Circassia Announces Top-Line Results from House Dust Mite Allergy Field Study

- **Primary endpoint not achieved**
- **Treatment groups had greatly reduced Combined Score and symptoms**
- **Strong placebo effect mirrored previous cat allergy study**
- **Allergy investment halted**
- **Circassia to focus on broader respiratory business including new AstraZeneca US collaboration**

Oxford, UK – 18 April 2017: Circassia Pharmaceuticals plc ("Circassia" or "the Company"; LSE: CIR), a specialty pharmaceutical company focused on respiratory disease, today announces top-line results from its investigational house dust mite allergy immunotherapy phase IIb field study. In the study, both the active treatment and placebo greatly reduced subjects' allergy symptoms and rescue medication use. As a result, the treatment did not show a significant effect compared with placebo and the study did not meet its primary endpoint. The results show the immunotherapy was well tolerated with a highly favourable safety profile.

Steve Harris, Circassia's Chief Executive, said: *"We are naturally disappointed by this outcome, which is in line with our cat allergy phase III study where there was also a very marked placebo effect. Although subjects receiving the immunotherapies in both these studies had greatly improved allergy symptoms, the strong placebo effect made it highly challenging to achieve the studies' endpoints."*

"It is concerning that in two well-designed field trials, a robust placebo response has confounded our ability to demonstrate a significant treatment effect, despite positive results in earlier chamber studies. We remain convinced that the technology has biologic activity, but we also believe the difficulty in overcoming the placebo effect using the field study designs required by regulators represents a significant hurdle, and consequently we will make no further investment in our allergy portfolio. As indicated previously, we will now focus on our wider respiratory business, in particular our new US commercial collaboration with AstraZeneca, our market-leading NIOX® franchise and the development of our broader respiratory portfolio."

Efficacy – primary endpoint

The house dust mite allergy study included four arms. These comprised a single four-dose course of treatment administered over 12 weeks, two sequential courses (eight doses), a high-dose course of four administrations, and placebo. The primary endpoint was the difference in mean Combined Score (CS: combined total rhinoconjunctivitis symptom score and rescue medication use score) between the placebo and active groups one year after the start of dosing.

- The placebo group had a substantial reduction in Combined Score from baseline (39.1%).
- The 4 x 12nmol regimen improved the Combined Score by 34.9% from baseline; (CS vs placebo p=0.26).
- The 4 x 20nmol regimen improved the Combined Score by 40.9% from baseline; (CS vs placebo p=0.65).
- The 8 x 12nmol regimen improved the Combined Score by 44.3% from baseline; (CS vs placebo p=0.14).

Next steps

Following the receipt of disappointing cat allergy phase III results in June last year, Circassia halted significant new investment in its allergy portfolio while awaiting the outcome of its house dust mite field study. Following these new results, Circassia will make no further investment in its allergy programmes.

The Company will now focus on its respiratory business, with its broad portfolio of marketed and development products offering significant commercial potential. Circassia plans to continue the growth of its market-leading NIOX® asthma management franchise, accelerating its newly established US commercial collaboration with AstraZeneca for Tudorza® and Duaklir®, leveraging its specialty commercial infrastructure as a strategic growth platform and progressing the development of its respiratory pipeline. The Company will provide a further update and announce its financial results for the year ended 31 December 2016 on 25 April 2017.

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About the study

The double-blind, placebo-controlled, multi-centre field study included house dust mite allergic subjects aged 18 to 70 years old with moderate or severe allergy symptoms (mean Total Rhinoconjunctivitis Symptom Score [TRSS] ≥ 12). The study compared a single course of 4 x 12nmol doses of investigational immunotherapy administered over 12 weeks (n=180), two sequential courses (8 x 12nmol; n=178), a course of 4 x 20nmol doses (n=178) and placebo (n=178). The primary efficacy endpoint was the difference in the mean combined TRSS and rescue medication scores between the treatment and placebo groups one year after the start of dosing.

About Circassia

Circassia is a world-class specialty respiratory pharmaceutical business with a strong commercial infrastructure, marketed products and portfolio of treatments targeting major market opportunities. The Company sells its novel, market-leading NIOX® asthma management products directly to specialists in the United States, United Kingdom and Germany, and in a wide range of other countries through its network of partners. Circassia recently established a collaboration with AstraZeneca in the United States in which it promotes the chronic obstructive pulmonary disease (COPD) treatment Tudorza®, and has the US commercial rights to late-stage COPD product Duaklir®.

Circassia's broad-based development pipeline includes a range of respiratory medicines. The Company's lead asthma treatment, Fliveo®, targets substitution of GSK's Flixotide® pMDI and is approved in the UK. Circassia is also developing a direct substitute for Seretide® pMDI, Seriveo®. In addition, the Company's pipeline includes a number of inhaled medicines for COPD, including single and combination dose products. For more information on Circassia please visit www.circassia.com.

Forward-looking statements

This press release contains certain projections and other forward-looking statements with respect to the financial condition, results of operations, businesses and prospects of Circassia. The use of terms such as "may", "will", "should", "expect", "anticipate", "project", "estimate", "intend", "continue", "target" or "believe" and similar expressions (or the negatives thereof) are generally intended to identify forward-looking statements. These statements are based on current expectations and involve risk and uncertainty because they relate to events and depend upon circumstances that may or may not occur in the future. There are a number of factors that could cause actual results or developments to differ materially from those expressed or implied by these forward-looking statements. Any of the assumptions underlying these forward-looking statements could prove inaccurate or incorrect and therefore any results contemplated in the forward-looking statements may not actually be achieved. Nothing contained in this press release should be construed as a profit forecast or profit estimate. Investors or other recipients are cautioned not to place undue reliance on any forward-looking statements contained herein. Circassia undertakes no obligation to update or revise (publicly or otherwise) any forward-looking statement, whether as a result of new information, future events or other circumstances.