### Polling Results

This year’s symposium incorporated Audience Response Polling technology to the presentations to allow for live-polling of the audience. The charts below are the responses to these polling questions.

#### Open Innovation

2. Based on your experience, and for our industry, Open Innovation defined as the use of purposive inflows and outflows of knowledge to accelerate innovation:

   - Is a buzz word with no real application to the pharmaceutical industry (16%)
   - Is not mature enough to have generated significant benefits but will eventually lead to more value added pharmaceutical products (17%)
   - Has enabled access to new technologies and processes that can be integrated as new capabilities into pharmaceutical companies that adopt it (27%)
   - Has become part of the routine toolbox available to drug development scientists (46%)

4. Form your point of view, when it comes to Open Innovation, your company was / is / will be:

   - An early adopter (will adopt despite the possible risks) (35%)
   - An early majority adopter (will adopt once the benefits have been clearly articulated) (30%)
   - A late majority adopter (will adopt once the benefits have been clearly demonstrated) (21%)
   - A laggard (reluctant to adopt as most decisions are based on past experience which will take time to accumulate) (14%)

6. From your perspective, the biggest obstacle to Open Innovation in the pharmaceutical industry is:

   - A risk-averse corporate culture (28%)
   - People’s behavior (28%)
   - The organizational structure typically found in companies (25%)
   - Intellectual Property protection and licensing agreements (21%)
   - A lack of clear vision describing what can be achieved (21%)
   - All of the above (24%)
   - None of the above (16%)

1. From your perspective, radical new ways of working and a culture of external collaboration are key elements in bringing more personalized medicines to patients faster.

   - I agree (23%)
   - I disagree (25%)
   - This is not really for me to decide (30%)
   - I do not have an opinion (22%)

3. Select the statement below that best describes, in your opinion, the collaboration between your company and outside organizations (companies, universities, venture capitalists, …) used currently to advance innovation:

   - Products that rely on such collaborations are nearly vanished (17%)
   - These collaborations happen all the time and only when required by specific project’s needs, i.e. their scopes are very limited (29%)
   - Strategic collaborations are encouraged but are difficult to implement because of the cultural, political, and organizational challenges (32%)
   - Establishing such collaborations is an integral part of my company’s strategy and is well supported by our business processes (22%)
   - I am not aware of any company’s strategy when it comes to outside collaboration (7%)

5. From your perspective, the role and responsibility to identify opportunities for Open innovation for your company today falls with:

   - Everyone in the company (57%)
   - The executive team in charge of charting the company’s roadmap (33%)
   - The head of each department (9%)
   - The Vice President of Open Innovation (1%)
   - I do not know (13%)

7. In your opinion, what magnitude of change is required to support Open Innovation in your company:

   - None; the current processes are already in place to enable and benefit from open innovation (17%)
   - Minor; a slight adjustment of the organizational structure is needed (23%)
   - Major; a radical change in mindset and behavior (cultural shift) is required (33%)
   - Too big to take on; the entire business model needs to be revisited (27%)
SPOTLIGHT:
Personalized Medicine

2. For your company’s corporate strategy and from your point of view, the development of personalized medicines is:

1. A aspiration (would be nice to have but is not a priority, i.e., not a lot of time and resources are spent)
2. A long-term goal (the strategy and roadmap to enable the development of personalized medicine is still in the design stage)
3. A must have (i.e., your company is actively working on existing personalized medicine a reality)
4. A reality (i.e., your company has already successfully incorporated the concept of personalized medicine in development programs)
5. I do not know

4. The development of a personalized medicine is likely to require the development of a companion diagnostic tool. For your company, this is or is likely to be achieved by:

1. Developing the diagnostic tool in-house in parallel with the personalized medicine
2. Licensing in the diagnostic tool from another company
3. Partnering with another company to develop the diagnostic tool
4. The strategies vary from drug-to-drug
5. I do not know

6. From your perspective, the business models and organization structures used traditionally to discover, develop and manufacture drugs:

1. Can be used without change to support the development of personalized medicine
2. Can be adapted with minor changes to support the development of personalized medicine
3. Will need to be significantly modified to support the development of personalized medicine
4. Will prevent the development of personalized medicine and will require a complete transformation

1. From your perspective, personalized medicine is best described as:

1. Preventive Care (disease prevention, prevention and early intervention)
2. Stratified medicine (the classification of individuals into subpopulations based on their susceptibility to a particular disease or their response to a specific treatment)
3. Individualized Medicine (the use of a patient’s biological markers such as genetics, environment, to prevent, diagnose and treat disease)
4. Targeted therapy (the use of a combination of drugs that are designed, for example, to interfere with a specific biological pathway that is central to the development or spread of a disease in an individual)
5. None of the above

5. For your company, when is the concept of personalized medicine introduced in the drug development roadmap?

1. The personalized medicine concept is built in from the very beginning, i.e., it is an integral part of the drug development strategy
2. The concept is only considered once a potential therapy fails to meet expectations for a marketed-out-of-patients
3. There is no formal time requirement for introducing the concept, it varies from program to program
4. My company has not yet introduced the concept of personalized medicine in drug development roadmap

5. In your opinion, the biggest obstacle to the development of personalized medicine is:

1. The cost
2. The identification of patients prospectively and in a timely fashion for trial enrollment
3. The quality of the science or nature of the available technology
4. The requirement for parallel development of a companion diagnostic
5. The existing business processes and organization structures
6. Not listed above

7. In your opinion, what is the biggest potential benefit to personalized medicine:

1. Faster regulatory approval
2. Improve the efficiency (time, cost, and failure rate) of clinical trials
3. Improve the likelihood of treatment success and survival
4. Shift the attention from reaction to a disease to prevention
5. Catalyze positive changes in our industry because of its disruptive nature
SPOTLIGHT: Globalization

2. From your perspective, Globalization today is:
   1. A reality and my company has adapted efficiently to this reality.
   2. Disruptive in a negative way because of the burden it creates.
   3. Disruptive in a positive way and I welcome the opportunities it provides.
   4. Not disruptive as it is not really impacting my daily work.

4. From your perspective, for your company, the seamless integration of data between different development sites and partners is:
   1. Critical and reliable tools have been implemented to enable it.
   2. Critical to enable collaboration and the technology is being implemented to enable such integration.
   3. Critical to enable collaboration but we are lacking the technology that enables seamless integration.
   4. Wishful thinking.
   5. Not critical.

5. From your perspective, the biggest obstacle to using Cloud Computing in the pharmaceutical industry is:
   1. The lack of technology (IT infrastructure) or lack of awareness of the available technology.
   2. Securing the confidentiality of the data collected.
   3. The need for strategic partnership between pharmaceutical companies and technology vendors including cloud companies.
   4. The fear of new technology, i.e. a risk-averse culture.
   5. The constraints from the regulatory requirements.
   6. Other

1. Pharmaceutical companies have long been late adopters of new technology, such as Cloud Computing, preferring not to stray too far from familiar territory:
   1. I agree
   2. I disagree
   3. I have no opinion

3. Innovation efforts are increasingly tied to globalization and collaborative work. Cloud Computing will eventually become a vital part of the way the pharmaceutical industry does its work. From your perspective:
   1. This is old news as the cloud is the norm for my company.
   2. I agree and moving to the cloud is an integral part of our company strategy.
   3. Maybe, but it is not clear how cloud computing can ever become a reality for the pharmaceutical industry.
   4. I am not clear as to what cloud computing is.

6. In your opinion, select the most plausible scenario for our industry in 2020 when it comes to globalization and Cloud Computing:
   1. This is going to be exciting: the real-time awareness of information from anywhere at any time will enable users to engage with each other, operate and innovate in smarter ways.
   2. This is going to be challenging: we will be inundated with data and will need new tools to visualize and extract useful information.
   3. This is going to be frustrating: some areas will adopt the cloud (e.g. clinical trial management, sales and marketing...) while others will remain grounded on earth (e.g. drug discovery manufacturing...) further expanding the gap between the different functions.
   4. This is going to be interesting: since adoption of cloud computing is unlikely to be uniform across the industry, our core business processes will be challenged especially when it comes to collaboration with external partners and CROs.
   5. Nothing will really change: The desire to keep everything internal and hold onto it because we want to protect it will prevail, it will be business as usual as in 2013.

The International Consortium for Innovation and Quality (IQ), formed in 2010, is a not-for-profit organization of pharmaceutical and biotechnology companies with a mission of advancing for pharmaceutical and biotechnology products worldwide.

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