

PRESS RELEASE

Basilea reports positive preclinical data on oncology drug candidates derazantinib and lisavanbulin at AACR-NCI-EORTC conference

- **Late-breaking abstract on mode of action and potential response biomarkers for FGFR/CSF1R kinase inhibitor derazantinib**
- **Survival advantage with monotherapy and standard-of-care combinations with tumor checkpoint controller lisavanbulin in glioblastoma models**

Basel, Switzerland, October 30, 2019 – Basilea Pharmaceutica Ltd. (SIX: BSLN) reported today presentations of supporting preclinical data, on its clinical stage oncology drug candidates derazantinib and lisavanbulin (BAL101553), at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics in Boston, USA, on October 29, 2019.

In a late-breaking abstract, novel preclinical data were presented demonstrating that derazantinib has equipotent inhibitory activity against fibroblast growth factor receptor kinases (FGFR1, 2 and 3) and the colony-stimulating factor 1 receptor (CSF1R) kinase. Structural analyses and in-cell inhibition of CSF1R activity in isolated macrophages, performed in collaboration with Dr. Paul Walker (University of Geneva), further supported CSF1R as an additional cancer target for derazantinib. As CSF1R inhibition plays a role in restoring T cell activity, thus promoting a tumoricidal immune environment, these observations support the rationale for derazantinib combination strategies with immune modulators. Furthermore, data from detailed derazantinib activity screens across a panel of urothelial cancer models were presented, providing evidence for potential response biomarkers beyond FGFR genetic aberrations that could facilitate patient selection.

Dr. Marc Engelhardt, Basilea's Chief Medical Officer, said: "These late-breaking derazantinib data may have important clinical implications. The data support the activity of derazantinib in urothelial cancer models with genetic FGFR aberrations and highlight the dual targeting of derazantinib through FGFR and CSF1R kinase inhibition. The activity of derazantinib against CSF1R may increase the susceptibility of cancers to immunotherapy when derazantinib is combined with PD-1/PD-L1 inhibitors."

Basilea is currently exploring derazantinib as monotherapy and in combination with Roche's PD-L1 inhibitor atezolizumab (Tecentriq®) in a multicohort phase 1/2 study in patients with advanced urothelial cancer.¹

A second abstract presented data obtained in collaboration with Dr. Jann Sarkaria (Mayo Clinic, Rochester), demonstrating significant survival benefits in patient-derived glioblastoma models after treatment with the microtubule-targeting tumor checkpoint controller lisavanbulin (BAL101553) as monotherapy or in combination with radiotherapy and/or standard-of-care chemotherapy, including the 'Stupp' regimen.² Survival benefits conferred by lisavanbulin and radiotherapy combinations improved when lisavanbulin dosing continued after the radiation window, suggesting a benefit of prolonged lisavanbulin dosing.

Lisavanbulin is currently being evaluated as monotherapy in a phase 2a study in Switzerland in patients with recurrent glioblastoma and platinum-resistant ovarian cancer patients using a

weekly 48-hour infusion.³ In the U.S., a phase 1 study is being conducted in collaboration with the Adult Brain Tumor Consortium (ABTC), in which oral lisavanbulin is evaluated in combination with radiotherapy in patients with newly diagnosed glioblastoma who have a reduced sensitivity to chemotherapy with the standard-of-care drug temozolomide.⁴ Patient recruitment into a further phase 1 study in recurrent glioblastoma or high-grade glioma with the oral formulation has just been completed with the determination of the maximum tolerated dose.⁵ In this study, daily oral lisavanbulin showed clinical antitumor activity, including one exceptional, long-lasting responder with an approximate 70% tumor area reduction.⁶

Derazantinib late-breaking abstract at the AACR-NCI-EORTC Conference on Molecular Targets and Cancer Therapeutics

- Derazantinib (DZB): A dual FGFR/CSF1R-inhibitor active in PDX-models of urothelial cancer – Paul McSheehy, Felix Bachmann, Nicole Forster-Gross, Marc Lecoultre, Mahmoud E. Shemerly, Mila Roceri, Stefan Reinelt, Laurenz Kellenberger, Paul R. Walker, Heidi Lane; abstract LB-C12.

Lisavanbulin (BAL101553) abstract at the AACR-NCI-EORTC Conference on Molecular Targets and Cancer Therapeutics

- Modeling the clinical paradigm of lisavanbulin (BAL101553) deployment in patient-derived xenografts (PDX) of glioblastoma (GBM) – Danielle M. Burgenske, Ann C. Mladek, Jenny L. Pokorny, Heidi A. Lane, Felix Bachmann, Rachael A. Vaubel, Mark A. Schroeder, Katrina K. Bakken, Lihong He, Zeng Hu, Brett L. Carlson, Surabhi Talele, Gautham Gampa, Matthew L. Kosel, Paul A. Decker, Jeanette E. Eckel-Passow, William F. Elmquist, Jann N. Sarkaria; abstract C096

For further information, please visit <https://www.aacr.org>.

About derazantinib

Derazantinib (formerly ARQ 087) is an investigational orally administered small-molecule panFGFR kinase inhibitor with strong activity against FGFR1, 2, and 3.⁷ FGFR kinases are key drivers of cell proliferation, differentiation and migration. FGFR genetic aberrations, e.g. gene fusions, mutations or amplifications, have been identified as potentially important therapeutic targets for various cancers, including intrahepatic cholangiocarcinoma (iCCA), urothelial, breast, gastric and lung cancers.⁸ In these cancers, FGFR genetic aberrations are found in a range of 5% to 30%.⁹ Derazantinib also inhibits the colony-stimulating-factor-1-receptor kinase (CSF1R).⁷ CSF1R-mediated signaling is important for the maintenance of tumor-promoting macrophages and therefore has been identified as a potential target for anti-cancer drugs.¹⁰ Pre-clinical data has shown that tumor macrophage depletion through CSF1R blockade renders tumors more responsive to T-cell checkpoint immunotherapy, including approaches targeting PD-L1/PD-1.^{11, 12} Derazantinib has demonstrated antitumor activity and a manageable safety profile in previous clinical studies, including a biomarker-driven phase 1/2 study in iCCA patients,¹³ and has received U.S. and EU orphan drug designation for iCCA. Basilea is currently conducting two clinical studies with derazantinib. The first study, FIDES-01, is a registrational phase 2 study in patients with iCCA with FGFR2 gene fusions or mutations and amplifications.¹⁴ The second study, FIDES-02, is a phase 1/2 study evaluating derazantinib alone and in combination with Roche's PD-L1-blocking immune-checkpoint inhibitor atezolizumab (Tecentriq®) in patients with advanced urothelial cancer, including metastatic, or recurrent surgically unresectable disease, expressing FGFR genetic aberrations.¹ Basilea in-licensed derazantinib from ArQule Inc.

About lisavanbulin (BAL101553)

Basilea's oncology drug candidate lisavanbulin (BAL101553, the prodrug of BAL27862)¹⁵ is being developed as a potential therapy for diverse cancers. It is currently evaluated in clinical phase 1

and 2a studies with glioblastoma and ovarian cancer patients.^{3, 4, 5} In preclinical studies, lisavanbulin demonstrated in-vitro and in-vivo activity against diverse treatment-resistant cancer models, including tumors refractory to conventional approved therapeutics and radiotherapy.^{16, 17, 18} Lisavanbulin efficiently distributes to the brain, with anticancer activity in glioblastoma models.^{19, 20, 21} In preclinical studies, end-binding protein 1 (EB1) was identified as a potential response-predictive biomarker in glioblastoma models.²¹ The active moiety BAL27862 binds to the colchicine site of tubulin, with distinct effects on microtubule organization,²² resulting in the activation of the "spindle assembly checkpoint" which promotes tumor cell death.²³

About Basilea

Basilea Pharmaceutica Ltd. is a commercial stage biopharmaceutical company, focused on the development of products that address the medical challenges in the therapeutic areas of oncology and anti-infectives. With two commercialized drugs, the company is committed to discovering, developing and commercializing innovative pharmaceutical products to meet the medical needs of patients with serious and life-threatening conditions. Basilea Pharmaceutica Ltd. is headquartered in Basel, Switzerland and listed on the SIX Swiss Exchange (SIX: BSLN). Additional information can be found at Basilea's website www.basilea.com.

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This press release can be downloaded from www.basilea.com.

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