

**bluebird bio****BLUE : NASDAQ : US\$29.40****Buy | US\$45.00 Target****Salveen Richter, CFA**

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## UPDATE FROM THE CANACCORD GENUITY CONFERENCE

We hosted BLUE management at the Canaccord Genuity Global Growth conference. Key highlights include:

- CEO Nick Leschly announced that the pivotal Phase 2/3 ALD-102 trial of lead product Lenti-D for childhood cerebral adrenoleukodystrophy (CCALD) initiated yesterday (sites are open, screening has begun), ahead of the prior schedule of late 2013. He characterized the FDA and EMA interactions as “extremely collaborative,” with significant focus on CMC.
- We are encouraged by the accelerated timetable and are optimistic for trial success given physician feedback and a P1/2 trial where three of four boys treated with an earlier version of Lenti-D demonstrated disease stabilization. We model for peak WW Lenti-D revenue recognized by BLUE of \$212M in 2028.

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**Valuation**

We arrive at our 12-month price target of \$45 via averaging two valuation methods: 1) a sum-of-the-parts discounted cash flow analysis equating to \$46 a share which ascribes \$15/share from Lenti-D, \$24/share for LentiGlobin and \$8/share in cash, with the following assumptions: we assign Lenti-D a 75% chance of success and LentiGlobin a 30% chance of success and we assign a WACC of 10% and a 1% terminal growth rate; and 2) a discounted EPS equating to \$44/share, applying a 35x multiple to our FY22 fully diluted GAAP EPS estimate of \$9.57, discounted back to mid-14 at 27%.

**Investment risks**

The primary risks for bluebird include the following:

1. Lenti-D clinical development risk: efficacy - will the Phase 2/3 trial demonstrate efficacy that compares favorably against the natural history trial (we note that the primary endpoint of no major functional disabilities is stringent and the new vector used in this trial has not been evaluated in the clinic; and safety – will a safety signal emerge? (particularly leukemia or pre-leukemic clonal expansion)?
  2. LentiGlobin clinical development risk: efficacy – will the two Phase 1/2 trials demonstrate efficacy in beta-thalassemia patients (particularly sufficient hemoglobin for patients to become transfusion independent) and safety?
  3. Commercial risk, including the possibility that Lenti-D and LentiGlobin do not achieve the peak commercial revenue estimates in our model (due to patient identification, market size, penetration rates, and/or pricing/reimbursement – particularly given the anticipated price of \$1.5M+).
  4. Regulatory risk: including failure to secure U.S. and E.U. approval for both Lenti-D and LentiGlobin.
  5. Product competition, for Lenti-D, advances in hematopoietic stem cell transplant using non-related donors or other techniques to prevent demyelination or development of competing gene therapy techniques; for LentiGlobin, other gene therapy approaches or advances in the ability to upregulate the fetal gamma globin gene.
  6. Financing risk – we model for one equity offering (\$200M; 5M shares @ \$40/share) in mid-2016.
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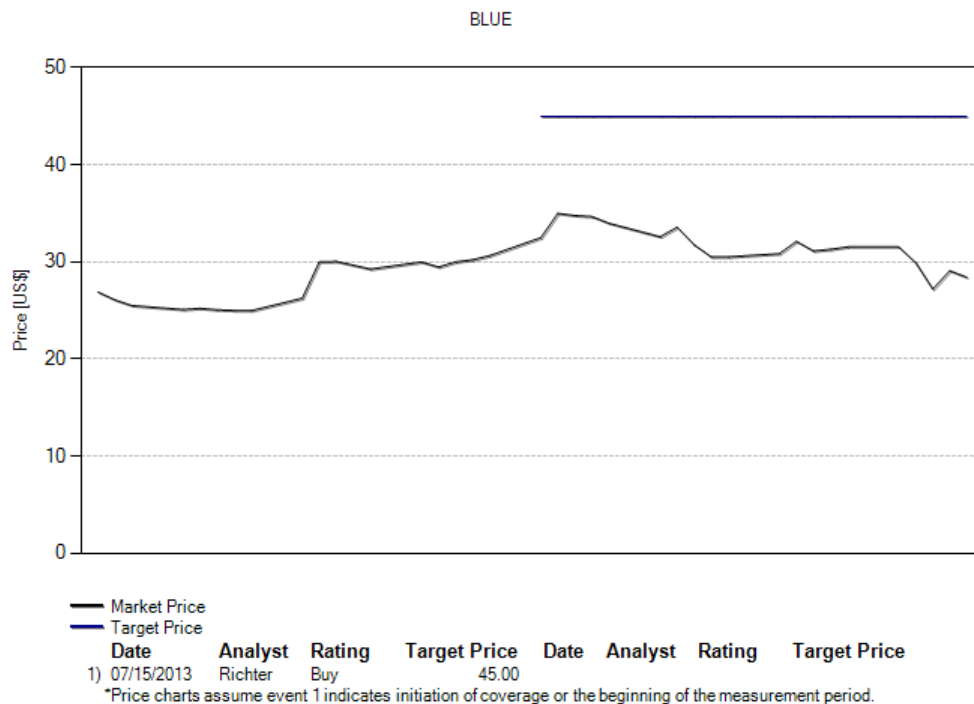
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**Price Chart:\*****Distribution of Ratings:**

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(as of 28 June 2013)

Rating	Coverage Universe		IB Clients
	#	%	%
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Speculative Buy	58	6.0%	60.3%
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	964*	100.0%	

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