

ARENA PHARMACEUTICALS INC  
Form 424B3  
July 27, 2012  
PROSPECTUS SUPPLEMENT NO. 2

Filed Pursuant to Rule 424(b)(3)

To Prospectus dated April 10, 2012

Registration Statement No. 333-160983

**Arena Pharmaceuticals, Inc.**

**Common Stock**

This Prospectus Supplement No. 2, or this prospectus supplement, supplements and amends the prospectus dated April 10, 2012, or the Original Prospectus, as supplemented by prospectus supplement No. 1 dated July 23, 2012, relating to the resale of up to 8,631,410 shares of our common stock that are issuable upon the exercise of certain warrants described therein.

This prospectus supplement should be read in conjunction with, and delivered with, the Original Prospectus, as supplemented by prospectus supplement No. 1 dated July 23, 2012, and is qualified by reference to the Original Prospectus, including any amendments or supplements to it, except to the extent that the information in this prospectus supplement supersedes the information contained in the Original Prospectus or any such amendment or supplement.

We are filing this prospectus supplement to reflect the transfer of certain 2012 Warrants by Deerfield entities. The table appearing under the caption *Selling Stockholders* on page S-4 of the Original Prospectus is hereby amended and supplemented by (i) deleting Deerfield International Limited, Deerfield Special Situations Fund, L.P. and Deerfield Special Situations Fund International Limited, and (ii) adding the stockholder(s) identified in the table below. Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission, and is based upon information provided by the selling stockholder(s) named below. Based upon information provided by the selling stockholder(s) named below, to our knowledge, none of the selling stockholder(s), nor any of their affiliates, directors or principal equity holders (5% or more) has held any position or office or has had any other material relationship with us (or our predecessors or affiliates) during the past three years. Selling stockholders who are registered broker-dealers or affiliates of registered broker-dealers may be deemed to be *underwriters* within the meaning of the Securities Act. To our knowledge, no selling stockholder who is a registered broker-dealer or an affiliate of a registered broker-dealer received any securities as underwriting compensation.

Name	Shares of	Number of Shares of	Shares of Common Stock	
	Common Stock		Beneficially Owned Following the Offering(1)(3)	
	Beneficially Owned Before the Offering(1)	Common Stock Offered Hereby(2)	Number	% of Class
BTIG LLC	2,792,509	2,792,509	0	0%

- (1) For the purposes of determining the number of shares beneficially owned by the selling stockholder named above, shares of common stock that may be issued to such selling stockholder within 60 days of July 26, 2012 are deemed to be outstanding.
- (2) Represents shares of common stock issuable upon the exercise of a 2012 Warrant.
- (3) We do not know when or in what amounts the selling stockholder may offer shares for sale. The selling stockholder may choose not to sell any of the shares offered by this prospectus supplement. This table assumes the sale by the selling stockholder of all of the shares of common stock available for resale under this prospectus supplement.

References in the Original Prospectus to the selling stockholders shall hereafter refer to the selling stockholders named in the table of selling stockholders beginning on page S-4 of the Original Prospectus, as amended by any amendments or supplements thereto, including this prospectus supplement.

**Investing in our common stock involves a high degree of risk. Please read Risk Factors on page S-2 of the Original Prospectus and as updated in any future filings made with the Securities and Exchange Commission that are incorporated by reference into the Original Prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.**

The date of this Prospectus Supplement is July 27, 2012.