

Pfizer Announces Positive Top-Line Results from Second Pivotal Phase 3 Study of Investigational Oral JAK1 Candidate, Abrocitinib, in Patients Aged 12 and Older with Moderate to Severe Atopic Dermatitis

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–Study achieves all co-primary and key secondary endpoints– –Safety results show both doses of abrocitinib consistent with prior clinical trial experiences–

NEW YORK--([BUSINESS WIRE](#))--Pfizer Inc. (NYSE: PFE) announced today positive top-line results from a second Phase 3 pivotal study evaluating the efficacy and safety of its investigational oral Janus kinase 1 (JAK1) inhibitor, abrocitinib, in patients aged 12 and older with moderate to severe atopic dermatitis (AD). This is the second monotherapy trial in the JAK1 Atopic Dermatitis Efficacy and Safety (JADE) global development program (B7451013, or JADE MONO-2). Pfizer announced positive top-line results from the first trial in the JADE program (B7451012, or JADE MONO-1) on [May 15, 2019](#). Complete results from JADE MONO-1 will be presented as a late-breaking abstract at a major upcoming European scientific meeting in Madrid in October 2019.

JADE MONO-2 was a randomized, double-blind, placebo-controlled, parallel-group study designed to evaluate the efficacy and safety of two doses (100mg and 200mg once daily) of abrocitinib monotherapy over 12 weeks.

Consistent with JADE MONO-1, results showed that by week 12 the percentage of patients achieving each co-primary efficacy endpoint and each key secondary endpoint with either dose of abrocitinib was statistically significantly higher than placebo. In addition, a statistically significant number of patients achieved a reduction in pruritus by week two, as measured by a four-point or larger reduction in itch severity measured with the pruritus numerical rating scale (NRS).

“These findings add to a growing body of evidence supporting the potential of abrocitinib to improve the lives of people living with moderate to severe atopic dermatitis,” said Michael Corbo, PhD, Chief Development Officer, Inflammation & Immunology, Pfizer Global Product Development. “We look forward to continued findings from the JADE program, with results from the next abrocitinib efficacy study, using an active control, becoming available in spring 2020. This will further our understanding of abrocitinib as a potential medicine for patients who suffer from this chronic condition.”

The co-primary study endpoints in JADE MONO-2 were the proportion of patients who achieved an Investigator Global Assessment (IGA) score of clear (0) or almost clear (1) skin and two-point or greater improvement; and the proportion of patients who achieved at least a 75% or greater change from baseline in their Eczema Area and

Severity Index (EASI) score. The key secondary endpoints were the proportion of patients achieving a four-point or larger reduction in itch severity measured with the pruritus NRS and the magnitude of decrease in the Pruritus and Symptoms Assessment for Atopic Dermatitis (PSAAD).

Safety results showed that both doses of abrocitinib were well-tolerated and were broadly consistent with JADE MONO-1. The frequency of treatment-emergent adverse events were 54%, 63%, and 66% for placebo, 100mg, and 200mg, respectively. The frequency of Serious Adverse Events were 1.3%, 3.2%, and 1.3% for placebo, 100mg, and 200mg, respectively. One patient with co-existing cardiovascular risk factors died from unknown etiology three weeks after completing treatment with abrocitinib 100mg once daily, which was deemed unrelated to the study drug by the investigator. The discontinuation rates due to an adverse event were low in each treatment arm (3.8% and 3.2% in 100mg and 200mg, respectively) compared to placebo (12.8%).

Full results from JADE MONO-2 will be submitted for presentation at a future scientific meeting and publication in a medical journal.

Additional Details About the Study

A total of 391 subjects were randomized to abrocitinib 200mg, abrocitinib 100mg, and placebo in the trial. Randomization was stratified by baseline disease severity (moderate [IGA=3] and severe [IGA=4] AD) and age (age <18 and ≥18 years). Eligible subjects completing the 12-week treatment period of the study had the option to enter a long-term extension (LTE) study, B7451015. Subjects discontinuing early from treatment, or who were otherwise ineligible for the LTE study, entered a 4-week follow up period in this study.

JADE MONO-2 is the second trial in the JAK1 Atopic Dermatitis Efficacy and Safety (JADE) global development program. Additional data from other studies in the JADE program will be available later this year and early next.

For additional information about JADE MONO-2, please visit <https://www.clinicaltrials.gov>.

About Abrocitinib

Abrocitinib is an oral small molecule that selectively inhibits Janus kinase (JAK) 1. Inhibition of JAK1 is thought to modulate multiple cytokines involved in pathophysiology of AD, including interleukin (IL)-4, IL-13, IL-31, and interferon gamma.

Abrocitinib received Breakthrough Therapy designation from the U.S. Food and Drug Administration (FDA) for the treatment of patients with moderate to severe AD in February 2018. Breakthrough Therapy designation was initiated as part of the Food and Drug Administration Safety and Innovation Act (FDASIA) signed in 2012. As defined by the FDA, a breakthrough therapy is a drug intended to be used alone or in combination with one or more other drugs to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. If a drug is designated as a Breakthrough Therapy, the FDA will expedite the development and review of such drug.¹

About Atopic Dermatitis

AD is a chronic skin disease characterized by inflammation of the skin and skin barrier defects.^{2,3} Lesions of AD are characterized by erythema (redness), itching, induration (hardening)/papulation (formation of papules), and oozing/crusting.^{2,3}

AD is one of the most common, chronic, relapsing childhood dermatoses, affecting up to 10% of adults and up to 20% of children worldwide.^{4,5}

About Pfizer's Immunokinase Inhibitor Leadership

The JAK pathways are believed to play an important role in inflammatory processes as they are involved in signaling for over 50 cytokines and growth factors, many of which drive immune-mediated conditions.⁶ JAK inhibition may offer patients with these conditions a potential new advanced treatment option.⁷

Pfizer's leading JAK biology and chemistry expertise from years of JAK research experience, has enabled the company to take a different R&D approach, resulting in the broadest immunokinase inhibitor pipeline. Instead of studying a single molecule for all its potential uses, where it may not be optimal for some, Pfizer's candidates are purposefully matched to the conditions where we believe they have the greatest potential to, if approved, address unmet need. Pfizer has five unique immunokinase inhibitors in late-stage clinical trials for the potential treatment of nine immune-mediated diseases:

- Abrocitinib: A JAK inhibitor in Phase 3 clinical trials for the treatment of moderate-to-severe AD among adolescents and adults
- PF-06651600: An oral, JAK3/TEC family kinase inhibitor in Phase 3 clinical trial for the treatment of alopecia areata (AA) and in Phase 2 for vitiligo, Crohn's disease (CD), and ulcerative colitis (UC)
- PF-06700841: A tyrosine kinase 2(TYK2)/JAK1 inhibitor in Phase 2 clinical trials for the treatment of psoriasis and AD in topical formulation, and, in oral formulation for psoriatic arthritis, CD, UC, vitiligo, systemic lupus erythematosus (SLE), and AA
- PF-06826647: A TYK2 inhibitor under investigation in Phase 2 clinical trials for the treatment of psoriasis
- PF-06650833: An IL-1 receptor associated kinase 4 (IRAK4) inhibitor under investigation for the treatment of rheumatoid arthritis in Phase 2 clinical trial

Pfizer Inc.: Breakthroughs that Change Patients' Lives

At Pfizer, we apply science and our global resources to bring therapies to people that extend and significantly improve their lives. We strive to set the standard for quality, safety and value in the discovery, development and manufacture of health care products, including innovative medicines and vaccines. Every day, Pfizer colleagues work across developed and emerging markets to advance wellness, prevention, treatments and cures that challenge the most feared diseases of our time. Consistent with our responsibility as one of the world's premier innovative biopharmaceutical companies, we collaborate with health care providers, governments and local communities to support and expand access to reliable, affordable health care around the world. For more than 150 years, we have worked to make a difference for all who rely on us. We routinely post information that may be important to investors on our website at www.pfizer.com. In addition, to learn more, please visit us on www.pfizer.com and follow us on Twitter at [@Pfizer](https://twitter.com/Pfizer) and [@Pfizer_News](https://twitter.com/Pfizer_News), [LinkedIn](https://www.linkedin.com/company/pfizer), [YouTube](https://www.youtube.com/pfizer) and like us on Facebook at [Facebook.com/Pfizer](https://www.facebook.com/Pfizer).

DISCLOSURE NOTICE: *The information contained in this release is as of September 27, 2019. Pfizer assumes no obligation to update forward-looking statements contained in this release as the result of new information or future events or developments.*

This release contains forward-looking information about a product candidate, abrocitinib, and Pfizer's ongoing investigational programs in kinase inhibitor therapies, including their potential benefits, that involves substantial risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. Risks and uncertainties include, among other things, the uncertainties inherent in research and development, including the ability to meet anticipated clinical endpoints, commencement and/or

completion dates for our clinical trials, regulatory submission dates, regulatory approval dates and/or launch dates, as well as the possibility of unfavorable new clinical data and further analyses of existing clinical data; the risk that clinical trial data are subject to differing interpretations and assessments by regulatory authorities; whether regulatory authorities will be satisfied with the design of and results from our clinical studies; whether and when drug applications may be filed in any jurisdictions for any potential indication for abrocitinib or any other investigational kinase inhibitor therapies; whether and when any such applications may be approved by regulatory authorities, which will depend on myriad factors, including making a determination as to whether the product's benefits outweigh its known risks and determination of the product's efficacy and, if approved, whether abrocitinib or any such other investigational kinase inhibitor therapies will be commercially successful; decisions by regulatory authorities impacting labeling, manufacturing processes, safety and/or other matters that could affect the availability or commercial potential of abrocitinib or any other investigational kinase inhibitor therapies; and competitive developments.

A further description of risks and uncertainties can be found in Pfizer's Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and in its subsequent reports on Form 10-Q, including in the sections thereof captioned "Risk Factors" and "Forward-Looking Information and Factors That May Affect Future Results", as well as in its subsequent reports on Form 8-K, all of which are filed with the U.S. Securities and Exchange Commission and available at www.sec.gov and www.pfizer.com.

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- ¹ U.S. Food and Drug Administration. Fact Sheet: Breakthrough Therapies at <https://www.fda.gov/RegulatoryInformation/LawsEnforcedbyFDA/SignificantA...> accessed on August 16, 2019.
- ² Hanifin JM, Reed ML. A population-based survey of eczema in the United States. *Dermatitis*. 2007;18(2):82-91.
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- ⁴ Oszukowska M, Michalak I, Gutfreund K, et al. Role of primary and secondary prevention in atopic dermatitis. *Postep Derm Alergol*. 2015;32(6):409-420.
- ⁵ Nutten S. Atopic dermatitis: global epidemiology and risk factors. *Ann Nutr Metab*. 2015;66(suppl 1):8-16.
- ⁶ Banerjee, S., Biehl, A., Gadina, M. et al. JAK-STAT Signaling as a Target for Inflammatory and Autoimmune Diseases: Current and Future Prospects. *Drugs*. 2017;77: 521. <https://doi.org/10.1007/s40265-017-0701-9>.
- ⁷ Telliez JB, Dowty ME, Wang L, Jussif J, Lin T, Li L, et al. Discovery of a JAK3-selective inhibitor: functional differentiation of JAK3-selective inhibition over pan-JAK or JAK1-selective inhibition. *ACS Chem Biol*. 2016;11(12):3442-51. doi:10.1021/acschembio.6b00677.

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