



**10,072,736 shares of Common Stock issuable upon the exercise of outstanding warrants
 And
 28,958,440 shares of Common Stock being sold by Selling Shareholders**

This prospectus supplement (“Supplement”) modifies, supersedes and supplements information contained in, and should be read in conjunction with, that certain prospectus, dated August 3, 2016 (“Prospectus”), of Inspyr Therapeutics, Inc. (“Company”), as well as all prior supplements thereto. The Prospectus relates to the resale of up to 28,958,440 (or approximately 966,032 shares subject to resale and increased by 750 common shares subject to estimated rounding amounts pursuant to the Company’s reverse stock split effective as of November 17, 2016) shares of our common stock by the selling shareholders identified therein. This Supplement is not complete without, and may not be delivered or used except in connection with, the original Prospectus and all supplements thereto.

The information attached to this Supplement modifies and supersedes, in part, the information in the Prospectus, as supplemented. Any information that is modified or superseded in the Prospectus shall not be deemed to constitute a part of the Prospectus, except as modified or superseded by this Supplement.

We may amend or supplement the Prospectus from time to time by filing amendments or supplements as required. You should read the entire Prospectus and any amendments or supplements thereto carefully before you make an investment decision.

See “Risk Factors” beginning on page 3 of the Prospectus for risk factors and information you should consider before investing in our common stock.

FORWARD-LOOKING STATEMENTS

You should carefully consider the risk factors set forth in the Prospectus, as well as the other information contained in this Supplement and the Prospectus. This Supplement and the Prospectus contain forward-looking statements regarding events, conditions, and financial trends that may affect our plan of operation, business strategy, operating results, and financial position. You are cautioned that any forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties. Actual results may differ materially from those included within the forward-looking statements as a result of various factors. Cautionary statements in the “Risk Factors” section of the Prospectus identify important risks and uncertainties affecting our future, which could cause actual results to differ materially from the forward-looking statements made in this Supplement and the Prospectus.

SELLING SHAREHOLDERS

The Company has been notified of certain changes in name of record holders of securities previously registered to certain selling shareholders. The beneficial holders of the securities remain the same. Accordingly, the Selling Shareholder table is being amended with regard to the change in name of the record holders.

	Common Shares Owned Before Sale (3)				Shares being registered	Common Shares Owned After Sale	
	Held Outright	Warrants/Options	Amount	% of class		Amount	% of Class
STERNE AGEE & LEACH INC C/F MARK V REED IRA (1)	-	-	-	*	-	-	*
Mark V Reed		556	556	*	556		*
STERNE AGEE & LEACH INC C/F SALLY REED R/O IRA (2)	-	-	-	*	-	-	*
Sally Reed	-	778	778	*	778	-	*

* **Less than 1%**

- (1) The Shares being registered include 556 shares underlying warrants pursuant to August 2013 Offering.
- (2) The Shares being registered include 778 shares underlying warrants pursuant to August 2013 Offering.

(3) All references to Shares have been adjusted pursuant to the Company's reverse stock split that was effective November 17, 2016.
