

VALUE-ADD: AN EMPIRICAL STUDY OF IDIOSYNCRATIC VALUE IN THE 2013 BIOTECH IPO MARKET

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This Note examines corporate governance trends in the biotechnology industry through an empirical study of the 39 United States-based biotechnology companies that made initial public offerings (“IPOs”) in 2013. This study of Form S-1 and Form 4 SEC filings reveals a cohort of newly public, immature biotech firms with highly consolidated corporate control and cash-flow rights by pre-public investors. On average, pre-public insiders fill 66.2% of the board seats and own 59.8% of the equity in these firms at the time of IPO. Further, pre-public insiders do not immediately sell their equity positions after the expiration of mandatory lock-up periods. These data, this Note argues, suggest that entrepreneurs and investors in the biotech industry use concentrated ownership structures to pursue idiosyncratic value that will be, if realized, shared pro rata across all public shareholders. This Note demonstrates that in an industry with long-term business plans and high levels of uncertainty, value-maximizing agents (e.g., entrepreneurs, pre-public investors) can bundle boardroom control and illiquid equity holdings to pursue idiosyncratic value while mitigating concerns over agency costs. These findings provide both empirical and theoretical context for guiding policies that seek to facilitate innovative, high-growth industries such as biotechnology.

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I. INTRODUCTION

On November 22, 2013, Dr. David Schenkein, Chief Executive Officer and Director of Agios Pharmaceuticals, had the honor of ringing the opening bell at the NASDAQ MarketSite in Times Square, New York.¹ Agios was a

¹ Press Release, NASDAQ OMX, Agios Pharmaceuticals, Inc. [AGIO] to Ring the NASDAQ Stock Market Opening Bell, (Nov. 22, 2013), available at <http://globenewswire.com/news-release/2013/11/22/591927/10059188/en/Agios-Pharmaceuticals-Inc-AGIO-to-Ring-The-NASDAQ-Stock-Market-Opening-Bell.html>.

preclinical biotechnology² firm developing novel drugs related to cancer metabolism and rare metabolic disorders.³ It had just issued its initial public offering (“IPO”) of shares on the NASDAQ four months earlier.⁴ The IPO occurred before any of its experimental molecules had entered a human body for clinical trials.⁵ Agios was the twentieth United States-based biotechnology firm to go public in 2013, and by the end of year thirty-nine such firms had issued IPOs.⁶ This represented the highest number of IPOs in the history of the industry.⁷

Schenkein also sat on the board of directors for two of the other newly public biotech firms, bluebird bio and Foundation Medicine.⁸ Like Agios, these firms were leveraging awe-inspiring technologies such as gene therapy and next-generation gene sequencing to improve the lives of

² Biotechnology (or, “biotech”) refers in this Note to the healthcare-focused life sciences industry, which includes the commercial development of pharmaceuticals, medical diagnostics, and medical devices.

³ *About Us*, AGIOS, <http://www.agios.com/about.php> (last visited Apr. 27, 2014).

⁴ See Renaissance Capital, *Agios Pharmaceuticals Prices IPO at \$18, Above the Range*, NASDAQ (July 24, 2013, 8:35 AM), <http://www.nasdaq.com/article/agios-pharmaceuticals-prices-ipo-at-18-above-the-range-cm260593>.

⁵ Agios Pharmaceuticals, Inc., Amendment No. 3 to Form S-1 Registration Statement (Form S-1/A), at 1 (July 16, 2013) [hereinafter Agios S-1].

⁶ These data were compiled from an original empirical study of Form S-1 SEC filings. See *infra* Part III for an explanation of the study and the methodology behind it.

⁷ See *Biotech IPOs Are Back to Normal*, RENAISSANCE CAPITAL IPO CENTER (Nov. 25, 2013), <http://www.renaissancecapital.com/ipohome/news/biotech-ipos-are-back-to-normal-16928.html>.

⁸ bluebird bio, Inc., Amendment No. 2 to Registration Statement (Form S-1/A), at 150 (June 4, 2013) [hereinafter bluebird bio S-1]; Foundation Medicine, Inc., Amendment No. 5 to Registration Statement (Form S-1/A), at 118 (Sep. 20, 2013) [hereinafter Foundation Medicine S-1].

patients with highly morbid cancers and genetic disorders.⁹ These firms had little or no revenue from product sales at the time of IPO, and yet they still managed to go public with expected market capitalizations on the order of \$350-450 million each.¹⁰ All three firms were portfolio companies of Third Rock Ventures, a life sciences-focused venture capital firm based in Boston.¹¹ Third Rock had one or more affiliates sitting on the board of directors of each company, as well as post-IPO equity stakes of 19%, 22%, and 25% in Agios, bluebird bio, and Foundation Medicine, respectively.¹² Other venture firms held similar positions in nearly all biotech firms that went public¹³ during this historic year for IPO activity.¹⁴

Traditional theories of corporate governance focus on limiting agency costs, such as self-dealing and the extraction of private benefits by controlling shareholders. Why, then, were the public markets willing to embrace public offerings of so many immature, controlled firms? And why were so many early-stage investors willing to tie up capital and other resources in these risky investments?

⁹ BLUEBIRD BIO, <http://www.bluebirdbio.com> (last visited Apr. 27, 2014); FOUNDATION MEDICINE, www.foundationmedicine.com (last visited Apr. 27, 2014).

¹⁰ See Agios S-1, *supra* note 5; bluebird bio S-1, *supra* note 8; Foundation Medicine S-1, *supra* note 8.

¹¹ THIRD ROCK VENTURES, <http://www.thirdrockventures.com> (last visited Apr. 27, 2014).

¹² Agios S-1, *supra* note 5, at 123; bluebird bio S-1, *supra* note 8, at 176; Foundation Medicine S-1, *supra* note 8, at 141.

¹³ This Note does not include a table indicating VC stakes in each biotech firm that went public, but this finding was confirmed using the author's independent research.

¹⁴ See Bruce Booth, *What's Behind the Booming Biotech IPO Market*, FORBES (Sept. 22, 2013, 9:41 PM), <http://www.forbes.com/sites/brucebooth/2013/09/22/whats-behind-the-booming-biotech-ipo-market/>; William Blair & Co., *Strong Biotech Market Fuels IPO Surge*, NVCA TODAY (June 21, 2013), <http://nvcatoday.nvca.org/index.php/from-our-sponsor/strong-biotech-market-fuels-ipo-surge.html> (noting that 2013 was one of the busiest years for biotech IPOs since before the financial crisis).

This Note provides the first industry-specific, empirical account of governance patterns in the business of early-stage biomedical innovation. To accomplish this task, this Note examines the pre-IPO SEC filings for all United States-based biotech firms with IPOs in 2013, as well as the post lock-up trading disclosures for beneficial owners of those same firms.¹⁵ The data reveal a real-world snapshot of newly public firms that are highly consolidated in terms of both boardroom control and cash flow rights.¹⁶ The data also reveal that entrepreneurs and pre-public investors do not immediately liquidate their control blocks. As this Note will explain, both of these empirical findings are best explained by a model of corporate control built around idiosyncratic value.¹⁷ Through a lens of idiosyncratic value, we can understand the behavior of pre-public insiders, as well as the behavior of minority holders who buy public shares of controlled, immature firms.¹⁸

Part II of this Note provides an introduction to “idiosyncratic value,” a theory of corporate control that focuses on the value an entrepreneur places on her own

¹⁵ See *infra* Part III and Part IV for detailed findings of these empirical studies.

¹⁶ See *infra* Part III for detailed findings of the empirical study.

¹⁷ I assume that a cohort of firms within a one-year IPO window allows for greater “apples-to-apples” comparison than would otherwise be possible when macroeconomic factors (e.g., market trading volume, financial regulatory regimes, macroeconomic health) and industry profiles (e.g., access to capital, major innovations, impacts of health reform) skew market comparisons over longer timeframes.

¹⁸ This Note explores idiosyncratic value on the basis of entrepreneurs’ perceived abilities to execute business plans as controlling shareholders. See *infra* note 19. This framework does not directly address the value of control mechanisms such as dual class stock, which appears increasingly in technology company IPOs. See Jeff Green & Ari Levy, *Zuckerberg Grip Becomes New Normal in Silicon Valley*, BLOOMBERG (May 7, 2012, 12:01 AM), <http://www.bloomberg.com/news/2012-05-07/zuckerberg-stock-grip-becomes-new-normal-in-silicon-valley-tech.html>. This Note puts aside the debate over dual class stock. The role of dual class stock, however, is an important and related issue to many themes discussed in this Note, and it merits explicit consideration in follow-on research.

ability to execute a business idea.¹⁹ Part II also traces traditional theories of governance related to the venture capital industry, and then explores idiosyncratic value and the biotech market. Part III presents the empirical results of a review of all Form S-1 SEC filings from United States-based biotech firms with initial public offerings in 2013. The data reveal a cohort of firms with highly consolidated ownership blocks and boardrooms full of insiders.²⁰ Idiosyncratic value theory emerges in Part III as the most cogent explanation for how firms such as Agios, with concentrated ownership and no product sales at the time of IPO,²¹ are able to successfully enter the public markets.

Empirical analysis continues in Part IV, revealing that pre-IPO block-holders do not liquidate their holdings following the mandatory lock-up period.²² This trading inactivity following lock-up expiries is evidence that controlling pre-public biotech investors and entrepreneurs with idiosyncratic value may view the IPO as a viable step toward maximizing firm value and not just as an “exit.” This Part also addresses alternative theories that might be evoked to explain the empirical findings.

Part V describes the consequences of the findings in Parts III and IV, with an emphasis on the manner in which idiosyncratic value reframes some governance debates, empowering entrepreneurs, and investors to maximize economic and social value for all shareholders. Part VI concludes with the hope of driving new discussions around the legal frameworks that support entrepreneurship and technology-driven innovation, particularly in the life sciences industry.

¹⁹ See Zohar Goshen & Assaf Hamdani, *Concentrated Ownership Revisited: The Idiosyncratic Value of Corporate Control* 6 (Columbia Law and Econ. Working Paper No. 444, 2013), available at <http://ssrn.com/abstract=2228194>.

²⁰ See *infra* Part III for detailed findings of the empirical study.

²¹ See Agios S-1, *supra* note 5.

²² These data were compiled from an original empirical study of Form 4 SEC filings, which capture stock transactions by insiders. See *infra* Part III for an explanation of the study and the methodology behind it.