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MEDIA & INVESTOR RELEASE

Novartis reports positive topline results from second Phase III trial of Beovu® in patients with diabetic macular edema

- *In Phase III KESTREL study, Beovu (brolucizumab 6 mg) achieved its primary endpoint of non-inferiority to aflibercept 2 mg in change in best-corrected visual acuity (BCVA) at year one (week 52)*[1]

- *In a secondary endpoint, more than half of Beovu patients in the 6 mg arm were maintained on a three-month dosing interval through year one, following the loading phase*[1]

- *Significant improvement with Beovu 6 mg in change of central subfield thickness (CST) from baseline over the period of week 40 through week 52 was observed*[1]

- *Beovu demonstrated an overall well-tolerated safety profile*[1]

- *Novartis intends to submit the data from KESTREL, together with the data from the pivotal Phase III KITE*[2] *study in DME, to health authorities in H1 2021*

Basel, December 15, 2020 — Novartis today announced positive findings from the first interpretable results of the Phase III KESTREL study, assessing the efficacy and safety of Beovu® (brolucizumab) 3 mg and 6 mg in diabetic macular edema (DME). Following KITE*, KESTREL is the second pivotal Phase III study of Beovu in DME. The trial met its primary endpoint of non-inferiority in change in best corrected visual acuity (BCVA) from baseline of Beovu 6 mg to aflibercept 2 mg at year one. The trial also met its key secondary endpoint of non-inferiority in average change in BCVA of Beovu 6 mg to aflibercept 2 mg over week 40 through week 52[1]. (Beovu 6 mg is the marketed dose for wet AMD.)

More than half of patients in the Beovu 6 mg arm were maintained on a three-month dosing interval through year one, following the loading phase[1]. Patients treated with Beovu 6 mg experienced significant improvement in change of central subfield thickness (CST) from baseline over the period of week 40 through week 52[1]. As non-inferiority in change in BCVA of brolucizumab 3 mg was not demonstrated in KESTREL, no confirmatory testing of superiority on anatomical outcomes was performed. Further analyses on anatomical outcomes from KESTREL are ongoing.

“These results demonstrate that Beovu has the potential, if approved, to offer DME patients better disease management,” said Dirk Sauer, Global Head Development, Novartis Pharma

Ophthalmology. “Based on these data and the strong results we saw earlier this year from the KITE clinical study, we look forward to working with regulatory authorities to bring Beovu to DME patients.”

In KESTREL, Beovu demonstrated an overall well-tolerated safety profile[1].

Novartis announced positive topline results from another pivotal phase III study, KITE, in September 2020. The results from KESTREL support the positive results seen in KITE, reinforcing Beovu as a potential new treatment option for DME patients.

The data from KITE and KESTREL will be submitted to upcoming medical meetings and for peer-review publication. Novartis intends to submit the data from both KITE and KESTREL to health authorities in H1 2021 and looks forward to working with regulators worldwide to make Beovu available to DME patients in need.

About Diabetic Macular Edema
Diabetic macular edema (DME) is the leading cause of blindness in young adults in developed countries, including 12% of people with type 1 diabetes and 28% of those with type 2 diabetes[3].

Consistently high blood sugar levels associated with diabetes can damage small blood vessels in the eye, causing them to leak fluid[4]. The resulting accumulation of fluid (known as edema) in the macula can lead to vision loss[5]. The macula is the area of the retina responsible for sharp, central vision[5].

Early symptoms of DME include blurry or wavy central vision and distorted color perception, although the disease can also progress without symptoms at early stages[4,5].

About Beovu (brolucizumab)
Beovu (brolucizumab, also known as RTH258) is approved in more than 50 countries, including in the US[6], EU[7], UK[7], Japan[8], Canada[9] and Australia[10], for the treatment of wet AMD. Additional trials are currently ongoing which study the effects of brolucizumab in patients with AMD, diabetic macular edema, retinal vein occlusion and proliferative diabetic retinopathy. Brolucizumab is the most clinically advanced humanized single-chain antibody fragment (scFv)[11-13]. Single-chain antibody fragments are highly sought after in drug development due to their small size, enhanced tissue penetration, rapid clearance from systemic circulation and drug delivery characteristics[13-15].

The proprietary innovative structure results in a small molecule (26 kDa) with potent inhibition of, and high affinity to, all VEGF-A isoforms[14]. Beovu is engineered to deliver the highest concentration of drug, providing more active binding agents[11-13]. In preclinical studies, Beovu inhibited activation of VEGF receptors through prevention of the ligand-receptor interaction[14-16]. Increased signaling through the VEGF pathway is associated with pathologic ocular angiogenesis and retinal edema[17]. Inhibition of the VEGF pathway has been shown to inhibit the growth of neovascular lesions and suppress endothelial cell proliferation and vascular permeability[17].

**Kite Pharma, Inc. is neither a sponsor nor associated with Novartis' KITE trial.*

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You should not place undue reliance on these statements. Such forward-looking statements are based on our current beliefs and expectations regarding future events, and are subject to significant known and unknown risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those set forth in the forward-looking statements. There can be no guarantee that the investigational or approved products described in this press release will be submitted or approved for sale or for any additional indications or labeling in any market, or at any particular time. Nor can there be any guarantee that such products will be commercially successful in the future. In particular, our expectations regarding such products could be affected by, among other things, the uncertainties inherent in research and development, including clinical trial results and additional analysis of existing clinical data; regulatory actions or delays or government regulation generally; global trends toward health care cost containment, including government, payor and general public pricing and reimbursement pressures and requirements for increased pricing transparency; our ability to obtain or maintain proprietary intellectual property protection; the particular prescribing preferences of physicians and patients; general political, economic and business conditions, including the effects of and efforts to mitigate pandemic diseases such as COVID-19; safety, quality, data integrity or manufacturing issues; potential or actual data security and data privacy breaches, or disruptions of our information technology systems, and other risks and factors referred to in Novartis AG's current Form 20-F on file with the US Securities and Exchange Commission. Novartis is providing the information in this press release as of this date and does not undertake any obligation to update any forward-looking statements contained in this press release as a result of new information, future events or otherwise.

About Novartis

Novartis is reimagining medicine to improve and extend people's lives. As a leading global medicines company, we use innovative science and digital technologies to create transformative treatments in areas of great medical need. In our quest to find new medicines, we consistently rank among the world's top companies investing in research and development. Novartis products reach nearly 800 million people globally and we are finding innovative ways to expand access to our latest treatments. About 110,000 people of more than 140 nationalities work at Novartis around the world. Find out more at https://www.novartis.com.

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