Regeneron and Teva Announce Positive Topline Phase 3 Fasinumab Results in Patients with Chronic Pain from Osteoarthritis of the Knee or Hip

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Data include final primary efficacy results and an interim safety analysis

Regeneron Pharmaceuticals, Inc. (NASDAQ: **REGN**) and Teva Pharmaceutical Industries Ltd. (NYSE and TASE: **TEVA**) today announced positive topline results from a Phase 3, randomized, double-blind, placebo-controlled study of fasinumab in patients with chronic pain from osteoarthritis (OA) of the knee or hip. At the week 16 primary efficacy analysis, the study met both co-primary endpoints and all key secondary endpoints. Fasinumab-treated patients experienced significantly less pain and significantly improved functional ability from baseline compared to placebo.

"We are encouraged by these data and look forward to advancing our pivotal Phase 3 fasinumab program in patients with osteoarthritis of the knee or hip, who currently have very limited therapeutic choices to treat their chronic pain, other than with non-steriodal anti-inflammatory drugs or opioids," said George D. Yancopoulos, M.D., Ph.D., President and Chief Scientific Officer of Regeneron.

The study compared two different fasinumab treatment arms (subcutaneous 1 mg every four or eight weeks) with placebo. The co-primary endpoint results are presented in Table 1.

Table 1: Topline Efficacy Results from Phase 3 Study[1]

	Placebo (n=214)	**Fasinumab 1 mg every 8 weeks** (n=215)	**Fasinumab 1 mg every 4 weeks** (n=217)
Change in pain at week 16 vs. baseline (least squares [LS] mean)[2]	-1.56	-2.25 *(p=0.0019)*	-2.78 *(p &< 0.0001)*
Change in physical function at week 16 vs. baseline (LS mean)[3]	-1.37	-2.10 *(p=0.0011)*	-2.57 *(p &< 0.0001)*

1. Approximately 85% of sub-study patients had OA of the knee; **2.** As measured by the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain subscale score (score range: 0-10); **3.** As measured by the WOMAC physical function subscale score (score range: 0-10)

After the primary efficacy assessment at week 16, patients continue on therapy for an additional 36 weeks, followed by a subsequent 20-week off study drug follow-up period for further safety assessment.

Interim safety data indicate that fasinumab was generally well tolerated, with similar adverse events (AEs) as those observed in previous fasinumab trials. At week 16, treatment discontinuations due to AEs had occurred in 6% of the placebo group patients, 5% of the fasinumab 1 mg every eight weeks group patients and 6% of the fasinumab 1 mg every four weeks group patients. The fasinumab safety program was designed to capture all arthropathies (joint damage), including those identified due to symptoms and those identified by regularly-scheduled radiographic monitoring, the first of which was scheduled at week 24. Among the approximately 65% of patients who had completed their first radiographic assessment, the placebo-adjusted rate of adjudicated arthropathies was approximately 2%. The majority of arthropathies were captured by the regularly-scheduled radiographic monitoring and involved isolated joint space narrowing, called RPOA-1 (rapid progressive OA type 1). No cases of osteonecrosis have been identified to date in this study.

The companies plan to present detailed results at an upcoming medical congress.

Regeneron and Teva are jointly developing fasinumab as part of a global collaboration agreement. In Japan and 10 other Asian countries, Mitsubishi Tanabe Pharma Corporation holds exclusive development and commercial rights for fasinumab.

About the Phase 3 Study

The Phase 3 study is a sub-study of a larger, long-term trial that involves 52 weeks of active treatment, designed to determine the safety and tolerability of fasinumab, including AEs of special interest, in patients with pain due to radiographically-confirmed OA of the knee or hip. Approximately 85% of sub-study patients had OA of the knee. The primary efficacy data were assessed at 16 weeks; the primary safety analysis of the larger long-term trial will occur at 72 weeks (52-week active treatment and 20-week follow-up periods). The safety data presented today are interim data and preliminary in nature. Earlier this year, an Independent Data Monitoring Committee (IDMC) monitoring the safety and efficacy of ongoing fasinumab trials recommended that the two higher dose regimens (3 mg every four weeks and 6 mg every eight weeks) be discontinued.

About Fasinumab

Fasinumab is an investigational therapy invented by Regeneron using the company's proprietary *VelocImmune*® technology that yields optimized fully-human antibodies. Fasinumab targets nerve growth factor (NGF), a protein that plays a central role in the regulation of pain signaling. There is evidence that NGF levels are elevated in the synovial fluid of patients with chronic pain conditions.

Regeneron and Teva are currently enrolling patients with chronic pain caused by OA of the knee or hip in three Phase 3 clinical trials including one assessing fasinumab long-term safety and two trials comparing fasinumab to standard pain therapies. The safety and efficacy of fasinumab have not been fully evaluated by any regulatory authority.

About Regeneron

Regeneron (NASDAQ: REGN) is a leading biotechnology company that invents life-transforming medicines for people with serious diseases. Founded and led for 30 years by physician-scientists, our unique ability to repeatedly and consistently translate science into medicine has led to six FDA-approved treatments and numerous product candidates in development, all of which were homegrown in our laboratories. Our medicines and pipeline are designed to help patients with eye disease, heart disease, allergic and inflammatory diseases, pain, cancer, infectious diseases and rare diseases.

Regeneron is accelerating and improving the traditional drug development process through our proprietary *VelociSuite*® technologies, such as *VelocImmune*® which produces optimized fully-human antibodies, and ambitious research initiatives such as the Regeneron Genetics Center, which is conducting one of the largest genetics sequencing efforts in the world.

For additional information about the company, please visit www.regeneron.com or follow @Regeneron on Twitter.

About Teva

Teva Pharmaceutical Industries Ltd. (NYSE and TASE: TEVA) is a global leader in generic medicines, with innovative treatments in select areas, including CNS, pain and respiratory. We deliver high-quality generic products and medicines in nearly every therapeutic area to address unmet patient needs. We have an established presence in generics, specialty, OTC and API, building on more than a century-old legacy, with a fully integrated R&D function, strong operational base and global infrastructure and scale. We strive to act in a socially and environmentally responsible way. Headquartered in Israel, with production and research facilities around the globe, we employ 45,000 professionals, committed to improving the lives of millions of patients. Learn more at www.tevapharm.com.

Regeneron Forward-Looking Statements and Use of Digital Media

This news release includes forward-looking statements that involve risks and uncertainties relating to future events and the future performance of Regeneron Pharmaceuticals, Inc. ("Regeneron" or the "Company"), and actual events or results may differ materially from these forward-looking statements. Words such as "anticipate," "expect," "intend," "plan," "believe," "seek," "estimate," variations of such words, and similar expressions are intended to identify such forward-looking statements, although not all forward-looking statements contain these identifying words. These statements concern, and these risks and uncertainties include, among others, the nature, timing, and possible success and therapeutic applications of Regeneron's products, product candidates, and research and clinical programs now underway or planned, including without limitation fasinumab; unforeseen safety issues resulting from the administration of products and product candidates in patients, including serious complications or side effects in connection with the use of Regeneron's product candidates in clinical trials, such as the clinical development programs evaluating fasinumab; the likelihood and timing of possible regulatory approval and commercial launch of Regeneron's late-stage product candidates, such as fasinumab for patients with chronic pain from osteoarthritis of the hip or knee or other potential indications; determinations by regulatory and administrative governmental authorities which may delay or restrict Regeneron's ability to continue to develop or commercialize Regeneron's products and product candidates, such as fasinumab; the extent to which the results from the research and development programs conducted by Regeneron or its collaborators may be replicated in other studies and lead to therapeutic applications; ongoing regulatory obligations and oversight impacting Regeneron's marketed products, research and clinical programs, and business, including those relating to patient privacy; competing drugs and product candidates that may be superior to Regeneron's products and product candidates; uncertainty of market acceptance and commercial success of Regeneron's products and product candidates and the impact of studies (whether conducted by Regeneron or others and whether mandated or voluntary) on the commercial success of Regeneron's products and product candidates; the ability of Regeneron to manufacture and manage supply chains for multiple products and product candidates; the ability of Regeneron's collaborators, suppliers, or other third parties to perform filling, finishing, packaging, labeling, distribution, and other steps related to Regeneron's products and product candidates; the availability and extent of reimbursement of the Company's products from third-party payers, including private payer healthcare and insurance programs, health maintenance organizations, pharmacy benefit management companies, and government programs such as Medicare and Medicaid; coverage and reimbursement determinations by such payers and new policies and procedures adopted by such payers; unanticipated expenses; the costs of developing, producing, and selling products; the ability of Regeneron to meet any of its sales or other financial projections or guidance and changes to the assumptions underlying those projections or guidance; the potential for any license or collaboration agreement, including Regeneron's agreements with Sanofi and Bayer HealthCare LLC (or their respective affiliated companies, as applicable) and Regeneron's agreements with Teva Pharmaceutical Industries Ltd. and Mitsubishi Tanabe Pharma Corporation relating to fasinumab, to be cancelled or terminated without any further product success; and risks associated with intellectual property of other parties and pending or future litigation relating thereto, including without limitation the patent litigation proceedings relating to EYLEA® (aflibercept) Injection, Dupixent® (dupilumab) Injection, and Praluent® (alirocumab) Injection, the ultimate outcome of any such litigation proceedings, and the impact any of the foregoing may have on Regeneron's business, prospects, operating results, and financial condition. A more complete description of these and other material risks can be found in Regeneron's filings with the United States Securities and Exchange Commission, including its Form 10-Q for the quarterly period ended June 30, 2018. Any forward-looking statements are made based on management's current beliefs and judgment, and the reader is cautioned not to rely on any forward-looking statements made by Regeneron. Regeneron does not undertake any obligation to update publicly any forward-looking statement, including without limitation any financial projection or guidance, whether as a result of new information, future events, or otherwise.

Regeneron uses its media and investor relations website and social media outlets to publish important information about the Company, including information that may be deemed material to investors. Financial and other information about Regeneron is routinely posted and is accessible on Regeneron's media and investor relations website (http://newsroom.regeneron.com) and its Twitter feed (http://twitter.com/regeneron).

Teva Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 regarding fasinumab, which are based on management's current beliefs and expectations and are subject to substantial risks and uncertainties, both known and unknown, that could cause our future results, performance or achievements to differ significantly from that expressed or implied by such forward-looking statements. Important factors that could cause or contribute to such differences include risks relating to:

- *challenges inherent in product research and development, including uncertainty of clinical success and obtaining regulatory approvals;*
- *our ability to successfully compete in the marketplace, including: that we are substantially dependent on our generic products; competition for our specialty products, especially COPAXONE®, our leading medicine, which faces competition from existing and potential additional generic versions and orally-administered alternatives; competition from companies with greater resources and capabilities; efforts of pharmaceutical companies to limit the use of generics including through legislation and regulations; consolidation of our customer base and commercial alliances among our customers; the increase in the number of competitors targeting generic opportunities and seeking U.S. market exclusivity for generic versions of significant products; price erosion relating to our products, both from competing products and increased regulation; delays in launches of new products and our ability to achieve expected results from investments in our product pipeline; our ability to take advantage of high-value opportunities; the difficulty and expense of obtaining licenses to proprietary technologies; and the effectiveness of our patents and other measures to protect our intellectual property rights;*
- *our substantially increased indebtedness and significantly decreased cash on hand, which may limit our ability to incur additional indebtedness, engage in additional transactions or make new investments, may result in a further downgrade of our credit ratings; and our inability to raise debt or borrow funds in amounts or on terms that are favorable to us;*
- *our business and operations in general, including: failure to effectively execute our restructuring plan announced in December 2017; uncertainties related to, and failure to achieve, the potential benefits and success of our new senior management team and organizational structure; harm to our pipeline of future products due to the ongoing review of our R&D programs; our ability to develop and commercialize additional pharmaceutical products; potential additional adverse consequences following our resolution with the U.S. government of our FCPA investigation; compliance with sanctions and other trade control laws; manufacturing or quality control problems, which may damage our reputation for quality production and require costly remediation; interruptions in our supply chain; disruptions of our or third party information technology systems or breaches of our data security; the failure to recruit or retain key personnel; variations in intellectual property laws that may adversely affect our ability to manufacture our products; challenges associated with conducting business globally, including adverse effects of political or economic instability, major hostilities or terrorism; significant sales to a limited number of customers in our U.S. market; our ability to successfully bid for suitable acquisition targets or licensing opportunities, or to consummate and integrate acquisitions; and our prospects and opportunities for growth if we sell assets;*
- *compliance, regulatory and litigation matters, including: costs and delays resulting from the extensive governmental regulation to which we are subject; the effects of reforms in healthcare regulation and reductions in pharmaceutical pricing, reimbursement and coverage; governmental investigations into sales and marketing practices; potential liability for patent infringement; product liability claims; increased government scrutiny of our patent settlement agreements; failure to comply with complex Medicare and Medicaid reporting and payment obligations; and environmental risks;*
- *other financial and economic risks, including: our exposure to currency fluctuations and restrictions as well as credit risks; potential impairments of our intangible assets; potential significant increases in tax liabilities; and the effect on our overall effective tax rate of the termination or expiration of governmental programs or tax benefits, or of a change in our business;*

and other factors discussed in our Annual Report on Form 10-K for the year ended December 31, 2017, including in the section captioned "Risk Factors," and in our other filings with the U.S. Securities and Exchange Commission, which are available at www.sec.gov and www.tevapharm.com. Forward-looking statements speak only as of the date on which they are made, and we assume no obligation to update or revise any forward-looking statements or other information contained herein, whether as a result of new information, future events or otherwise. You are cautioned not to put undue reliance on these forward-looking statements.

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