Bolstering the R&D pipeline

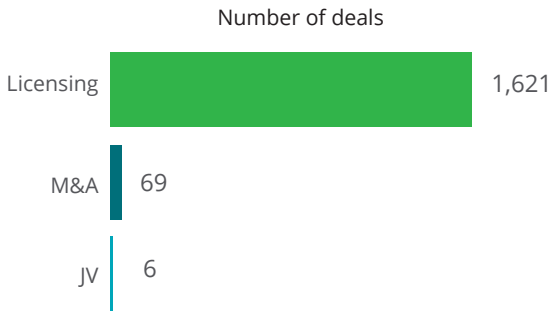
Maximizing value from external R&D

The percent of biopharma revenues that comes from drugs sourced from other companies has risen from 41percent in 2005 to 50 percent in 2014.[1]

Companies primarily use three types of deal structures to access these drugs: licensing, mergers and acquisition (M&A), and joint venture (JV). These deal structures provide varying levels of risk and control.[2] But which deal type is most likely to move a drug (asset) through research and development (R&D) phases to market? How does this vary by therapeutic area?

To help answer this question, we analyzed approximately 1,700 single-asset transactions that occurred in R&D phases (preclinical through registration) over the time frame of 2007–2012. We found that licensing is by far the preferred approach by industry, making up ~95 percent of deals in our data set, followed by M&A (4 percent) and JV (1 percent).

Licensing was by far the preferred approach from 2007–2012 (Total deals: 1,699)



Source: Deloitte analysis of Cortellis Deals Intelligence (as of March 2017)

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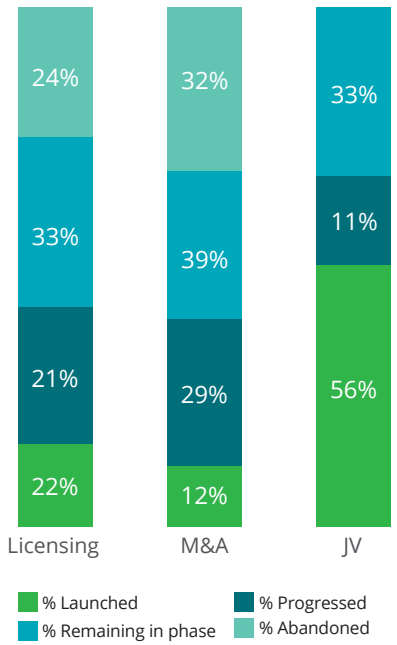
Why do companies chose one deal structure over another?

Deal type	Advantages	Disadvantages
Licensing	• Shared access to new capabilities, technology, talent, or geographic regions • Contingent payment structure allows risk sharing	• Shared decision-making can complicate or delay operational progress • Each party is dependent on the other to achieve key milestones or goals
M&A (single asset companies or deals)	• Streamlined decision-making after transition of ownership • Contingent M&A deals could allow for additional payments tied to value creation • Tax benefits for the buyer	• Could be difficult to come to alignment on valuation for public companies • Tend to be more disruptive in nature; may lose key personnel and tacit knowledge • Consolidation of assets could have negative accounting impact
JV	• Ideal for areas where scientific mechanisms are not well known • Allows entry into new or unknown markets	• Complex accounting and tax considerations

Which deal type is associated with greater success progressing drugs through R&D phases and getting to market?

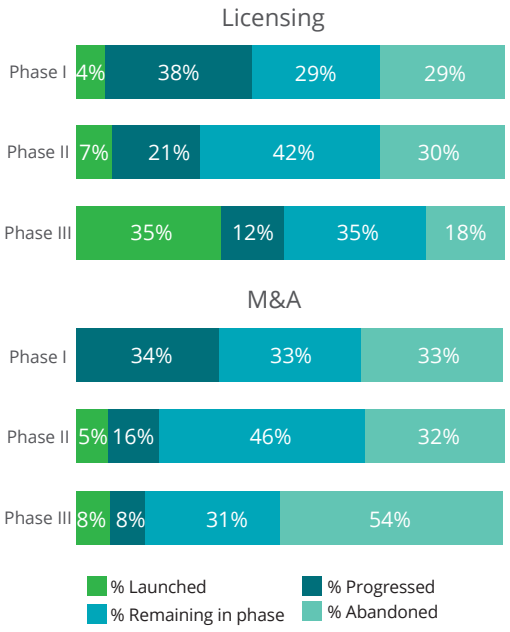
Assets sourced via JV and licensing agreements were more likely to launch and progress in R&D as compared to M&A (2007–2012)



Note: Total deal (1,699); Split as licensing (1,621), M&A (69), JV (9)

Source: Deloitte analysis of Cortellis Deals Intelligence (as of March 2017)

Assets sourced via licensing are found to be more likely to progress in R&D* than those added by M&A regardless of when sourced (2007–2012)



Note: Percent progressed calculates what percent of assets sourced within phase progressed to the next phase and beyond; e.g. 38 percent of assets licensed in Phase 1 progressed to Phase 2, 3 or registration

Source: Deloitte analysis of Cortellis Deals Intelligence (as of March 2017)

What questions does this data raise?

IS COLLABORATION THE KEY TO SUCCESS?

Licensing involves working with a licensor that is often committed to the continued success of the asset. This drives accountability across both the licensee and licensor to hitting key milestones.

In M&A, acquired assets may be deprioritized as the strategic focus of the acquiring company changes, slowing down development. Assets could linger in development pipelines, especially in Phase 1 and 2.

It is interesting to note that 5 out of 9 assets from JV deals in our data set launched (56 percent), suggesting that more open and collaborative deal types are associated with greater success. This is consistent with our prior analysis, which revealed that assets sourced via open innovation approaches have a 3x higher probability of success than those sourced from traditional approaches.[3]

IS ACQUISITION MORE DISRUPTIVE THAN LICENSING?

Key talent or capabilities might be lost in the M&A transactions, potentially disrupting R&D. The acquiring company might underestimate the integration needs of a one-asset deal as compared to a transformative mega-merger. Thoughtful post-merger integration planning, including the dedication of sufficient resources to executing this plan, could increase the success of acquired assets.

ARE ACQUIRERS MORE DECISIVE THAN LICENSORS WHEN IT COMES TO TERMINATING DEVELOPMENT PROGRAMS?

Abandonment does not always equal failure: terminating programs with low likelihood of commercial success saves companies from making additional investment that will not generate a return. A higher percentage of M&A programs were abandoned across phases compared to licensing. This could suggest that acquirers are more willing to terminate development programs that are not likely to be successful. Licensors may struggle to gain consensus with licensees to make the same hard choice.

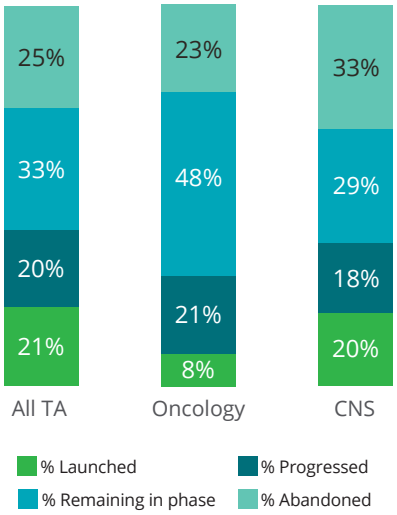
Some companies may seek to acquire products that pose a competitive threat to their own. In this scenario, an abandoned drug development program might be considered a successful outcome.

DOES DEAL STRUCTURE REFLECT ASSET VALUE?

Consider for M&A: If one party is willing to give up control of an asset via M&A, does that suggest that the asset is of lower quality? Or does it mean that the asset was highly valued and drew an attractive acquisition bid? It is possible that deal type could be reflective on the seller's commitment to the program.

What are the differences by therapeutic area?

Oncology deals were more likely to stagnate as compared to all therapeutic areas (TAs); Central nervous system (CNS) deals were more likely to be abandoned than all TAs



Note: n=537, includes licensing, M&A, JV deals (Oncology: 331, CNS: 206)

Source: Deloitte analysis of Cortellis Deals Intelligence (as of March 2017).

What does this data tell us?

In both therapeutic areas, the unmet needs are high, but the science is challenging and this is reflected by lower rates of launch or R&D progression in both.

OUR METHODOLOGY

- Cortellis Deals Intelligence was used as the primary dataset for this analysis
- Deals analyzed were from 2007–2012
- We excluded deals related to medical devices and diagnostics, generics, or technology platforms
- Further, the dataset was filtered to capture biopharma deals for individual drugs only (excluded M&A for companies with more than one asset)
- We also focused on deals executed during pre-clinical and clinical phases, through pre-registration
- We excluded deals where no information was reported on clinical status of assets or deal terms

Interested in learning more? The complete findings will be released in October 2017.

Visit www.deloitte.com/us/life-sciences-RandD and sign up to receive the full report.

ENDNOTES

1. Informa, "The next frontier for cancer immunotherapy trials," 2017, https://scrip.pharmamedtechbi.com/-/media/marketing/scrip-100/PDF/Scrip_100_2017.PDF, accessed September 14, 2017.
2. Ranan Lachman and Marc Samet, "The top five drivers of a successful out-licensing process," *Biopharm International*, Volume 18, Issue 4, April 01, 2005, http://www.biopharminternational.com/top-five-drivers-successful-out-licensing-process, accessed September 14, 2017.
3. Ralph Marcello, Glenn Carroll, Gaurav Vadnerker and Adam Volini, *Executing an open innovation model: Cooperation is key to competition for biopharmaceutical companies*, 2015, https://www2.deloitte.com/content/dam/Deloitte/us/Documents/life-sciences-health-care/us-lshc-open-innovation.pdf, accessed September 14, 2017.