
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

**CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(D)
OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of Report (Date of earliest event reported): October 8, 2014

Arrowhead Research Corporation

(Exact name of registrant as specified in its charter)

0-21898
(Commission File Number)

Delaware
(State or other jurisdiction of incorporation)

46-0408024
(IRS Employer Identification No.)

225 South Lake Avenue, Suite 1050, Pasadena, CA 91101
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (626) 304-3400

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4 (c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 8.01. Other Events.

On October 8, 2014, Arrowhead Research Corporation (the “Company”) issued a news release to report that data from a Phase 2a clinical study of ARC-520, its drug candidate being developed as a treatment for chronic hepatitis B, will be presented in a poster session at the 2014 American Association for the Study of Liver Diseases (AASLD) Liver Meeting being held on November 7-11, 2014, in Boston.

A copy of the news release and the abstract for the poster are attached as Exhibit 99.1 and 99.2 this Form 8-K.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

| <u>Exhibit No.</u> | <u>Description</u> |
|--------------------|------------------------------------|
| 99.1 | News Release dated October 8, 2014 |
| 99.2 | Abstract |

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Date: October 9, 2014

ARROWHEAD RESEARCH CORPORATION

By: /s/ Kenneth Myszowski

Kenneth Myszowski
Chief Financial Officer

**PRESS RELEASE**

October 8, 2014

Arrowhead to Present ARC-520 Phase 2a Data in Late-Breaking Session at AASLD Liver Meeting® 2014

PASADENA, Calif., Oct. 8, 2014 — Arrowhead Research Corporation (NASDAQ: ARWR), a biopharmaceutical company developing targeted RNAi therapeutics, today announced that data from the ongoing Phase 2a study of ARC-520, its RNAi therapeutic candidate for the treatment of chronic hepatitis B (HBV) infection, will be presented in the late-breaking poster session at the 2014 American Association for the Study of Liver Diseases (AASLD) Liver Meeting being held on November 7-11, 2014, in Boston. Arrowhead was also selected to deliver a plenary presentation with new preclinical efficacy data on ARC-AAT, its RNAi therapeutic candidate for the treatment of liver disease associated with Alpha-1 antitrypsin deficiency. Additional details including abstracts for both presentations can be found in The Liver Meeting section of the AASLD website at <http://www.aasld.org/livermeeting/Pages/default.aspx>.

“ARC-520 represents a novel approach for the treatment of HBV with the potential to achieve functional cures,” said Christopher Anzalone, Ph.D., Arrowhead’s President and Chief Executive Officer. “Our ongoing Phase 2a dose finding study is an important step, and in cohort 1 at a dose of 1 mg/mg and cohort 2 at 2 mg/kg we saw a clear reduction in HBsAg, the surface antigen of HBV. Data collection for HBsAg reduction in cohort 3 at 3 mg/kg is still ongoing, however we are pleased to report that all three dose levels have been well tolerated in patients. These results give us great confidence as we move forward with designing and initiating several upcoming Phase 2b studies of ARC-520 and the ARC-AAT Phase 1 study.”

Arrowhead presentations can be attended during the following times:

9:15 a.m. EST, Nov. 10, Plenary Session, John B. Hynes Convention Center, Auditorium – An oral presentation titled, “**A hepatocyte-targeted RNAi-based treatment for liver disease associated with alpha-1 antitrypsin deficiency.**” will be presented by Christine Wooddell, Ph.D., Group Leader, Arrowhead Research, Madison, Wis.

8 a.m. to 5:30 p.m. EST, Nov. 10, Late-Breaking Poster Session, John B. Hynes Convention Center, Hall C – A poster presentation titled, “**Phase II, dose ranging study of ARC-520, a siRNA-based therapeutic, in patients with chronic hepatitis B virus infection,**” will be presented by Man-Fung Yuen, M.D., Ph.D., Chair of Gastroenterology and Hepatology, and Li Shu Fan Medical Foundation Professor in Medicine, The University of Hong Kong.

About ARC-520

Arrowhead’s RNAi-based candidate ARC-520 is designed to treat chronic HBV infection by reducing the expression and release of new viral particles and key viral proteins. The goal is to achieve a functional cure, which is an immune clearant state characterized by hepatitis B s-antigen negative serum with or without sero-conversion. The siRNAs in ARC-520 intervene at the mRNA level, upstream of where nucleotide and nucleoside analogues act. In transient and transgenic mouse models of HBV infection, a single co-injection of Arrowhead’s Dynamic Polyconjugate (DPC) delivery vehicle with cholesterol-conjugated siRNA targeting HBV sequences resulted in multi-log knockdown of HBV RNA, proteins and viral DNA with long duration of effect. Arrowhead has completed enrollment in a Phase 1 single ascending dose study in normal volunteers. The company is conducting a single dose Phase 2a study in chronic HBV patients, and expects to follow with multi-dose, multi-national Phase 2b studies. Approximately 350 million people worldwide are chronically infected with the hepatitis B virus. Chronic HBV infection can lead to cirrhosis of the liver and is responsible for 80% of primary liver cancers globally.

About ARC-AAT

Arrowhead has developed ARC-AAT for the treatment of liver disease associated with Alpha-1 Antitrypsin Deficiency (AATD), a rare genetic disease that severely damages the liver and lungs of affected individuals. ARC-AAT employs a novel unlocked nucleobase analog (UNA) containing RNAi molecule designed for systemic delivery using the Dynamic Polyconjugate delivery system. ARC-AAT is highly effective at knocking down the Alpha-1 antitrypsin (AAT) gene transcript and reducing the hepatic production of mutant AAT (Z-AAT) protein. Reduction of inflammatory Z-AAT protein, which has been clearly defined as the cause of progressive liver disease in AATD patients, is important as it is expected to halt the progression of liver disease and allow fibrotic tissue repair. The Company plans to file an Investigational New Drug (IND) or equivalent application for ARC-AAT in the fourth quarter of 2014 and commence clinical studies shortly thereafter.

About Arrowhead Research Corporation

Arrowhead Research Corporation is a biopharmaceutical company developing targeted RNAi therapeutics. The company is leveraging its proprietary Dynamic Polyconjugate delivery platform to develop targeted drugs based on the RNA interference mechanism that efficiently silences disease-causing genes. Arrowhead’s pipeline includes ARC-520 for chronic hepatitis B virus, ARC-AAT for liver disease associated with Alpha-1 antitrypsin deficiency, and partner-based programs in obesity and oncology.

For more information please visit <http://www.arrowheadresearch.com>, or follow us on Twitter [@ArrowRes](https://twitter.com/ArrowRes). To be added to the Company’s email list and receive news directly, please visit

<http://ir.arrowheadresearch.com/alerts.cfm>.

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Source: Arrowhead Research Corporation

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Phase II, dose ranging study of ARC-520, a siRNA-based therapeutic, in patients with chronic hepatitis B virus infection

Man-Fung Yuen¹, Henry Lik Yuen Chan², Bruce D. Given³, James Hamilton³, Thomas Schlupe³, David L. Lewis³, Ching-Lung Lai¹, Stephen A. Locarnini⁴, Johnson YN Lau⁵, Robert G. Gish^{6,7}

1 The University of Hong Kong, Hong Kong, China 2 The Chinese University of Hong Kong, Hong Kong, China 3 Arrowhead Research Corporation, Pasadena, CA, USA; 4 Victorian Infectious Diseases Reference Laboratory, Victoria, Australia 5 Hong Kong Polytechnic University, Hong Kong, China 6 Stanford University, Palo Alto, CA, USA 7 Hepatitis B Foundation, Doylestown, PA, USA

ARC-520 is a novel, short interfering RNA (siRNA)-containing, liver-targeted therapeutic for treatment of chronic hepatitis B virus (HBV) designed to reduce all HBV transcripts via RNA interference, with an observed reduction of viral particles and decreased expression of viral proteins in an HBV-infected chimpanzee and HBV mouse models. Viral proteins, in particular HBeAg and HBsAg, have been implicated in immune tolerance, sustained infection and disease progression. Therapies targeting viral proteins might allow host immune reconstitution, thereby promoting HBsAg seroclearance. A Phase I study in healthy subjects has demonstrated the safety profile of ARC-520. This phase IIa, randomized, double blind, placebo controlled study at two centers assesses depth and duration of HBsAg reduction and safety after a single, intravenous dose of ARC-520 in HBeAg negative adult patients with chronic HBV infection receiving long-term entecavir. Patients meeting the inclusion-exclusion criteria are randomized to placebo or ARC-520 at a ratio of 1:3 and continue daily entecavir.

Escalating, single doses of ARC-520 at 1 mg/kg (Cohort 1, 8 patients), 2 mg/kg (Cohort 2, 8 patients) and 3 mg/kg (Cohort 3, 6 patients) have been evaluated. Cohorts 1 and 2 have been evaluated through Day 85 and are unblinded. Cohort 3 is enrolling and remains blinded.

In all three cohorts there have been no SAEs, no AEs rated as severe, no signs of hypersensitivity, no dose limiting toxicities and no discontinuations due to AEs. There were no treatment emergent changes in vital signs, physical exams or ECGs rated clinically significant by the investigator. There have been few abnormal laboratory values, with no clinically significant, treatment emergent, changes in ALT, AST, GGT, LDH, bilirubin, BUN or creatinine or apparent trends. All AEs reported to date (n=4) have been mild or moderate and rated as unrelated to study drug by the investigator.

ARC-520 activity is assessed by measuring percent change of quantitative HBsAg decline from baseline. For patients receiving ARC-520 in cohort 1, mean nadir HBsAg was -39% (range -22 to -57) with a mean change on day 85 of -31% (range -14 to -39). For patients receiving ARC-520 in cohort 2, mean nadir HBsAg was -51% (range -46 to -59) with a mean change on day 85 of -22% (range -7 to -40). For cohort 2, the percent reduction in HBsAg was statistically significant vs placebo for Days 3 through 43 post dose. This is the first time that a reduction in HBsAg mediated through RNA interference has been shown in chronic HBV patients.