

*March 25, 2013***Arrowhead Research (Nasdaq/ARWR/Buy/\$2.22)****Robert M. Wasserman**  
Director of Research

561-208-2905

[rwasserman@dawsonjames.com](mailto:rwasserman@dawsonjames.com)

**1) Arrowhead Research (Nasdaq/ARWR/Buy/\$2.22)** – Arrowhead Research will hold an analyst day in New York City from 12:30-2 pm today, focusing on its Hepatitis B (HBV) candidate ARC-520. Topics to be discussed during the event include ARC-520 preclinical data, HBV disease biology, clinical trial strategy and timelines, market opportunity, clinician and patient perspectives, and new data generated from a chimpanzee with chronic HBV infection. Presenters today are expected to include Dr. Robert Gish, Chairman of Arrowhead’s HBV Clinical Advisory Board, Dr. Chris Anzalone, Arrowhead’s President and CEO, Dr. Bruce Given, Arrowhead’s COO and Head of R&D, and Joan Block, Executive Director and Co-founder of the Hepatitis B Foundation. To access audio portions of today’s presentations as well as related slides, interested parties will need to type or copy the following and then register for the event:

<http://www.wsw.com/webcast/ah/register.aspx?conf=ah&page=index&url=http%3A//www.wsw.com/webcast/ah/>

Separately, this morning Arrowhead provided further details on the recently published study on low-dose ARC-520 given intravenously to a chimpanzee with chronic HBV infection, specifically that through 29 days after initial treatment, maximal knock down of HBV DNA, e-antigen, and s-antigen were approximately 95%, 90%, and 90%, respectively. The study was notable and successful because:

- 1) According to Dr. Robert Lanford of the Texas Biomedical Research Institute where the study was conducted, “This is the first time I have tested an siRNA therapy that was efficiently delivered to the liver and suppressed HBV infection. This was a proof-of-concept study with a novel approach for curing HBV infection and this therapy provided highly promising results in a very short trial.”;
- 2) The animal being treated had exceptionally high titers of circulating HBV DNA and HBsAg that measured 1,000 to 10,000-fold higher than the average chronic hepatitis B patient. The HBV infection has been chronic for over thirty years and has persisted despite prior therapy with multiple anti-viral drugs and therapeutic vaccine exposures; and
- 3) This study marked the first large primate to be treated with ARC-520, and its viral and s-antigen loads were many orders of magnitude higher than what are typically found in humans.

Arrowhead is planning to begin human clinical trials on ARC-520 later this year. We are maintaining our Buy rating on ARWR shares and \$4 price target. (For further detail on our stock valuation please refer to our Initiation Report dated February 26, 2013). **RMW**

Morning Notes provide current information we believe might be noteworthy to investors regarding the subject companies. Morning Notes are not intended to be complete research reports. More detailed information concerning the rated companies referenced in this Note, including the full reports, basis for price targets and other disclosures, may be found at:

<http://www.DawsonJames.com/portal.html>.

### **Important Disclosures:**

Dawson James Securities, Inc. (the "Firm") is a member of the Financial Industry Regulatory Authority ("FINRA") and the Securities Investor Protection Corporation ("SIPC").

The Firm does not make a market in the securities of the profiled company. The Firm has received investment banking compensation from the company (ARWR) profiled in this report and may seek compensation for investment banking services in the future. The Firm has not received other compensation from the profiled company in the last 12 months.

Neither the research analyst(s) whose name appears on this report nor any member of his (their) household is an officer, director or advisory board member of these companies. The Firm and/or its directors and employees may own securities of the company(s) in this report and may increase or decrease holdings in the future. As of February 28, 2013, the firm as a whole, however, did not beneficially own 1% or more of any class of common equity securities of the subject company.

The Firm, its officers, directors, analysts or employees may effect transactions in and have long or short positions in the securities (or options or warrants related to those securities) of the companies subject to this report. The Firm may effect transactions as principal or agent in those securities.

Analysts receive no direct compensation in connection with the Firm's investment banking business. All Firm employees, including the analyst(s) responsible for preparing this report, may be eligible to receive non-product or service specific monetary bonus compensation that is based upon various factors, including total revenues of the Firm and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.

Although the statements in this report have been obtained from and are based upon recognized statistical services, issuer reports or communications, or other sources that the Firm believes to be reliable, we cannot guarantee their accuracy. All opinions and estimates included in this report constitute the analyst's judgment as of the date of this report and are subject to change without notice.

The securities of the company discussed in this report may be unsuitable for investors depending on their specific investment objectives and financial position. This report is offered for informational purposes only, and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such would be prohibited. Additional information is available upon request.

### **Ratings Definitions:**

- 1) **Buy:** the analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months;
- 2) **Neutral:** the analyst believes the price of the stock is fairly valued for the next 12-18 months;
- 3) **Sell:** the analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

Ratings Distribution	Company Coverage		Investment Banking	
	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	12	75%	8	67%
Market Perform (Neutral)	4	25%	1	25%
Market Underperform (Sell)	0	0%	0	0%
Total	16	100%	9	56%

### **Analyst Certification:**

The analyst(s) whose name appears on this research report certifies that 1) all of the views expressed in this report accurately reflect his (their) personal views about any and all of the subject securities or issuers discussed; and 2) no part of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst in this research report; and 3) all Dawson James employees, including the analyst(s) responsible for preparing this research report, may be eligible to receive non-product or service specific monetary bonus compensation that is based upon various factors, including total revenues of Dawson James and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.