Innovation (Our Raison d'être)

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Stated simply, the term “innovation” implies a new way of doing something. It may refer to incremental, radical, and revolutionary changes in thinking, products, processes, or organizations (Wikipedia, the free encyclopedia, <http://en.wikipedia.org/wiki/Innovation>). The American Heritage Dictionary (Fourth Edition, 2000) defines innovation as “the action of beginning or introducing something new”. Innovation is important to many fields, most notably, but not limited to, economics, sociology, business, and engineering. In a colloquial manner, innovation refers to the output of a process or system invented or devised to accomplish a goal. Those who are responsible for the adoption of innovation are often called pioneers, whether they are individuals or organizations.

When tied to organizations or the products or output they achieve, innovation is typically linked to performance and improvement in efficiency, productivity, quality, cycle time, competitive position, and/or market share. If one looks at the course of history, all organizations and industries have exhibited the ability to practice innovation. History has also showed us that organizations or companies that innovate gain a competitive edge over those that do not, sometimes to the extent that those that choose not to innovate are destroyed by those that do. A convenient definition of innovation is given by Webster where it is stated that

innovation is “the introduction of something new, as in a device, method, or idea”. In the pharmaceutical industry, innovation has been driven by the evolution of ideas, technology, regulations, and economics. Over the past 50 years, the concepts of trial, error, and serendipity in drug discovery have given way to the use of rational drug design, combinatorial chemistry, high-throughput screening, bioinformatics, and genomics. In the area of drug development, the performance of clinical trials in countries other than the USA and the European Union, the adoption of the Quality by Design paradigm by the US FDA, the regulatory expectations in the toxicology area with regard to genotoxic impurities, and the increased utility of modeling and design as an alternative to empirical thinking have altered the way in which active molecular species are transformed into marketable dosage forms.

While innovation is difficult to accurately quantify, it can be large or small. As an example of a small innovation, studies of the location of equipment and reagents in an analytical laboratory have been shown to expedite work and lead to increased productivity, which is one way in which innovation may be measured. If one evaluates their own work performance and asks “Am I accomplishing more than I did 10 or 20 years ago?” The answer is usually yes. If so, we might then ask, “Am I working sixteen hours instead of eight?” The answer to that question is usually no, leading to the additional question, “How am I doing my work differently?” The reply to this is tied directly to the concept of innovation, although many scientists will not admit that their approach is innovative in nature. Many of us raised in science confuse innovation with invention. Invention is the first occurrence of an idea for a new product or process while innovation is the first attempt to carry it out into practice [1]. Based on this definition, Thomas Edison might be better remembered as an

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innovator rather than as an inventor (and he is certainly well-remembered).

In looking at not only the effect of innovation, but also the necessity of the concept in the pharmaceutical industry, it was realized that no one publication was devoted entirely to the promotion of innovative ideas (rather than inventions). Therefore, the Journal of Pharmaceutical Innovation (JPI) was started in 2007 with the mission of providing an avenue for pharmaceutical scientists to publish and share innovative ideas, approaches, and results with their peers. The scope of JPI spans from basic research to commercialization and includes, but is not limited to, innovation in:

- Process and systems
- Product design and optimization
- Modeling approaches
- Facility design
- Application(s) of novel technology
- Problem solving
- Regulatory developments
- Education and professional development

We are seeking research articles, reviews, and perspectives from pharmaceutical scientists, engineers, and all JPI readers. JPI offers a forum for publishing work that many other journals might not consider, and we look forward to receiving and considering your work for inclusion in JPI.

References

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