Updated Interim Results of a Phase 1/2 Study of BION-1301 in Patients with IgA Nephropathy

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**Background/Methods**

IgA Nephropathy (IgAN) • IgA is the leading cause of primary glomerulonephritis, with approximately 2.3 per 100,000 individuals per year worldwide.1 • Approximately 30-40% of IgA patients progress to end-stage kidney disease (ESKD) over a period of 20-25 years.2,3 • Proteinuria is strongly associated with kidney disease progression in IgAN4-5 and treatment that reduces proteinuria result in improved clinical outcomes in IgAN3.

BION-1301 and the APRIL Pathway • APRIL-neutralizing IgG (APRIL) is a TNF superfamily cytokine that drives IgA class switching and survival of IgA-producing cells.6,7 • Higher APRIL levels in patients with IgAN are correlated with higher pathogenic IgG-IgA, proteinuria, and lower eGFR.8-10 • APRIL blocks APRIL humanized monoclonal antibody that binds and blocks APRIL.

**Safety and Tolerability**

In Cohort 1 and Cohort 2:
• BION-1301 is generally well-tolerated in IgAN patients, with no reported deaths, SAEs, or SAEs leading to discontinuation of study drug.
• All infections in patients with IgAN have been Grade 1 or 2 in severity and only one patient developed a Grade 3 infection (Covid-19).
• BION-1301 is generally well tolerated in IgAN patients, with no reported deaths, SAEs, or SAEs leading to discontinuation of study drug.

**Pharmacokinetics**
• Low inter-individual variability in BION-1301 serum concentration following IV and SC administrations.11

**Results**

BION-1301 Results in Rapid and Durational Reduction in IgA and Gd-IgA

Following both IV and SC dosing, BION-1301 produced rapid and sustained reductions in IgA and Gd-IgA, the pathogenic variant

Cohort 1 (IV) n=9:
• Patients received 450 mg IV then transitioned to 600 mg SC after at least 24 weeks.
• Reductions in IgA and Gd-IgA were maintained beyond 52 weeks of treatment.
• Reductions in IgA, and to a lesser extent IgG, were also observed.
• Reductions in APRIL confirm durable target neutralization sustained through 1 year (data not shown).

Cohort 2 (de novo SC):
• SC BION-1301 treatment resulted in rapid and sustained reductions in Gd-IgA, IgA, and to a lesser extent IgG through 24 weeks of treatment, consistent with Cohort 1.
• Cohort 2 measurements for free APRIL concentrations are in process.

Conclusions

Interim Data Continues to Demonstrate Disease-Modifying Potential of BION-1301 in Patients with IgAN
• BION-1301 results in rapid and durable reductions in IgA and Gd-IgA, the pathogenic IgA variant which drives IgAN pathogenesis.
• Reductions in IgA, and to a lesser extent IgG, were also observed.
• BION-1301 IgA IgGaphrologically well-tolerated with no AEs observed in patients with IgAN.
• BION-1301 results in clinically meaningful proteinuria reductions in patients receiving RAASi.
• Results are consistent across Cohort 1 (450 mg Q2W IV 400 mg SC after 24 weeks) and Cohort 2 (600 mg Q2W SC).

Clinical data to date supports BION-1301 (600 mg SC Q2W) is well-tolerated and results in clinically meaningful proteinuria reductions to be further explored in phase 3.

These data provide proof-of-concept for the disease-modifying potential of BION-1301 to:
• deplete pathogenic Gd-IgA in patients with IgAN
• reduce proteinuria in patients with IgAN who remain at risk for progression with residual proteinuria despite optimized standard-of-care treatment