Spark Therapeutics, Inc. Form FWP June 13, 2016 Filed Pursuant to Rule 433

Issuer Free Writing Prospectus dated June 13, 2016

Relating to Prospectus dated June 13, 2016

Registration No. 333-211993

Spark Therapeutics Announces Launch of Public Offering

PHILADELPHIA, June 13, 2016 Spark Therapeutics, Inc. (Spark) (NASDAQ: ONCE) announced today that it has commenced an underwritten public offering of 3,500,000 shares of its common stock pursuant to an automatically effective shelf registration statement that has been filed with the Securities and Exchange Commission. The offering consists of 2,500,000 shares being offered by Spark and 1,000,000 shares being offered by The Children s Hospital of Philadelphia Foundation (CHOP). In addition, Spark is expected to grant the underwriters of the offering an option for a period of 30 days to purchase up to an additional 525,000 shares at the public offering price, less the underwriting discount. Spark will not receive any proceeds from the sale of shares by CHOP. The offering is subject to market and other conditions, and there can be no assurance as to whether or when the offering may be completed.

J.P. Morgan Securities LLC and Cowen and Company, LLC will act as bookrunning managers for the offering. This offering will be made only by means of a prospectus.

The issuer has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. A preliminary prospectus supplement relating to the offering will also be filed with the SEC. Before you invest, you should read the prospectus in that registration statement, the prospectus supplement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus and prospectus supplement if you request it from: J.P. Morgan Securities LLC, c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, or by telephone at (866) 803-9204; or Cowen and Company, LLC c/o Broadridge Financial Services, 1155 Long Island Avenue, Edgewood, NY, 11717, Attn: Prospectus Department, by calling (631) 274-2806 or by faxing (631) 254-7140.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of, these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification of these securities under the securities laws of any such state or jurisdiction.

About Spark Therapeutics

Spark Therapeutics, a fully-integrated gene therapy company, is seeking to transform the lives of patients with debilitating genetic diseases by developing one-time, life-altering treatments. Spark s validated gene therapy platform is being applied to a range of clinical and preclinical programs addressing serious genetic diseases, including inherited retinal diseases, liver-associated diseases, such as hemophilia, and neurodegenerative diseases. Spark s validated platform has successfully delivered gene therapies with proof-of-concept data in the eye and liver. Spark s most advanced product candidate, SPK-RPE65 (voretigene neparvovec), which has received both breakthrough therapy and

orphan product designation, reported positive top-line results from a pivotal Phase 3 clinical trial for the treatment of rare blinding conditions. Spark s hemophilia franchise has two lead assets: SPK-9001 in a Phase 1/2 trial for hemophilia B and SPK-8011, a preclinical candidate, for hemophilia A.

Contacts

Spark Therapeutics, Inc.

Stephen W. Webster

Chief Financial Officer

(855) SPARKTX (1-855-772-7589)

###