

Prospectus Supplement to Prospectus dated April 23, 2012

InVivo Therapeutics Holdings Corp.

26,047,200 Shares of Common Stock

This prospectus supplement updates the prospectus dated April 23, 2012 relating to the offer for sale of up to an aggregate of 26,047,200 shares of common stock of InVivo Therapeutics Holdings Corp. by the selling securityholders identified in the prospectus and this prospectus supplement, and any of their pledgees, donees, transferees or other successors in interest.

We are providing this prospectus supplement to update the table in the prospectus under the caption “Selling Securityholders” to reflect transfers of warrants to purchase shares of common stock by certain selling securityholders. The amounts set forth below are based upon information provided to us by the respective selling securityholder (or its or his representatives), or on our records, and are accurate to the best of our knowledge. Unless we indicate otherwise, the information in this prospectus supplement is as of April 30, 2013.

<u>Name</u>	<u>Securities Beneficially Owned Prior to the Offering</u>		<u>Securities Offered Hereby</u>		<u>Securities Beneficially Owned After this Offering</u>	
	<u>Common Stock (1)</u>	<u>Warrants</u>	<u>Common Stock</u>	<u>Common Stock Underlying Warrants</u>	<u>Common Stock</u>	<u>Warrants</u>
Lon E. Bell	150,000	150,000	150,000	150,000	—	—
Steven Deutsch	100,000	100,000	100,000	100,000	—	—
Wealth Concepts LLC	N/A	N/A	N/A	N/A	N/A	N/A

(1) Does not include shares of common stock underlying the warrants.

This prospectus supplement is not complete without the prospectus dated April 23, 2012, as supplemented to date, and we have not authorized anyone to deliver or use this prospectus supplement without the prospectus.

The date of this prospectus supplement is April 30, 2013.