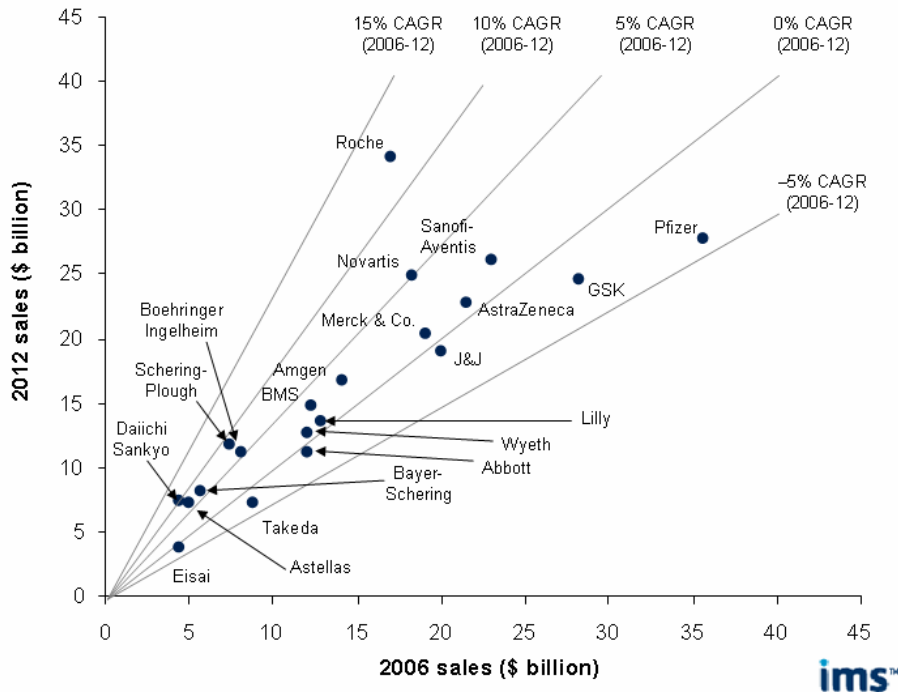
Opsona
Therapeutics

- **What does marriage involve?**
 - ***Commitment***
 - Staying motivated and enthused and committed to your partner
 - ***Love***
 - A passion for your product/project
 - Keep that flame alive
 - ***Trust***
 - The exclusivity or non-compete clause
 - ***Equality***
 - A marriage of equals? Is this possible in a small-biotech/big pharma partnership?
 - ***Fun***
 - Data/results/progress/team dynamic

BEFORE YOU GET MARRIED, REMEMBER.....

- **Partnerships are a significant commitment**
 - Emotionally
 - Legally
- **Smaller biotechs can often underestimate the time required to maintain and nurture the commitment, particularly if they have other programmes – resource planning is paramount**
- **Divorce isn't pretty and can be resource intensive. Therefore, go in with your eyes wide open**

INCREASE IN DEAL FLOW

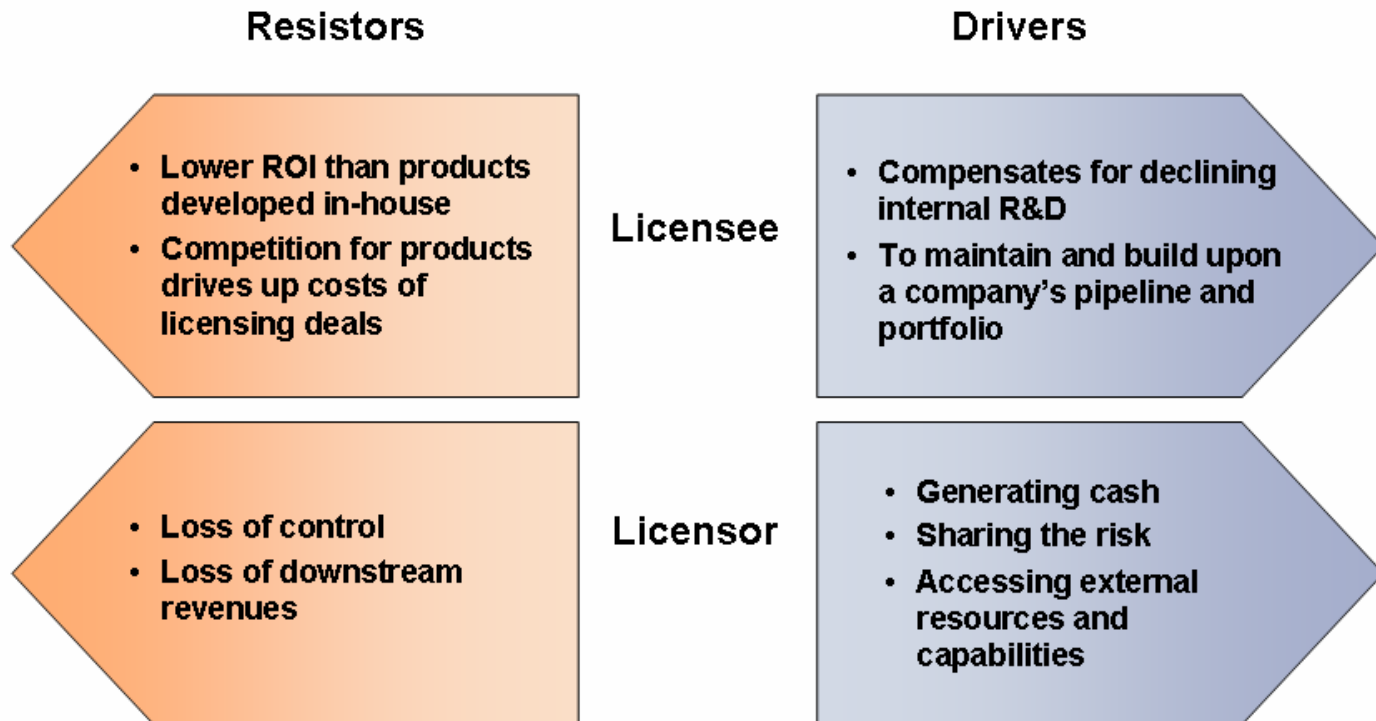


- Since 2002, the licensing dependence of the leading 20 companies increased from 17.5% of total ethical sales to 19.5% in 2004, and 28.2% in 2006. By **2012**, this figure is forecast to be **34.4%**.
- Patent expiration is fuelling much of this need
- The constant demand for licensing of late-stage product candidates has fueled the dramatic increase in deal costs, which have **risen from approximately \$50m in 2000 to more than \$400m in 2005**.
- Consequently, Pharma are now looking to in-license earlier-stage compounds, demonstrated by the **recent resurgence in preclinical and Phase I licensing deals** made by the top 20 pharmaceutical companies.

WHY DO WE GET MARRIED?

Biotech's strengths	Pharma's strengths
Novel products and technology	Financial strength
Differentiated products	Development, sales and marketing expertise
Entrepreneurial business culture	Global positioning and reputation
Creativity	Larger share of voice

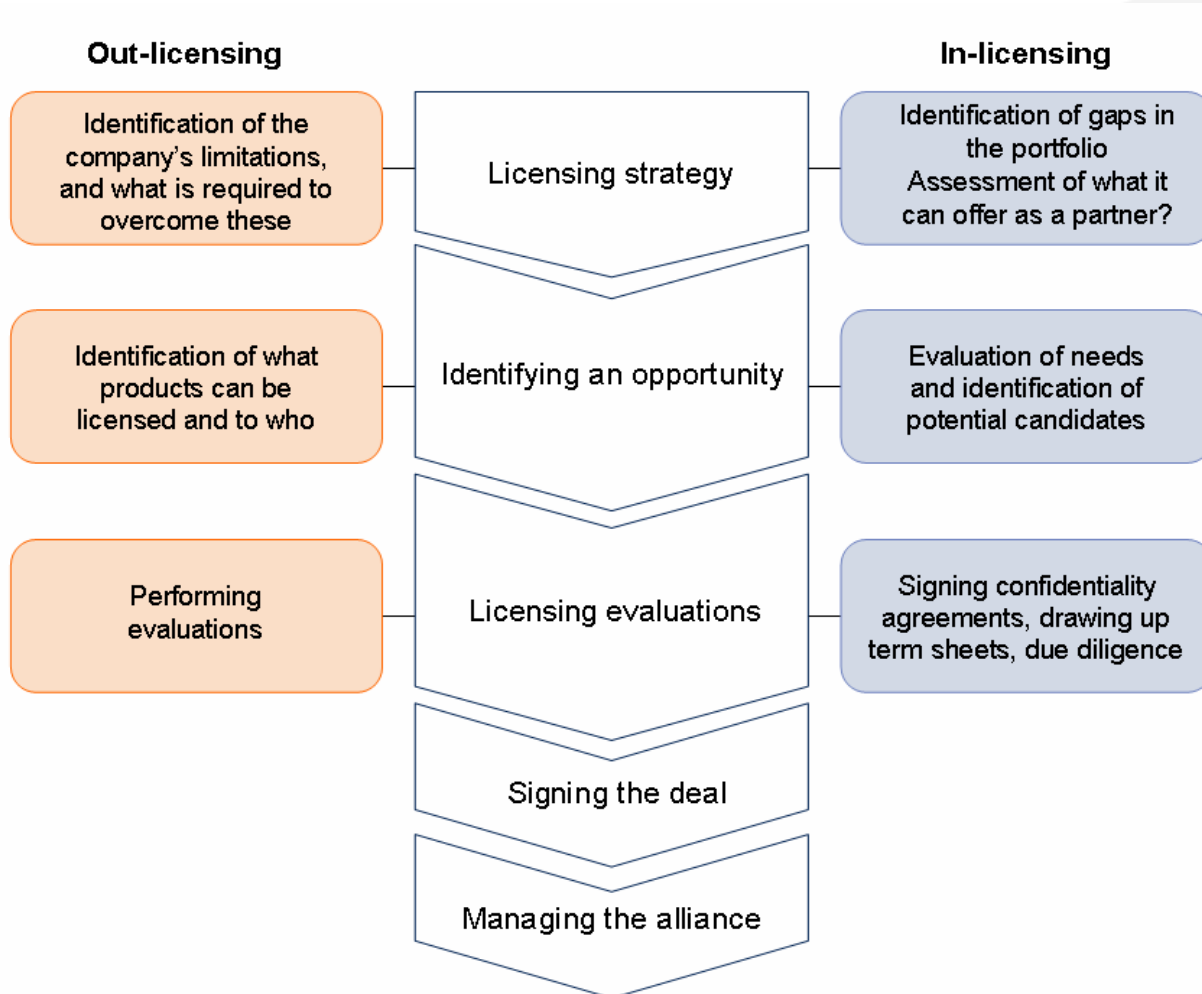
WHY DO WE GET MARRIED?



WHY DO WE GET MARRIED?

- **Marriage is important for private/early-stage biotechs, like Opsona:**
 - Investment or revenue (raised over €20m to date from corporate sources)
 - Validation of science/approach
 - Allows earlier stage programmes to create value faster
 - Experience
 - Establishing a relationship with a potential acquirer

THE PROCESS



- Licensing is a complex process, which must be navigated correctly in order to be successful. This is exemplified by the fact that more than **50% of all alliances are unsuccessful**, of which, 15% of failures are attributed to external factors, while **85% are due to poor alliance management**, and could be avoided.

FINDING THE PERFECT PARTNER



IDENTIFICATION OF THE PERFECT PARTNER

- **Therapeutic focus areas – look for gaps in pharma pipeline – bring a solution to fit the need**
- **What do you bring to the table?**
 - In our case, TLRs and innate immunity, hot area, early-stage and requirement for know-how and technology
- **Cultural fit**

IDENTIFICATION OF THE PERFECT PARTNER

- **Ensure you have your “make-up” done:**
 - Solid IP
 - Well thought through development plans
 - Realistic deal expectations
 - Know-how and potential to contribute further in the field
 - *Don't think that the make-up will cover major flaws.....rather use it to accentuate your assets*

HOW TO ATTRACT THAT PERFECT PARTNER



IDENTIFICATION OF THE PERFECT PARTNER

- **Flaunt the “sexy” scientific factor – identify a scientific champion**
- **Be quick, flexible and have realistic expectations (don't over value yourself)**

HOW TO ATTRACT THAT PERFECT PARTNER

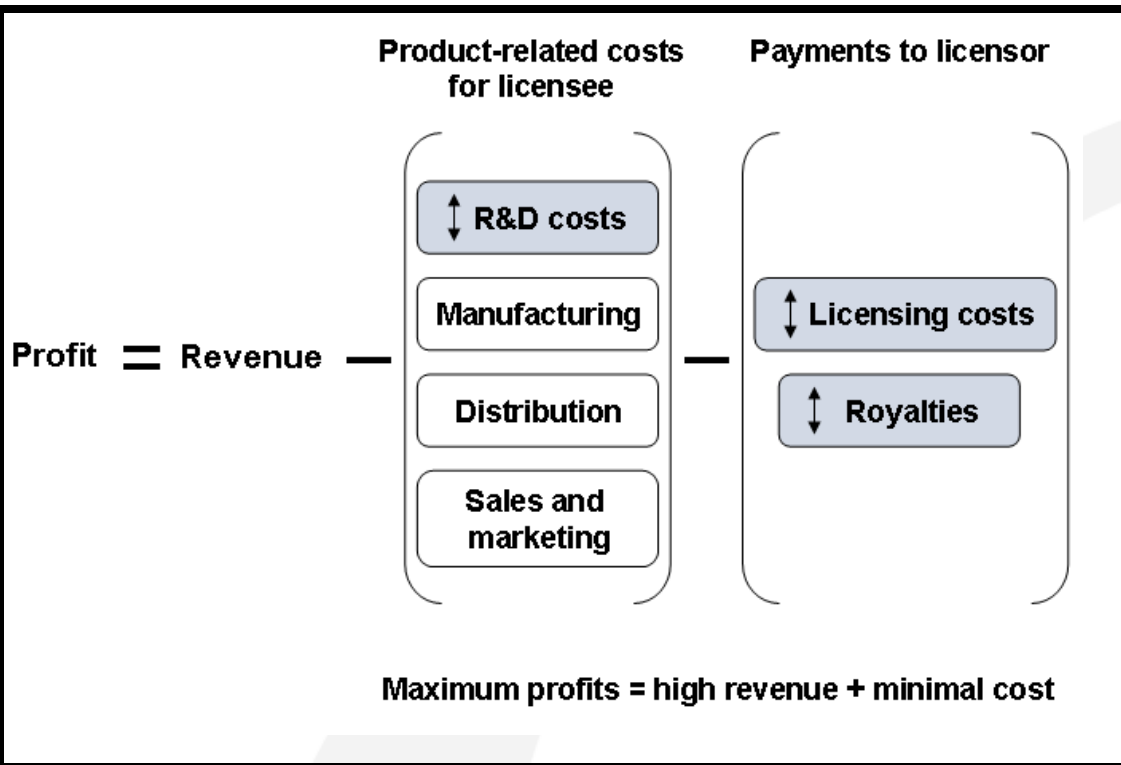
- **Solid science**
- **KOLs – involvement or endorsement**
- **Persistence and patience**
 - Decision making in a large organisation can be slow – be persistent (not aggressive)
- **Be organised – have everything available and be transparent**
 - E-datarooms are a great investment

GETTING THAT PERFECT PROPOSAL



"Well, put like that of course you can marry my daughter."

GETTING THAT PERFECT PROPOSAL



- Valuing the deal is a difficult and complex decision to arrive at for both parties and involves predicting the potential value of the deal, including the costs and risks associated with it
- Complexity of deal structures increase, licensors are demanding more, while major pharmaceutical players are conceding more during the deal negotiation stage.

- **Signed 2005**
- **Opsona did not have the resources (financial or drug discovery) to develop drugs to the four targets**
- **Emerging field – TLRs and the innate immune system – attractive targets and limited validation. Science was attractive and possibility for first in class**
- **We bring: IP, know-how, KOL and novel targets**
- **Wyeth: drug discovery and development (NCE and mAb), financing, credibility in inflammation research/development**

- **Upfronts, Milestones, Royalties, FTE support (8)**
- **All 4 programmes have made significant progress over the last 3 years:**
 - **Assay delivery**
 - **Identified compounds**
 - **Validation of the Targets**
 - **In vivo work**

- **Perfect example:**
 - **We provided the ability for a large company to enter quickly into an emerging field**
 - **Opsona received an endorsement of quality as well as finance – important in our first year of operations**
 - **Learned a lot in managing an alliance, achieving milestones and delivering to a certain level of quality –**
 - **was pivotal in our recent financing**

CHALLENGES

- Time for evaluation and the environment is highly competitive
- Dealing with internal resource allocations
- M&A:
 - Pfizer/Wyeth
 - Merck/SP
 - Roche/Genentech
- Slows the internal machine further
- Alliance Management – sometime not balanced
- *Identification of influential champions*
– *sometime they move on*

SUMMARY

- **We are in a period where partnership potential is high**
 - big pharma looking to acquire
 - small companies need cash
 - the perfect marriage environment
- **Be organised, transparent and bring value and solutions**
- **Be realistic in your expectations**
- **Invest in alliance management – it's a great achievement to sign a deal, but the real value is the delivery**

SUMMARY

- **Understand your potential partner's drivers before signing the deal – relationship building is critical**
- **Where are you today? Where they aim to be in the future? Any licensing strategy must be aligned with a company's overall corporate strategy**
- **Licensees need to present themselves as the most suitable partner of choice**
- **Both companies need to demonstrate key strengths and commitments rather than relying on reputation alone**
- **Partnerships must be fun and keeping the love alive is critical**



"Didn't you get my email?"

Mark Heffernan, PhD

CEO

Opsona Therapeutics Ltd

T: +353 (1) 895 7635

E: info@opsona.com

W: www.opsona.com