

## Product News

### **Lonza Introduces Services for Rational Vaccine Design and Development to Help Reduce the Cost of Failure and Increase the Chance of Clinical Success**

- **Epibase™ Screening platform provides an integrated set of *in silico* and *in vitro* tools for fast, cost-effective vaccine design and development**
- **The platform incorporates a fully human system to maximize the chances of developing a safe and potent vaccine**
- **Data analysis and consultation with our expert Applied Protein Services scientists is included, allowing companies to focus on their most promising candidates**
- **Lonza's Light Path™ Services provide milligram quantities of product for *in vitro* testing, providing a complete solution for vaccine development**

**Basel, Switzerland, 04 Sep 2014** – To help address the growing costs and long development timelines facing vaccine manufacturers, Lonza is announcing the launch of the Vaccine Design and Development Services Platform. This platform includes *in silico* and *in vitro* tools to accelerate the design and assessment of vaccine candidates for their ability to provoke an effective immune response. Allowing companies to focus on the most promising vaccine candidates early in the process can help reduce time and costs, maximizing R&D resources.

Lonza is uniquely positioned to offer customers these services that include our Epibase™ *In Silico* (IS) and *In Vitro* (IV) tools for immunogenicity assessment. Epibase™ IS is a predictive tool driven by structural bioinformatics in conjunction with experimental data. This tool can predict potential peptide/HLA binding, which can be used to rationally design an efficacious vaccine. Recent enhancements enable extensive prediction of both HLA Class I CD8<sup>+</sup> and Class II CD4<sup>+</sup> T cell epitopes, strengthening the ability of Epibase™ IS to support lead vaccine candidate selection and optimization.

The Epibase™ IV screening services include a wide range of assays designed to assess immune responses raised by vaccine candidates. High-quality peripheral blood mononuclear cells (PBMCs) from human donors are used allowing for the comparison and ranking of candidates in healthy and/or specific diseased populations. A wide variety of antigens, including whole proteins, protein complexes, peptides, viruses, Virus Like Particles (VLPs), virosomes, and adjuvants can be tested with the Epibase™ IV tools.

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As *in vitro* testing requires milligram quantities of vaccine candidates, Lonza offers the Light Path™ Custom Material Supply Service for small-scale production of proteins. The Light Path™ Discovery Service is a streamlined process that can provide sufficient product for *in vitro* assessment of vaccine immunogenicity. The Light Path™ service includes access to our industry-leading mammalian and microbial expression systems, which can lead to a seamless transition into larger-scale cGMP manufacturing for later development stages.

Our Applied Protein Services team of immunogenicity and bioinformatics experts based in Cambridge, UK will work with customers to develop the best assessment plan for their vaccine candidates. Our scientists will help interpret the data, rank candidates and guide re-engineering for optimization/enhancement of immunogenicity.

“Offering vaccine developers the predictive tools and services they need to assess their candidates for the ability to elicit an appropriate immune response, can help them optimize their R&D efforts and bring successful vaccines to the market,” said Anne Hays, Head of Lonza’s Custom Development Services Organization.

For more information on Lonza’s Vaccine Design and Development Services, please visit [www.lonza.com/vaccines](http://www.lonza.com/vaccines).

### **About Lonza**

Lonza is one of the world’s leading and most-trusted suppliers to the pharmaceutical, biotech and specialty ingredients markets. We harness science and technology to create products that support safer and healthier living and that enhance the overall quality of life.

Not only are we a custom manufacturer and developer, Lonza also offers services and products ranging from active pharmaceutical ingredients and stem-cell therapies to drinking water sanitizers, from the vitamin B compounds and organic personal care ingredients to agricultural products, and from industrial preservatives to microbial control solutions that combat dangerous viruses, bacteria and other pathogens.

Founded in 1897 in the Swiss Alps, Lonza today is a well-respected global company with more than 40 major manufacturing and R&D facilities and approximately 10,000 employees worldwide. The company generated sales of about CHF 3.6 billion in 2013 and is organized

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into two market-focused segments: Pharma&Biotech and Specialty Ingredients. Further information can be found at [www.lonza.com](http://www.lonza.com).

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