

# bluebird bio Biotechnology

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## Rating

**BUY**  
unchanged

## Price Target

**US\$86.00**  
unchanged

**BLUE-NASDAQ**

Price  
**US\$45.40**

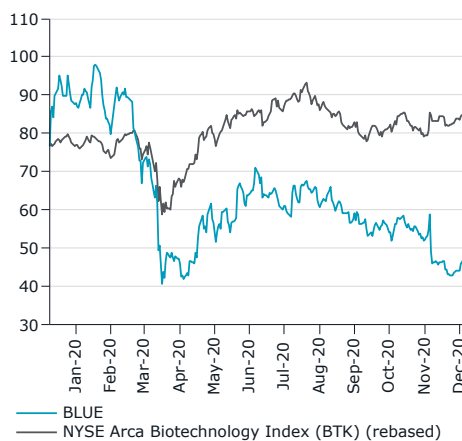
## Market Data

|                        |               |
|------------------------|---------------|
| 52-Week Range (US\$) : | 38.95 - 99.36 |
| Market Cap (US\$M) :   | 3,114.2       |
| Shares Out. (M) :      | 66.4          |

| FYE Dec            | 2018A   | 2019A   | 2020E  | 2021E  |
|--------------------|---------|---------|--------|--------|
| Revenue (US\$M)    | 54.6    | 44.7    | 249.0  | 59.6   |
| EPS Adj&Dil (US\$) | (10.68) | (14.31) | (9.62) | (8.89) |

| Quarterly Revenue | Q1    | Q2     | Q3    | Q4   |
|-------------------|-------|--------|-------|------|
| 2018A             | 16.0  | 7.9    | 11.5  | 19.2 |
| 2019A             | 12.5  | 13.3   | 8.9   | 10.0 |
| 2020E             | 21.9A | 198.9A | 19.3A | 8.9  |
| 2021E             | 10.3  | 12.6   | 15.2  | 21.5 |

| Quarterly EPS Adj&Dil | Q1      | Q2      | Q3      | Q4     |
|-----------------------|---------|---------|---------|--------|
| 2018A                 | (2.31)  | (2.91)  | (2.73)  | (2.72) |
| 2019A                 | (2.99)  | (3.55)  | (3.73)  | (4.04) |
| 2020E                 | (3.64)A | (0.36)A | (2.94)A | (2.69) |
| 2021E                 | (2.27)  | (2.20)  | (2.21)  | (2.21) |



Priced as of close of business 7 December 2020

## Severe vaso-occlusive event resolution for up to two years

**Key takeaways:** 100% resolution of severe vaso-occlusive events (VOEs) between months 6 and 24 of follow-up was reported in Sickle Cell Disease patients treated with LentiGlobin (n=19). Additionally, patient-reported outcomes show a reduction in pain intensity after treatment, improving quality of life.

### Resolution of severe VOEs for up to two years

Data as of August 20, 2020 show 100% resolution of severe vaso-occlusive events (VOEs) between months 6 and 24 of follow-up (n=19). Prior to treatment, these patients experienced a median of 3 severe VOEs, and resolution of these VOEs represents an important clinical benefit. After 6 or more months post-LentiGlobin treatment, median total hemoglobin is consistently  $\geq 11$  g/dL, and gene therapy-derived hemoglobin levels stabilizes at median  $\geq 40\%$  with near pancellular expression (n=22). Hemolysis markers trended towards normalization after treatment, and all patients were able to stop regular blood transfusions by three months post-treatment and remain off transfusions as of the data cut-off. Safety remains generally consistent with known side effects of busulfan conditioning as well as underlying SCD.

### Patient-reported outcomes show reduction in pain intensity

BLUE reported reduction in pain intensity at 12 months after treatment with LentiGlobin for SCD, using validated PROMIS-57 (0-10 scale) to collect patient-reported clinical outcomes. For five patients with baseline pain worse than population average (2.6), their mean score improved from 6 at baseline to 2.4 at month 12. For four patients with baseline pain better than or near population average at baseline, two reported improvement and two remained stable with a mean score of 2.3 at baseline and 0.8 at Month 12. These results support improvement in quality of life.

### Maintain BUY, \$86 price target

We maintain our BUY rating and \$86 price target for bluebird bio. We are encouraged by the long-term follow-up data in SCD, and we also continue to expect FDA approval for LentiGlobin in B-thalassemia. Additionally, we look for revenues to ramp for ZYNTGLO in Europe for B-thalassemia, beginning 2021.