

**News Release**

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**Janssen Submits Applications in the EU and U.S. Seeking Approval of  
DARZALEX®▼ (daratumumab) Subcutaneous Formulation in Combination With  
Pomalidomide and Dexamethasone for Patients With Relapsed or Refractory  
Multiple Myeloma**

*Applications supported by positive results from the Phase 3 APOLLO study, which  
demonstrated improved significant progression-free survival in patients receiving  
the subcutaneous formulation of daratumumab<sup>1</sup>*

**BEERSE, BELGIUM, 12 November, 2020** – The Janssen Pharmaceutical Companies of Johnson & Johnson announced today the submission of regulatory applications to the European Medicines Agency (EMA) and United States (U.S.) Food and Drug Administration (FDA) seeking approval of the subcutaneous formulation of daratumumab, known as DARZALEX®▼ subcutaneous (SC) formulation within the European Union (EU) and DARZALEX FASPRO™ (daratumumab and hyaluronidase-fihj) in the U.S. These applications seek approval of the combination of daratumumab SC with pomalidomide and dexamethasone (D-Pd) for the treatment of patients with relapsed or refractory multiple myeloma. As a fixed-dose formulation, daratumumab SC can be administered over approximately three to five minutes, significantly less time than the intravenous formulation (IV) of daratumumab, which is given over several hours.

The Type II variation application to the EMA and the supplemental Biologics License Application (sBLA) to the U.S. FDA are supported by positive findings from the Phase 3 APOLLO study ([MMY3013](#)). The APOLLO study is the first and only study showing the benefit of subcutaneous anti-CD-38 monoclonal antibody (mAb) in combination with pomalidomide and dexamethasone. The study met its primary endpoint with improved progression-free survival (PFS) in patients receiving D-Pd compared with Pd alone in patients with relapsed or refractory multiple myeloma.<sup>2</sup> Overall, the safety profile of D-Pd demonstrated a consistent safety profile with that of each therapy separately.<sup>2</sup> The most common adverse reactions seen with D-Pd were neutropenia, anemia and leukopenia.<sup>2</sup>

Full results from the Phase 3 APOLLO study, a collaboration between Janssen Research & Development, LLC and the European Myeloma Network (EMN), will be presented in an oral session at the upcoming American Society of Hematology (ASH) Annual Meeting on Sunday, December 6, 2020 at 9:00 a.m. Central European Time (3:00 p.m. Eastern Time) (Abstract #412).

The D-Pd regimen received approval from the U.S. FDA for the intravenous (IV) formulation of daratumumab in 2017 for patients who have received at least two prior therapies, including lenalidomide and a proteasome inhibitor.<sup>3</sup> This regimen for the IV formulation has not previously been submitted for approval to the EMA.

“The IV formulation of daratumumab in combination with pomalidomide and dexamethasone is an important option for patients with multiple myeloma. We are excited to pursue daratumumab subcutaneous formulation for this indication as we look to improve patient outcomes and reduce administration time from hours to minutes compared to the IV formulation,” said Craig Tendler, M.D., Vice President, Late Development and Global Medical Affairs, Oncology, Janssen Research & Development, LLC. “Today’s regulatory milestones represent our continued commitment to advance innovative treatments for people living with multiple myeloma.”

Daratumumab was first approved as a monotherapy for the treatment of multiple myeloma in [2015](#) in the U.S. and in [2016](#) in the EU, making it the first anti-CD38 monoclonal antibody indicated anywhere in the world for multiple myeloma.<sup>4,5</sup> In 2020, the subcutaneous formulation of daratumumab was approved by the [U.S. FDA](#) and [European Commission \(EC\)](#) as the only CD38-directed antibody approved to be given subcutaneously to treat patients with multiple myeloma.<sup>6,7</sup> Daratumumab SC is co-formulated with recombinant human hyaluronidase PH20 (rHuPH20), Halozyme's ENHANZE<sup>®</sup> drug delivery technology. As of 2020, daratumumab has been approved by global regulatory authorities across six combination regimens and as a monotherapy for the treatment of newly diagnosed patients, across relapsed and refractory multiple myeloma.<sup>4,8,9,10,11,12</sup>

“Despite strong progress in multiple myeloma over the last decade, it remains a disease with significant unmet need,” said Dr Catherine Taylor, VP, Medical Affairs Therapeutic Area Strategy, Europe, Middle East and Africa (EMEA), Janssen-Cilag Ltd. Middle East. “We are pleased to pursue this important daratumumab-based combination regimen, which is the first study showing a benefit of subcutaneous anti-CD38 in combination in patients with previously treated multiple myeloma.”

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### **About the APOLLO Study<sup>1</sup>**

APOLLO ([NCT01960348](#)) is an ongoing multicenter, Phase 3, randomized, open-label study comparing daratumumab SC, pomalidomide and low-dose dexamethasone with pomalidomide and low-dose dexamethasone alone in patients with relapsed or refractory multiple myeloma who have received at least one prior treatment regimen, have received both lenalidomide and a proteasome inhibitor, and have demonstrated disease progression. The study enrolled 304 participants. The primary endpoint is PFS between treatment arms. Secondary endpoints include rates of overall response rate (ORR), very good partial response (VGPR) or better, complete response (CR) or better, and duration of response.

**About daratumumab and daratumumab SC**

Daratumumab is a first-in-class biologic targeting CD38, a surface protein that is highly expressed across multiple myeloma (MM) cells, regardless of disease stage.<sup>13,14</sup> Daratumumab is believed to induce tumour cell death through multiple immune-mediated mechanisms of action, including complement-dependent cytotoxicity (CDC), antibody-dependent cell-mediated cytotoxicity (ADCC) and antibody-dependent cellular phagocytosis (ADCP), as well as through apoptosis, in which a series of molecular steps in a cell lead to its death.<sup>14</sup> A subset of myeloid derived suppressor cells (CD38+ MDSCs), CD38+ regulatory T cells (Tregs) and CD38+ B cells (Bregs) are decreased by daratumumab-mediated cell lysis.<sup>14</sup>

In [August 2012](#), Janssen Biotech, Inc. and Genmab A/S entered a worldwide agreement, which granted Janssen an exclusive license to develop, manufacture and commercialise daratumumab. Since launch, it is estimated that more than 154,000 patients have been treated with daratumumab worldwide.<sup>15</sup> In [June 2020](#), daratumumab SC (daratumumab and hyaluronidase human-fihj) was approved by the European Commission as the only subcutaneous CD38-directed antibody approved to treat patients with multiple myeloma. Daratumumab SC is co-formulated with recombinant human hyaluronidase PH20 (rHuPH20), Halozyme's ENHANZE® drug delivery technology.<sup>7</sup>

Daratumumab is being evaluated in a comprehensive clinical development programme across a range of treatment settings in MM, such as in frontline and relapsed settings.<sup>16,17,18,19,20,21,22,23</sup> Additional studies are ongoing or planned to assess daratumumab SC's potential in other malignant and pre-malignant haematologic diseases in which CD38 is expressed, such as smouldering myeloma and in AL amyloidosis.<sup>24,25</sup> For more information, please see <https://www.clinicaltrials.gov/>.

For further information on daratumumab, please see the Summary of Product Characteristics at <https://www.ema.europa.eu/en/medicines/human/EPAR/darzalex>.

**About the Janssen Pharmaceutical Companies of Johnson & Johnson**

At Janssen, we're creating a future where disease is a thing of the past. We're the Pharmaceutical Companies of Johnson & Johnson, working tirelessly to make that future a reality for patients everywhere by fighting sickness with science, improving access with ingenuity, and healing hopelessness with heart. We focus on areas of medicine where we can make the biggest difference: Cardiovascular & Metabolism, Immunology, Infectious Diseases & Vaccines, Neuroscience, Oncology, and Pulmonary Hypertension.

Learn more at [www.janssen.com](http://www.janssen.com). Follow us at [www.twitter.com/janssenEMEA](https://www.twitter.com/janssenEMEA) for our latest news. Janssen Research & Development, LLC, Janssen-Cilag Limited Middle East, and Janssen Biotech, Inc. are part of the Janssen Pharmaceutical Companies of Johnson & Johnson.

### **Cautions Concerning Forward-Looking Statements**

*This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding the benefits of daratumumab for the treatment of patients with multiple myeloma. The reader is cautioned not to rely on these forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate or known or unknown risks or uncertainties materialize, actual results could vary materially from the expectations and projections of Janssen Pharmaceutica N.V., Janssen Pharmaceutical Companies and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to: challenges and uncertainties inherent in product research and development, including the uncertainty of clinical success and of obtaining regulatory approvals; uncertainty of commercial success; manufacturing difficulties and delays; competition, including technological advances, new products and patents attained by competitors; challenges to patents; product efficacy or safety concerns resulting in product recalls or regulatory action; changes in behavior and spending patterns of purchasers of health care products and services; changes to applicable laws and regulations, including global health care reforms; and trends toward health care cost containment. A further list and descriptions of these risks, uncertainties and other factors can be found in Johnson & Johnson's Annual Report on Form 10-K for the fiscal year ended December 29, 2019, including in the sections captioned "Cautionary*

*Note Regarding Forward-Looking Statements” and “Item 1A. Risk Factors,” and in the company’s most recently filed Quarterly Report on Form 10-Q, and the company’s subsequent filings with the Securities and Exchange Commission. Copies of these filings are available online at [www.sec.gov](http://www.sec.gov), [www.jnj.com](http://www.jnj.com) or on request from Johnson & Johnson. None of the Janssen Pharmaceutical Companies nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.*

ENHANZE® is a registered trademark of Halozyne.

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<sup>1</sup> Comparison of Pomalidomide and Dexamethasone With or Without Daratumumab in Subjects With Relapsed or Refractory Multiple Myeloma Previously Treated With Lenalidomide and a Proteasome Inhibitor Daratumumab/Pomalidomide/Dexamethasone vs Pomalidomide/Dexamethasone (EMN14). Available at: <https://clinicaltrials.gov/ct2/show/record/NCT03180736> Last accessed: November 2020.

<sup>2</sup> Chari A, et al. “Daratumumab plus pomalidomide and dexamethasone in relapsed and/or refractory multiple myeloma.” *Blood*. 2017;130(8): 974-981.

<sup>3</sup> Johnson & Johnson. DARZALEX® (daratumumab) Approved by the U.S. FDA in Combination with Pomalidomide and Dexamethasone for Patients with Multiple Myeloma Who Have Received At Least Two Prior Therapies. Available at: <https://www.jnj.com/media-center/press-releases/darzalex-daratumumab-approved-by-the-us-fda-in-combination-with-pomalidomide-and-dexamethasone-for-patients-with-multiple-myeloma-who-have-received-at-least-two-prior-therapies> Last accessed: November 2020.

<sup>4</sup> Johnson & Johnson. DARZALEX® (daratumumab) Approved by U.S. FDA: First Human Anti-CD38 Monoclonal Antibody Available for the Treatment of Multiple Myeloma. Available at: <https://www.jnj.com/media-center/press-releases/darzalex-daratumumab-approved-by-us-fda-first-human-anti-cd38-monoclonal-antibody-available-for-the-treatment-of-multiple-myeloma> Last accessed: November 2020.

<sup>5</sup> Janssen EMEA. Janssen’s Single-Agent DARZALEX® (Daratumumab) Approved by European Commission for Treatment of Multiple Myeloma (MM). Available at: [www.janssen.com/emea/sites/www\\_janssen\\_com\\_emea/files/janssen\\_darzalex\\_ec\\_approval\\_press\\_release\\_2016\\_05\\_23\\_final.pdf](http://www.janssen.com/emea/sites/www_janssen_com_emea/files/janssen_darzalex_ec_approval_press_release_2016_05_23_final.pdf). Last accessed: November 2020.

<sup>6</sup> U.S. Food and Drug Administration Center for Drug Evaluation and Research. FDA Approves Daratumumab and Hyaluronidase-Fihj for Multiple Myeloma. Available at: [www.fda.gov/drugs/drug-approvals-and-databases/fda-approves-daratumumab-and-hyaluronidase-fihj-multiple-myeloma](http://www.fda.gov/drugs/drug-approvals-and-databases/fda-approves-daratumumab-and-hyaluronidase-fihj-multiple-myeloma) Last accessed: November 2020.

<sup>7</sup> Janssen EMEA. European Commission Grants Marketing Authorisation for DARZALEX® ▼ (Daratumumab) Subcutaneous Formulation for All Currently Approved Daratumumab Intravenous Formulation Indications. Available at: [www.businesswire.com/news/home/20200604005487/en/European-Commission-Grants-Marketing-Authorisation-for-DARZALEX%C2%AE%E2%96%BC-daratumumab-Subcutaneous-Formulation-for-all-Currently-Approved-Daratumumab-Intravenous-Formulation-Indications](http://www.businesswire.com/news/home/20200604005487/en/European-Commission-Grants-Marketing-Authorisation-for-DARZALEX%C2%AE%E2%96%BC-daratumumab-Subcutaneous-Formulation-for-all-Currently-Approved-Daratumumab-Intravenous-Formulation-Indications). Last accessed: November 2020.

<sup>8</sup> Janssen Research & Development, LLC. A Study Comparing Daratumumab, Lenalidomide, and Dexamethasone With Lenalidomide and Dexamethasone in Relapsed or Refractory Multiple Myeloma. In: ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000-[cited 2018 July 24]. Available at: <https://clinicaltrials.gov/ct2/show/NCT02076009?term=mmy3003&rank=1> Identifier: NCT02136134. Last accessed: November 2020.

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