# **Press Release**





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# <u>DSM and Crucell announce breakthrough in the production of biopharmaceuticals</u> with PER.C6<sup>®</sup> technology platform.

Royal DSM N.V. and Crucell N.V. (Euronext, NASDAQ: CRXL; Swiss Exchange: CRX), today announce fermentation yields of more than 10 grams per liter for monoclonal antibodies, a major breakthrough in the development of their PER.C6 technology platform.

Early last year, DSM and Crucell announced their major objectives for their PER.C6 development joint venture. A key objective was to achieve yields of more than 10 grams per liter for monoclonal antibodies using the PER.C6 technology platform. Today they announced that this remarkable milestone has been achieved within one year of setting the target.

This result was achieved by combining DSM's considerable expertise in all aspects of fermentation science and technology with Crucell's industry-recognized PER.C6® human cell line. The partners believe that in the foreseeable future even 20 grams per liter can be realized. Looking into the future, both partners believe that they are very well positioned to exploit the full potential of this technology through the newly opened PERCIVIA PER.C6® Development Center in Cambridge, Mass, USA.

Yields in the range of 10 to 20g/L are an order of magnitude higher than current industry averages. The higher yields allow the use of much smaller bioreactors and opens routes to significantly lower cost of goods for biopharmaceuticals.

Ronald Brus, CEO of Crucell is delighted with the results: "We have always had confidence in the huge potential of PER.C6, and these results are only the beginning. This is a major breakthrough in reducing the cost of goods in biopharmaceutical production."

Leendert Staal, CEO of DSM Pharmaceutical Products comments: "This is an outstanding achievement of our organization in Groningen, which will have a major impact on the way we will produce in the future. We believe that these results mark the beginning of a paradigm shift in the industry."

Pieter de Geus, Vice President Research and Development of DSM Pharmaceutical Products, and Jaap Goudsmit, Chief Scientific Officer of Crucell are unanimous in their assessment of the commercial potential of the results. The next steps will be scale-up to pilot scale and ultimately commercial scale reactors.

Since December 2002, DSM Biologics and Crucell are jointly outlicensing the PER.C6® human cell line technology to third parties as a production platform for monoclonal antibodies and recombinant proteins. The partners recently established the PERCIVIA PER.C6® Development Center in Cambridge, Mass, USA as a joint venture to further develop the PER.C6® cell line and

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provide unique solution for the production of pharmaceutical proteins to licensees utilizing the PER.C6<sup>®</sup> human cell line in the biotech industry.

# About the PER.C6® technology platform

Crucell's and DSM's PER.C6<sup>®</sup> technology platform has been developed for the large-scale manufacture of biopharmaceutical products including vaccines. Compared to conventional production technologies, the strengths of the PER.C6<sup>®</sup> technology lie in its excellent safety profile, scalability and productivity under serum-free culture conditions.

### **About PERCIVIA**

PERCIVIA PER.C6® Development Center LLC is a joint venture between DSM and Crucell. The Center has approximately 47,000 square feet of laboratory space in Cambridge, Mass, and will have a staff of 50 highly skilled people engaged in the development and optimization of the human PER.C6® cells as an expression platform for proteins and monoclonal antibodies for therapeutic use. This center of excellence will provide a fully integrated technology platform, and true unique solutions for the production of pharmaceutical proteins, to the biotech industry and the scientific community. This PER.C6® technology platform will comprise cell line generation technology, cell culture media development, upstream and downstream processes, equipment selection, scale-up, technology transfer, and regulatory support.

#### **About Crucell**

Crucell N.V. (Euronext, NASDAQ: CRXL; Swiss Exchange: CRX) is a biotechnology company focused on research, development and worldwide marketing of vaccines and antibodies that prevent and treat infectious diseases. Its vaccines are sold in public and private markets worldwide. Crucell's core portfolio includes a vaccine against hepatitis B, a fully-liquid vaccine against five important childhood diseases, and a virosome-adjuvanted vaccine against influenza. Crucell also markets travel vaccines, such as the only oral anti-typhoid vaccine, an oral cholera vaccine and the only aluminum-free hepatitis A vaccine on the market. The Company has a broad development pipeline, with several Crucell products based on its unique PER.C6® production technology. The Company licenses this and other technologies to the biopharmaceutical industry. Important partners and licensees include DSM Biologics, sanofi aventis, GSK and Merck & Co. Crucell is headquartered in Leiden (the Netherlands), with subsidiaries in Switzerland, Spain, Italy, Sweden, Korea and the US. The Company employs over a 1000 people. For more information, please visit <a href="https://www.crucell.com">www.crucell.com</a>.

#### **About DSM Biologics**

DSM Biologics, a business unit of DSM Pharmaceutical Products, is a leading provider of manufacturing technology and services to the biopharmaceutical industry. In addition to offering world-class biopharmaceutical manufacturing services, DSM Biologics has co-exclusive rights, along with Dutch biotech company Crucell N.V., to license the high-producing PER.C6® human cell line as a production platform for recombinant proteins and monoclonal antibodies. DSM Biologics' FDA-approved facility in Groningen, The Netherlands, was established in 1986 and has a strong track record in using a broad range of cell lines (PER.C6®, CHO, hybridoma, etc.) in biopharmaceutical manufacturing, and has a wide range of experience using multiple manufacturing (batch, fed-batch and continuous perfusion) and purification techniques. The combination of the PER.C6® human cell line and DSM's manufacturing services provides companies with a turn-key biologic manufacturing solution reducing cost, risk and time to market. For more information, please visit <a href="https://www.dsmbiologics.com">www.dsmbiologics.com</a>.

#### **DSM**

DSM is active worldwide in <u>nutritional and pharma ingredients</u>, <u>performance materials and industrial chemicals</u>. The company develops, produces and sells innovative products and services that help improve the quality of life. DSM's products are used in a wide range of end-markets and applications, such as human and animal nutrition and health, personal care, pharmaceuticals, automotive and transport, coatings and paint, housing and electrics & electronics (E&E). DSM's strategy, named <u>Vision 2010 − Building on Strengths</u>, focuses on accelerating profitable and innovative growth of the company's specialties portfolio. The key drivers of this strategy are market-driven growth and innovation plus an increased presence in emerging economies. The group has annual sales of over €8 billion and employs some 22,000 people worldwide. DSM ranks among the global leaders in many of its fields. The company is headquartered in the Netherlands, with <u>locations</u> in Europe, Asia, Africa, Australia and the Americas. More information about DSM can be found at <u>www.dsm.com</u>.

### Forward-looking statements

This press release contains forward-looking statements that involve inherent risks and uncertainties. These statements are based on current expectations, estimates and projections of the management of DSM and Crucell and information currently available to both companies. The statements involve certain risks and uncertainties that are difficult to predict and therefore DSM and Crucell do not guarantee that their expectations will be realized. Furthermore, DSM and Crucell have no obligation to update the statements contained in this press release. Crucell has identified certain important factors that may cause actual results to differ materially from those contained in such forward-looking statements. For information relating to these factors please refer to the Form 20-F, as filed by Crucell with the U.S. Securities and Exchange Commission on July 6, 2006, and the section entitled "Risk Factors". Crucell prepares its financial statements under generally accepted accounting principles in the United States (US GAAP) and Europe (IFRS).

## For further information please contact:

## **DSM Corporate Communications**

Elvira Luykx tel. +31 (0) 45 5782421 fax +31 (0) 45 5740680 e-mail media relations @

e-mail media.relations@dsm.com

# For DSM in the USA: DSM Pharmaceutical Products

Terry Novak
Chief Marketing Officer
DSM Pharmaceuticals Inc. and Biologics
Tel. +1 973 257 8471
Terry.Novak@dsm.com

#### Crucell N.V.

Leonard Kruimer
Chief Financial Officer
Tel. +31-(0)71-524 8722
Leonard.Kruimer@crucell.com

Barbara Mulder
Tel: 31-(0) 71 524 8718
barbara.mulder@crucell.com

### **DSM Investor Relations**

Dries Ausems tel. +31 (0) 45 5782864 fax +31 (0) 45 5782595 e-mail <u>investor.relations@dsm.com</u>

For Crucell in the US: Redington, Inc. Thomas Redington Tel. +1 212-926-1733 tredington@redingtoninc.com