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Section: Opinion & Analysis

A Review of Deal Making in 2012

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Deal activity in the pharmaceutical industry fell notably in 2012 as partnering strategies became increasingly focused and R&D budgets remained constrained. Mean deal values increased from 2011, however, and upfront payments remained robust as licensing continued to represent an important source of non-dilutive funding for biotech companies in a still challenging financing climate. Bolt-on acquisitions were the order of the day and some of the highest valuations were reserved for mature biotechs with late-stage or marketed products. Oncology continued to dominate the deal-making landscape and GlaxoSmithKline overtook Roche to become the most prolific dealmaker.

The level of deal making in the pharmaceutical industry fell further in 2012 as resource-constrained companies pursued focused partnering strategies and appetites for M&A transactions diminished. Big pharma companies also remained concerned with advancing the sizeable portfolios of collaborations and licensing agreements that they had accumulated in the preceding years. A review of the PharmaDeals® v4 database of publicly disclosed deal activity reveals that the number of deals signed in the pharmaceutical industry decreased by approximately 22% from 2011 to 2012 (Figure 1). Indeed, deal-making activity is now at the lowest level it has been for 5 years.

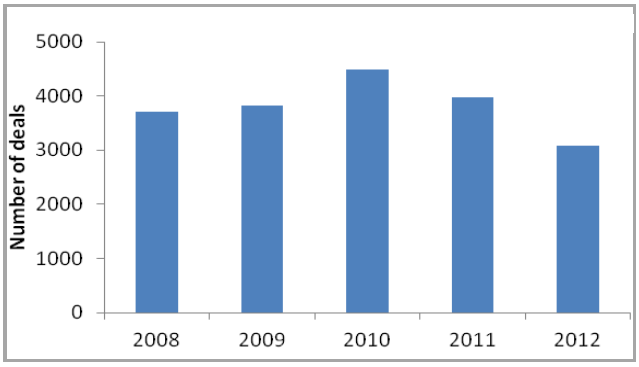

Figure 1: Number of deals 2008-2012 (Source: PharmaDeals® v4)

In line with the observed overall decline in deal making, notably fewer collaborative R&D deals were entered into in 2012 compared with previous years (Figure 2).

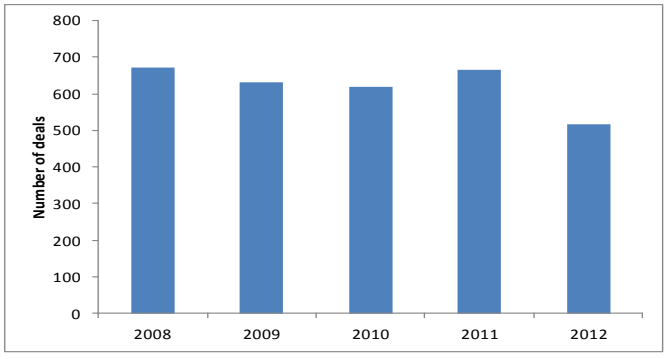

Figure 2: Number of collaborative R&D deals 2008-2012 (Source: PharmaDeals® v4)

The mean total deal value, excluding royalties, of collaborative R&D deals with disclosed financial terms rose significantly in 2012 to reach 2009 levels (Figure 3),

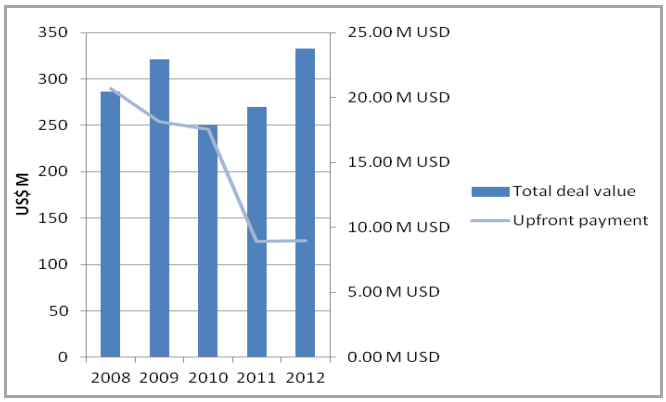

Figure 3: Mean total deal value and upfront payment of collaborative R&D deals 2008-2012 (Source: PharmaDeals® v4)

influenced by a number of high value deals providing access to novel discovery platforms for multiple targets. An example is provided by the September 2012 alliance between MacroGenics and Les Laboratoires Servier for the development and commercialisation of dual-affinity re-targeting (DART™) products directed at three undisclosed tumour targets, which is potentially worth more than US$1 B (Deal no. 48746). The likelihood that such headline deal values will be realised is of course remote. There was little change in the mean upfront payment for R&D alliances from 2011 to 2012, however. Although the IPO market is showing modest signs of life for companies with clinical-stage assets, collaborative R&D and licensing agreements remain an important source of undiluted capital for early-stage biotech companies that find venture capital funding hard to come by.

While licensing options are now commonplace in early-stage collaborations, a number of creatively structured deals involving buyout options were observed in 2012. At the beginning of the year, Constellation Pharmaceuticals formed a major epigenetics collaboration with Roche's Genentech that provided Constellation with committed funding of US$95 M and provided Genentech with a future option to acquire the biotech based on prenegotiated terms, including a 'significant' initial acquisition

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payment and contingent value rights based on the future development and commercialisation success of multiple products by Genentech (Deal no. 44946). Buyout options are attractive for biotechs such as Constellation as they provide both upfront funding and a path to liquidity for the company's investors.

Pharmaceutical companies continue to tap the resources of academia in the hope of translating scientific discoveries into novel drug candidates and ultimately commercial products. In August 2012, for example, Novartis formed a broad alliance with the University of Pennsylvania (UPenn) for the research, development and commercialisation of targeted chimeric antigen receptor cancer immunotherapies, including CART-19, which is being studied in a Phase II clinical trial (Deal no. 48056). As part of the deal, Novartis will contribute US$20 M towards a new research facility, the Center for Advanced Cellular Therapies, at UPenn's Philadelphia campus.

Licensing activity in the pharmaceutical industry, which peaked in 2010, fell by more than a quarter from 2011 to 2012 (Figure 4).

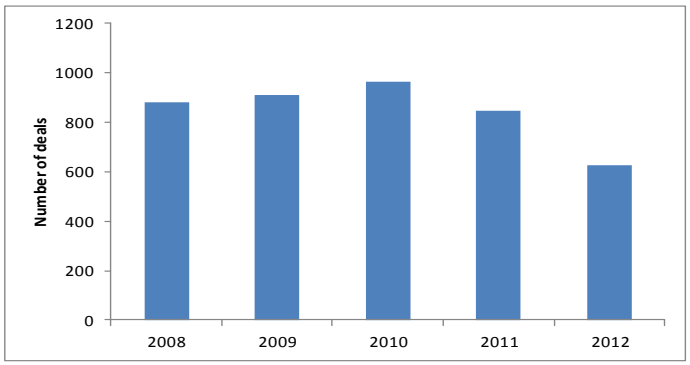

Figure 4: Number of licensing deals 2008-2012 (Source: PharmaDeals® v4)

However, the mean total deal value, excluding royalties, of licensing deals with disclosed financial information actually increased from 2011 to 2012, as did the mean upfront payment for these deals (Figure 5).

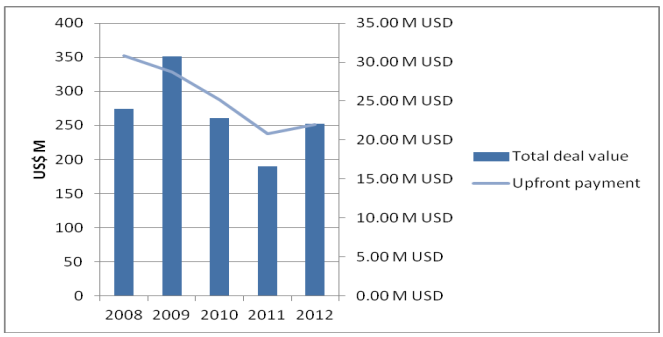

Figure 5: Mean total deal value and upfront payment of licensing deals 2008-2012 (Source: PharmaDeals® v4)

These trends suggest that licensors with the most attractive assets, be they discovery platforms that could spawn new therapeutic classes or drug candidates with encouraging clinical data, are able to secure favourable deal terms when a number of potential licensees exist. One such example is provided by Genmab's human CD38 monoclonal antibody daratumumab, which is in Phase I/II development for multiple myeloma and which reportedly garnered much big pharma interest before it was licensed to Johnson & Johnson's Janssen Biotech division in August 2012 (Deal no. 48371). As part of the US$1.1 B deal, Genmab received US$55 M upfront and Johnson & Johnson, which Genmab described as its 'perfect partner' given its expertise with Velcade® (bortezomib), became the Danish company's largest shareholder with a 10.73% stake.

Licensing activity at the discovery and preclinical stages fell notably in 2012, reversing the trend seen the previous year (Figure 6).

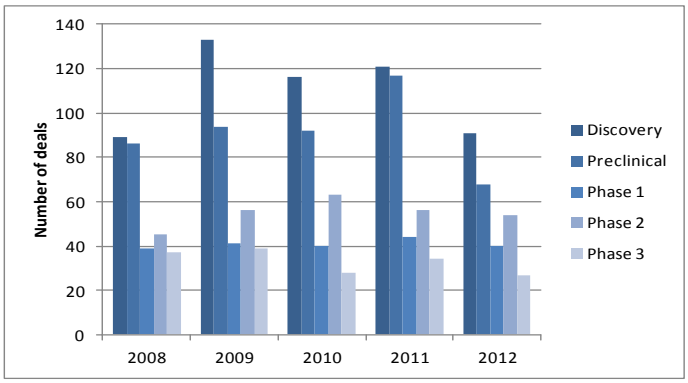

Figure 6: Number of licensing deals by development stage 2008-2012 (Source: PharmaDeals® v4)

However, the number of licensing deals for clinical-stage drug candidates remained relatively robust, despite the overall downturn in licensing activity. What is more, mean upfront payments for Phase II and Phase III assets actually increased from 2011 to 2012, perhaps driven by increased competition for pipeline products at the proof-of-concept among risk-averse pharmaceutical companies (Figure 7).

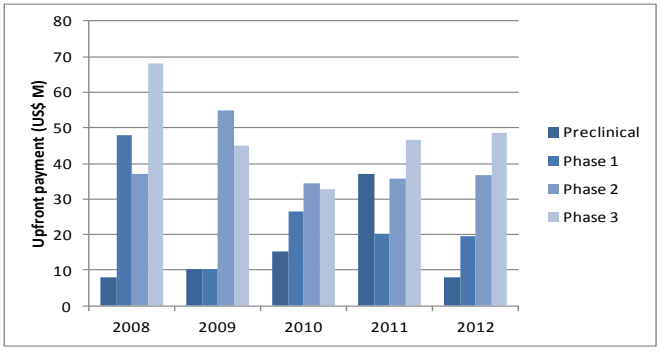

Figure 7: Mean upfront payment of licensing deals by development stage 2008-2012 (Source: PharmaDeals® v4)

When ranked in terms of disclosed upfront payments, the largest licensing-based deal of 2012 concerned a Phase II asset. In February 2012, Abbott partnered with Galapagos to develop and commercialise GLPG0634, a promising next-generation JAK1 (Janus kinase 1) inhibitor for rheumatoid

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arthritis (RA), in a deal worth as much as US$1.35 B (Deal no. 45670). Abbott made an initial upfront payment of US$150 M for rights related to the global collaboration and will license GLPG0634 for a one-time fee of US$200 M if Phase II studies for RA meet certain pre-agreed criteria. The deal ranks as the largest to date for a single Phase II asset and provides Abbott with a potential oral successor to Humira® (adalimumab).

M&A activity (defined here as Mergers and Business Acquisitions) fell by 35% in 2012 (Figure 8) and the mean value of M&A transactions was down 16% on the previous year (Figure 9).

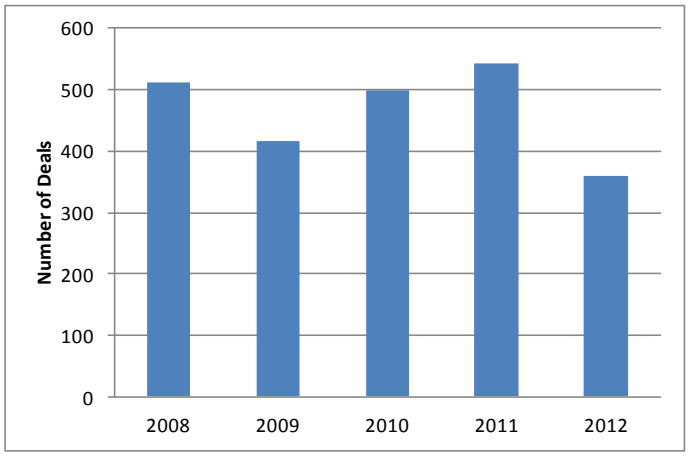

Figure 8: Number of M&A transactions 2008-2012(Source: PharmaDeals® v4)

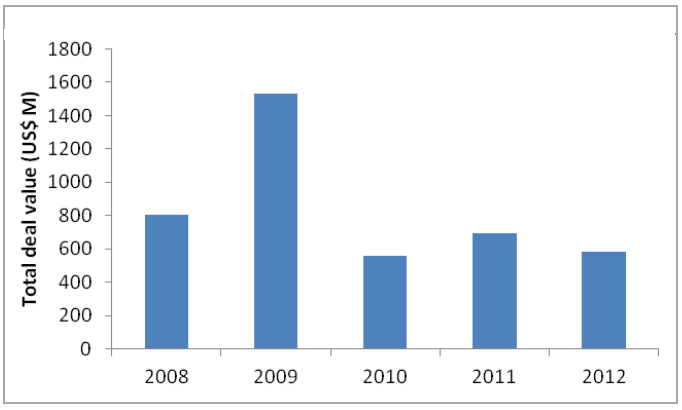

Figure 9: Mean total deal value of M&A transactions 2008-2012 (Source: PharmaDeals® v4)

Megamergers were conspicuous by their absence in 2012, which could be viewed as the year of the bolt-on acquisition. Mature US biotechs with commercialised products and attractive late-stage assets achieved some of the highest valuations. In an interestingly structured deal, Bristol-Myers Squibb (BMS) teamed up with partner AstraZeneca in June 2012 to acquire diabetes drug developer Amylin Pharmaceuticals in a two-stage deal valued at US$7 B, including US$1.7 B towards the settlement of Amylin's net debt and a contractual payment obligation to Eli Lilly (Deal no. 47571). The acquisition came several months after the US FDA issued a complete response letter requesting additional clinical data for dapagliflozin, an SGLT-2 (sodium glucose co-transporter-2) inhibitor being co-developed by the two big pharma companies (Deal no. 26257). Moreover, after a 3-month pursuit, in July 2012 GlaxoSmithKline (GSK) negotiated a deal on friendly terms to acquire its long-time partner Human Genome Sciences (HGS) for approximately US$3 B net of cash and debt (Deal no. 46716). After rejecting GSK's initial offer of US$2.6 B in April 2012 and initiating an auction process to find another buyer, HGS was forced to negotiate a deal with GSK to avoid a share price collapse after a white knight failed to emerge.

The number of deals done by the top 18 pharmaceutical companies in ten key emerging markets declined in 2012 from the high seen in 2011. (Figure 10)

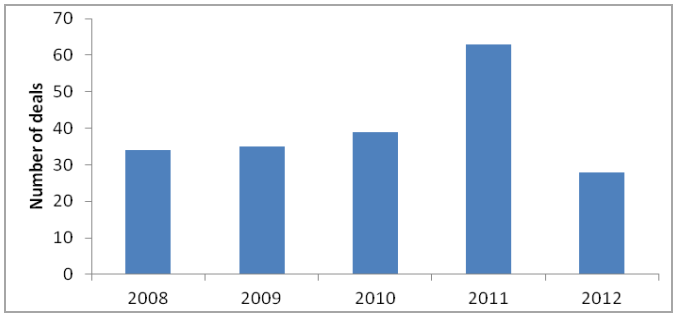

Figure 10: Number of deals done by top 18 pharmaceutical companies in ten emerging markets 2008-2012 (Source: PharmaDeals® v4)

Nevertheless, big pharma deal making in emerging markets evolved in 2012. The year saw the first joint venture between a foreign pharmaceutical company and a Chinese company for the development of an innovative biologic for the Chinese market when AstraZeneca and Chinese CRO WuXi AppTec joined forces to accelerate the path to market in China of AstraZeneca's anti-IL6 antibody therapeutic MEDI5117 for autoimmune and inflammatory diseases (Deal no. 48568). Only weeks after declaring that it was seeking deal opportunities in second-generation emerging markets such as Vietnam, Indonesia and Colombia, Sanofi agreed to acquire Genfar, the second-largest generics company in Colombia in terms of sales, in order to solidify its position as the largest generics company in Latin America (Deal no. 49044).

Driven by the high unmet clinical need for safe and efficacious cancer therapeutics and the premium prices that such drugs can achieve, oncology remains the leading therapy area for pharmaceutical deal-making by some margin (Figure 11).

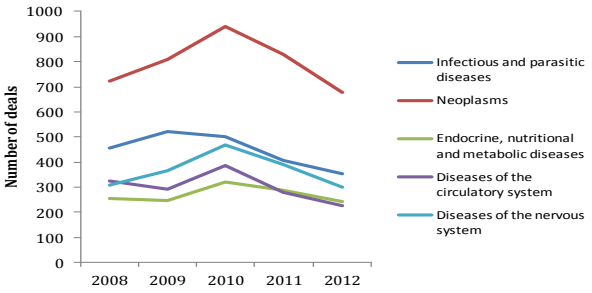

Figure 11: Number of deals by therapy area (selected therapy areas only) (Source: PharmaDeals® v4)

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Indeed, approximately 30% of the deals signed in 2012 that were ascribed an indication involved oncology as a therapeutic area and targeted cancer therapeutics were of particular interest. Celgene was a noteworthy cancer dealmaker in 2012, acquiring Avila Therapeutics in a deal worth up to US$925 M, US$350 M of which was paid upfront, in order to gain a Bruton's tyrosine kinase (Btk) inhibitor in Phase I development for haematological malignancies and a technology platform for the discovery and development of targeted covalent drugs (Deal no. 45066). It also formed a collaboration with Epizyme to develop personalised therapeutics for patients with genetically defined cancers that inhibit histone methyltransferases (HMTs), an important epigenetic target class (Deal no. 46618). Epizyme received US$90 M upfront in this ex-US deal, by far the largest upfront consideration for a discovery or preclinical-stage deal in 2012.

Infectious and parasitic diseases comprised the second most popular therapy area for deal making in 2012, although the number of deals in this category was down nearly 14% on 2011. Antivirals remained high on the deal-making agenda and the year began with BMS acquiring Inhibitex for a sizeable US$2.5 B on the back of positive Phase Ib results of the company's hepatitis C virus nucleotide polymerase inhibitor INX-189 (BMS-986094) (Deal no. 44778). Less than 8 months later, however, BMS was forced to take an impairment charge of US$1.8 B as development of the drug was discontinued in the interest of patient safety following an unexpected heart toxicity event in a Phase II study that resulted in the death of one patient. In another high value antiviral deal, Merck & Co. licensed global rights to Bayer HealthCare spin-off AiCuris' portfolio of human cytomegalovirus-targeting drug candidates, including its Phase III-ready asset letermovir (AIC246), for €110 M (US$143 M) upfront and a headline value of €442.5 M (US$573 M) (Deal no. 49075). Diseases of the nervous system (not including mental and behavioural disorders), endocrine, nutritional and metabolic diseases and diseases of the circulatory system comprised the third, fourth and fifth most popular therapy areas for deals signed in 2012, respectively.

Similar numbers of deals were entered into for biologics and small molecule therapeutics in 2012 (Figure 12).

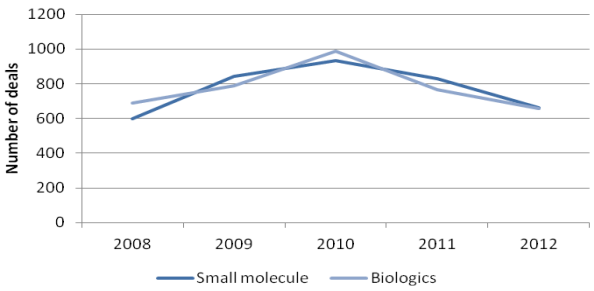

Figure 12: Number of therapeutic deals for small molecules and biologics (Source: PharmaDeals® v4)

Next-generation antibody deals continued apace and the field saw its first major acquisition when Amgen acquired Micromet and its bispecific T-cell engager (BiTE®) antibody technology for US$1.16 B in March 2012 (Deal no. 45070). Macrocyclic and antisense drug discovery platforms also attracted big pharma partners in 2012 and there was notable interest in developing drugs to access previously intractable targets such as protein-protein interactions.

GSK stole the crown previously held by Roche to become the most prolific dealmaker of 2012 when all deal types were considered, although Johnson & Johnson, AstraZeneca and Sanofi followed closely behind (Figure 13).

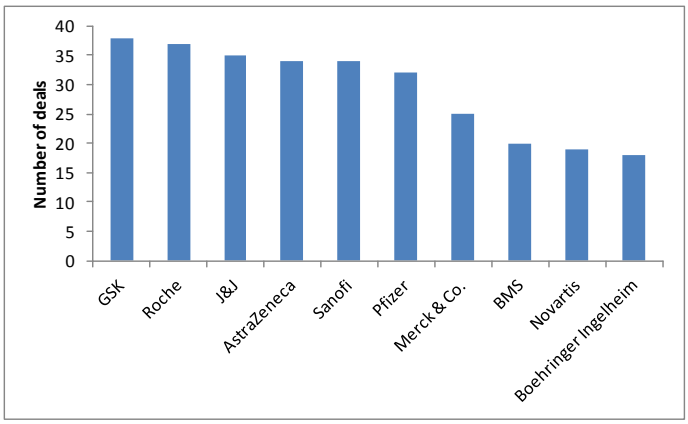

Figure 13: Top dealmakers of 2012 (Source: PharmaDeals® v4)

The upturn in the deal-making activity of AstraZeneca in 2012 is particularly noteworthy and reflects the size of the company's patent cliff and a late-stage pipeline that is regarded as weak by many industry observers after a raft of development setbacks. Aside from teaming up with BMS to buy Amylin, the company's key deals of 2012 included the US$1.26 B acquisition of Ardea Biosciences (Deal no. 46556), a licensing deal for Rigel Pharmaceuticals' inhaled JAK inhibitor R256 (Deal no. 47449) and a microRNA therapeutics collaboration with Regulus Therapeutics (Deal no. 48158).

In summary, a review of deal making in 2012 reveals that large pharmaceutical companies are pursuing focused deal strategies as they manage constrained R&D budgets. While companies with attractive assets can achieve favourable deal terms when there are multiple interested parties, licensees remain in a strong negotiating position owing to the limited financing options available to biotech companies. The industry continues to adopt creative deal structures and oncology, bolt-on acquisitions and discovery platforms for next-generation therapeutics were at the top of the deal-making agenda in 2012.