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News Release

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New Comprehensive Phase 3 Data Show First-in-Class TREMFYA®▼ (guselkumab) Provided Durable Improvements in Measures of Psoriatic Arthritis (PsA) Disease Activity Through Two Years

Guselkumab, the only selective interleukin (IL)-23 inhibitor therapy approved in the EU to treat both adults with active PsA and adults with moderate to severe plaque psoriasis (Pso), demonstrated low rates of structural damage progression and durable improvements in physical function at week 100

Approximately 80-90 percent of guselkumab-treated patients who achieved improvements in joint signs and symptoms and low levels of disease activity at week 52 (ACR20/50 and MDA) maintained this response at week 100

BEERSE, BELGIUM, 1 November, 2021 – The Janssen Pharmaceutical Companies of Johnson & Johnson today announced comprehensive efficacy and safety data from the DISCOVER–2 trial of TREMFYA®▼ (guselkumab) were published in *Arthritis & Rheumatology*, representing the final results of the first two-year clinical trial investigating a selective interleukin (IL)-23 inhibitor therapy in active psoriatic arthritis (PsA).[1] Results show a majority of guselkumab-treated biologic-naïve adult

patients with active PsA achieved improvements in joint signs and symptoms (American College of Rheumatology [ACR] 20/50/70)[a] and complete skin clearance (Investigator's Global Assessment [IGA] 0)[b] that were maintained or increased over time, suggesting continued guselkumab treatment may lead to higher levels of symptom improvement.[1] Guselkumab demonstrated low rates of radiographic progression, a key indicator of structural damage, which includes erosion and joint space narrowing, and provided substantial and durable improvements across multiple additional disease domains, including achievement of minimal disease activity (MDA)[c] and normalised physical function (Health Assessment Questionnaire Disability Index [HAQ-DI] ≤0.5).[1,2,d]

"These comprehensive, two-year data yield important insights into how patients with psoriatic arthritis can achieve and sustain improvements across symptoms with the ultimate goal being full remission," said study investigator Philip Mease,[e] M.D., Director of Rheumatology Research at the Swedish Medical Center/Providence St. Joseph Health and Clinical Professor at the University of Washington School of Medicine. "It's helpful for both healthcare providers and patients to understand the long-term profile of therapies like guselkumab in order to make informed decisions about treatment for a life-long disease like psoriatic arthritis."

The data from the study show durable improvement in joint manifestations and skin clearance:[1]

- Among guselkumab patients who achieved an ACR20, ACR50, or ACR70 response at week 52, 91 percent of patients receiving treatment every four weeks (q4w)[f] and 87 percent of patients receiving treatment every eight weeks (q8w) maintained an ACR20 response at week 100. Eighty-three percent of q4w and 79 percent of q8w patients maintained an ACR50 response, and 72 percent and 80 percent, respectively, maintained an ACR70 response.
- In both guselkumab groups, ACR response rates were maintained or continued to improve through week 100. Response rates for ACR50 and ACR70 increased through the second year of treatment, suggesting that individual patients may

be improving over time and achieving higher levels of improvement with continued guselkumab treatment.

- Low rates of radiographic progression, a key indicator of structural damage, were seen from week 0–100 across both guselkumab dosing regimens. Mean changes in total van der Heijde Modified Sharp (vdH-S)[g] scores indicated less radiographic progression from week 52–100 than from week 0–52 in all three treatment groups (q4w, q8w, and patients who crossed over from placebo to guselkumab at week 24).
- Enthesitis and dactylitis resolution rates at week 100 showed amelioration of these signs and symptoms of arthritis was durable through two years. Among patients affected at baseline, 62 percent in the q4w group and 70 percent in the q8w group achieved complete resolution of enthesitis and 72 percent and 83 percent, respectively, achieved complete resolution of dactylitis at week 100.
- Among patients receiving guselkumab from week 0, 62 percent and 55 percent of patients in the q4w and q8w groups, respectively, achieved complete skin clearance (IGA score of 0) at week 100, and 76 percent and 72 percent had an IGA score of 0/1 (clear/almost clear).[h]

Guselkumab also demonstrated durable improvements in physical function and maintenance of low disease activity:[1]

- At week 100, 38 percent and 40 percent of patients receiving guselkumab q4w and q8w, respectively, achieved the more stringent criteria of minimal disease activity (MDA).[c] Among patients achieving MDA at week 52, 81 percent and 83 percent in the q4w and q8w groups, respectively, maintained MDA at week 100. In addition, 14 percent of patients in the q4w group and 17 percent in the q8w group achieved very low disease activity (VLDA).[i]
- At week 100, least squares mean changes from baseline in the HAQ-DI[d] in the q4w (-0.55) and q8w (-0.53) groups were consistent with those at week 52, and 63 to 64 percent of patients receiving either dosing regimen experienced a clinically meaningful improvement in HAQ-DI scores (≥0.35). Additionally,

35 to 40 percent of patients in the guselkumab groups achieved normalised physical function (HAQ-DI ≤0.5) at week 100.

DISCOVER-2 data, which represent the most comprehensive results for a selective IL-23 inhibitor in PsA patients, also showed consistency in the established safety profile of guselkumab:[1]

- Adverse events (AEs) through two years of DISCOVER-2 were consistent with those reported through one year of DISCOVER-2 and those seen in the one-year DISCOVER-1 study and in the five-year VOYAGE 1 and 2 studies in plaque psoriasis (Pso).[3-5] Guselkumab-treated patients exhibited low rates of infections (37.3 events/100 patient-years of follow-up), serious infections (1.9 events/100 patient-years of follow-up), and opportunistic infections (in three patients with predisposing factors during the second year of treatment). Among all patients, there were no cases of active tuberculosis, and in guselkumab-treated patients, there were no cases of inflammatory bowel disease.
- Guselkumab-treated patients also receiving methotrexate (MTX) had numerically higher rates of elevated alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels, which can indicate abnormal liver function, than patients not receiving MTX. The majority of ALT and AST elevations were generally mild and transient. PsA patients often receive concomitant therapy with MTX and oral corticosteroids, in contrast with Pso patients.[6,7]

"The response rates in the DISCOVER-2 trial demonstrate the ability of guselkumab to improve the signs and symptoms of psoriatic arthritis for people who live with the challenges of this disease," said Alyssa Johnsen, M.D., Ph.D., Vice President and Rheumatology Disease Area Leader, Janssen Research & Development, LLC. "Psoriatic arthritis is a chronic disease, so patients need treatment options with durable efficacy and an established safety profile. We are proud to deliver the first two-year results for a selective IL-23 inhibitor therapy in PsA."

Janssen's continued commitment to advancing guselkumab for the treatment of active PsA is demonstrated by the guselkumab PsA clinical development programme, which currently includes two studies in Phase 3b, NCT04882098/EudraCT 2020-004981-20 and NCT04936308/EudraCT 2021-000482-32, and one in Phase 4 testing, NCT04929210/EudraCT 2021-000465-32.[8-13]

Editor's Note:

a. ACR20/50/70 response is defined as both at least 20/50/70 percent improvement from baseline in the number of tender and swollen joints, and at least 20/50/70 percent improvement from baseline in three of the following five criteria: patient global assessment, physician global assessment, patient-reported functional ability (HAQ-DI), patient-reported pain using a visual analogue, and a laboratory marker of systemic inflammation (erythrocyte sedimentation rate or C-reactive protein level).[14]
b. IGA is a five-point scoring system used to characterise Pso severity. Scores range from 0 to 5 and represent cleared (0), almost clear (1), mild (2), moderate (3), severe (4), and very severe (5) skin Pso.[15]
c. MDA is defined as low disease activity across five of the following seven domains of PsA: tender joint count, swollen joint count, tender entheses, Psoriasis Area and Severity Index (PASI) or body surface area affected with Pso, patient pain assessment and global disease activity assessments, and patient-reported physical function.[16]
d. HAQ-DI is a patient questionnaire that assesses physical function and disability across rheumatic diseases.[17] Normalised physical function is defined as a HAQ-DI score of ≤0.5. These results were seen among patients with HAQ-DI ≥0.35 and ≥0.5 at baseline.
e. Dr Mease is a paid consultant for Janssen. He was not compensated for any media work.
f. Guselkumab is approved for administration as a 100-mg subcutaneous (SC) injection given every eight weeks, following initial doses at weeks 0 and 4.[18]

g. The total PsA-modified vdH-S score is a composite score of structural damage that ranges from 0-528 and measures the number and size of joint erosions and the degree of joint space narrowing in the hands and feet.[2]
h. These results were seen among patients with psoriasis body surface area ≥3 percent and IGA ≥2 at baseline.[1]
i. VLDA (considered "remission") represents low disease activity across all seven of the MDA components noted above.[19]

About Psoriatic Arthritis (PsA)

PsA is a chronic, immune-mediated inflammatory disease characterised by peripheral joint inflammation, enthesitis (pain where the bone, tendon and ligament meet), dactylitis (severe inflammation of the fingers and toes), axial disease, and the skin lesions associated with plaque Pso.[20-22] In addition, in patients with PsA, comorbidities, such as obesity, cardiovascular diseases, anxiety and depression are often present.[23] Studies show up to 30 percent of people with plaque Pso also develop PsA.[24] The disease causes pain, stiffness and swelling in and around the joints; it commonly appears between the ages of 30 and 50, but can develop at any time.[24] Nearly half of patients with PsA experience moderate fatigue and about 30 percent suffer from severe fatigue as measured by the modified fatigue severity scale.[25] Although the exact cause of PsA is unknown, genes, the immune system and environmental factors are all believed to play a role in disease onset.[26]

About Psoriasis (Pso)

Plaque Pso is an immune-mediated disease resulting in an overproduction of skin cells, which causes raised, red, scaly plaques that may be itchy or painful.[27] It is estimated that more than 125 million people worldwide live with the disease.[28] Nearly one-quarter of all people with plaque Pso have cases that are considered moderate to severe.[29] Living with plaque Pso can be a challenge and impact life beyond a person's physical health, including emotional health, relationships, and handling the stressors of life.[30]

About DISCOVER-2 (NCT03158285/EudraCT 2016-001224-63)[31,32]

DISCOVER-2 is a randomised, double-blind, multicentre Phase 3 study evaluating the efficacy and safety of guselkumab administered by subcutaneous (SC) injection in biologic-naïve patients with active PsA. DISCOVER-2 evaluated 739 participants who were treated and followed through approximately two years.[1] The primary endpoint was response of ACR20 at week 24 and primary endpoint data was previously presented at scientific congresses. In addition to ACR20, multiple other clinical outcomes were assessed, including ACR50/70; resolution of soft tissue inflammation, enthesitis and dactylitis; improvement in physical function; skin clearance (IGA), and general health outcomes (36-Item Short Form Survey Physical Component Summary and Mental Component Score). DISCOVER-2 also assessed changes in structural damage as a key secondary endpoint (vdH-S score). The study consisted of a screening phase of up to six weeks, a blinded treatment phase of approximately 100 weeks that included a placebo-controlled period from week 0 to week 24 and a blinded active treatment period from week 24 to week 100. It also included a safety follow-up phase through week 112 (i.e., approximately 12 weeks after the last administration of study agent at week 100). Clinical efficacy, radiographic efficacy, health economics, safety, pharmacokinetics, immunogenicity, biomarker, and pharmacogenomics evaluations were performed in the study on a defined schedule.

About TREMFYA® (guselkumab)

Developed by Janssen, guselkumab is the first approved fully human monoclonal antibody that selectively binds to the p19 subunit of IL-23 and inhibits its interaction with the IL-23 receptor.[18] IL-23 is an important driver of the pathogenesis of inflammatory diseases such as moderate to severe plaque Pso and active PsA.[30] Guselkumab is approved in the EU for the treatment of moderate to severe plaque Pso in adults who are candidates for systemic therapy and for the treatment of active PsA in adult patients who have had an inadequate response or who have been intolerant to a prior disease-modifying antirheumatic drug therapy.[18] It is also approved in the U.S., Canada, Japan, and a number of other countries worldwide for the treatment of adults with moderate to severe plaque Pso who are candidates for

injections or pills (systemic therapy) or phototherapy (treatment using ultraviolet light), and for the treatment of adult patients with active PsA.[18]

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GUSELKUMAB IMPORTANT SAFETY INFORMATION

Very common (≥10 percent) and common (≥1 percent) adverse drug reactions (ADRs) in controlled periods of clinical studies with guselkumab were respiratory tract infections, increased transaminases, headache, diarrhoea, arthralgia and injection site reactions.[18] Uncommon ADRs (≥0.1 percent) observed were herpes simplex infections, tinea infections, gastroenteritis, decreased neutrophil count, hypersensitivity, anaphylaxis, urticaria and rash.[18]

Please refer to the Summary of Product Characteristics for full prescribing information for guselkumab: https://www.ema.europa.eu/en/documents/product-information/tremfya-epar-product-information_en.pdf

ADRs should be reported▼. This medicinal product is subject to additional monitoring and it is therefore important to report any suspected ADRs related to this medicinal product.

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.

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Janssen-Cilag International NV, the marketing authorisation holder for TREMFYA® in the EU; and Janssen Research & Development, LLC each are a 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 TREMFYA® (guselkumab) product development. 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 Research & Development, LLC, any of the other 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 January 3, 2021, 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, 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.

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