

Prospectus Supplement No. 10  
(To Prospectus filed on July 26, 2016, as supplemented  
by Prospectus Supplement No. 1 dated August 1, 2016, Prospectus Supplement No. 2 dated  
August 10, 2016, Prospectus Supplement No. 3 dated August 12, 2016 and Prospectus Supplement No. 4 dated August 19, 2016, Prospectus Supplement No.  
5 dated September 16, 2016, Prospectus Supplement No. 6 dated September 23, 2016, Prospectus Supplement No. 7 dated November 10, 2016, Prospectus  
Supplement No. 8 dated December 12, 2016, and Prospectus Supplement No. 9 dated January 9, 2017)

**ENUMERAL BIOMEDICAL HOLDINGS, INC.**

This Prospectus Supplement No. 10 supplements the information contained in the Prospectus, dated as of July 26, 2016, as amended by Prospectus Supplement No. 1 dated August 1, 2016, Prospectus Supplement No. 2 dated August 10, 2016, Prospectus Supplement No. 3 dated August 12, 2016, Prospectus Supplement No. 4 dated August 19, 2016, Prospectus Supplement No. 5 dated September 16, 2016, Prospectus Supplement No. 6 dated September 23, 2016, Prospectus Supplement No. 7 dated November 10, 2016, and Prospectus Supplement No. 8 dated December 12, 2016, and Prospectus Supplement No. 9 dated January 9, 2017, relating to the resale of up to 47,674,386 shares of our common stock by selling stockholders.

This Prospectus Supplement No. 10 is being filed to include the information set forth in our Current Report on Form 8-K, which was filed with the Securities and Exchange Commission on March 28, 2017.

You should read this Prospectus Supplement No. 10 in conjunction with the Prospectus. This Prospectus Supplement No. 10 is qualified by reference to the Prospectus, except to the extent that the information contained in this Prospectus Supplement No. 10 supersedes the information contained in the Prospectus. This Prospectus Supplement No. 10 is not complete without, and may not be utilized except in connection with, the Prospectus.

You should consider carefully the risks that we have described in “Risk Factors” beginning on page 8 of the Prospectus.

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

The date of this Prospectus Supplement is March 28, 2017

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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): **March 28, 2017**

**Enumeral Biomedical Holdings, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or Other Jurisdiction  
of Incorporation)

**000-55415**  
(Commission File  
Number)

**99-0376434**  
(I.R.S. Employer  
Identification Number)

**200 CambridgePark Drive, Suite 2000**  
**Cambridge, Massachusetts**  
(Address of Principal Executive Offices)

**02140**  
(Zip Code)

**(617) 945-9146**  
(Registrant's telephone number, including area code)

**N/A**  
(Former name or former address, if changed since last report)

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 2.02 Results of Operations and Financial Condition.**

On March 28, 2017, Enumeral Biomedical Holdings, Inc. issued a press release announcing its financial results for the fiscal year ended December 31, 2016. The press release is attached to this report as Exhibit 99.1.

**Item 8.01 Other Events.**

The information contained in Item 2.02 above is incorporated herein by reference.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits

<b>Exhibit No.</b>	<b>Description</b>
99.1	Press Release dated March 28, 2017.

**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 hereunto duly authorized.

**ENUMERAL BIOMEDICAL HOLDINGS, INC.**

Dated: March 28, 2017

By: /s/ Kevin G. Sarney  
Name: Kevin G. Sarney  
Title: Vice President of Finance, Chief Accounting Officer and  
Treasurer

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**EXHIBIT INDEX**

**Exhibit  
No.**

**Description**

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99.1	Press Release dated March 28, 2017.
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### Enumeral Reports Year End 2016 Financial Results

**CAMBRIDGE, Mass.—March 28, 2017**—Enumeral Biomedical Holdings, Inc. (OTCQB: ENUM) (“Enumeral” or the “Company”), a biotechnology company focused on the discovery and advancement of next generation therapeutics in cancer and other diseases, today announced its financial results for the year ended December 31, 2016.

“Over the last several months we have been actively engaged in our turnaround plans for Enumeral,” said Wael Fayad, the Company’s Chairman, Chief Executive Officer and President. “While our scientific team has been executing a plan to advance our programs and improve our capacity to innovate, we have also been positioning the Company for transformational opportunities. We continue to pursue arrangements to enhance our pipeline of next-generation therapeutics, including the potential acquisition or licensing of complementary assets that are at a more advanced stage of development than our own internally developed pipeline.”

“We recognize the challenges of our current financial position and the need to secure financing to enable us to advance our strategic plans,” continued Mr. Fayad. “To that end, we are exploring a range of potential transactions including financing arrangements, collaborations, mergers and acquisitions, as well as other strategic alternatives. If we are able to secure additional funding and execute on our plans, we believe that we can expand our pipeline and enhance our growth potential. We truly appreciate the continued support of our stockholders and other stakeholders, and we look forward to reporting on our progress.”

#### Recent Business Highlights

- Enumeral has successfully completed additional studies to further elucidate the pre-clinical efficacy and safety of its lead anti-PD-1 antibody 244C8:
    - The Company completed a second anti-tumor efficacy study for 244C8 demonstrating anti-tumor efficacy in a PD-1 HuGEMM model using the syngeneic MC38 tumor.
    - The Company also completed a pilot dose ranging non-human primate toxicology study, which found 244C8 to be well-tolerated in males and females dosed up to 100 mg/kg.
  - Enumeral has also identified lead candidates for the Company’s TIM-3 antibody program, which are undergoing continued characterization for selection of a final development candidate.
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- The Company has begun small scale synthesis and characterization of its CD39 antibody program. CD39 is a novel target directed at the adenosine pathway and targeted for the treatment of various cancers. The Company has also initiated screening for a new cancer immunotherapy antibody program.
- In December 2016, Enumeral received gross proceeds of approximately \$3.4 million in connection with the successful completion of a previously announced warrant tender offer. All of Enumeral's directors and executive officers participated in the warrant tender. In addition, holders of a majority of the warrants subject to the tender offer agreed to remove the price-based anti-dilution provisions contained therein. As a result, Enumeral has been able to streamline its capital structure and, combined with similar agreements from other warrant holders, eliminate the warrant liability recorded on the Company's consolidated balance sheet.

#### **Year Ended 2016 Financial Results**

- *Cash and Cash Equivalents:* Cash and cash equivalents as of December 31, 2016 were approximately \$3.2 million, compared to approximately \$3.6 million as of December 31, 2015. As of the date of this press release, Enumeral believes that it has sufficient liquidity to fund operations into May 2017. If Enumeral is unable to raise additional capital on acceptable terms and on a timely basis, Enumeral will be required to downsize or wind down its operations through liquidation, bankruptcy, or a sale of its assets. The Company is currently exploring a range of potential transactions, which may include public or private equity offerings, debt financings, collaborations and licensing arrangements, and/or other strategic alternatives, including a merger, sale of assets or other similar transactions.
  - *Revenue:* Revenue increased by \$1.0 million to \$2.5 million for the year ended December 31, 2016, as compared to \$1.5 million for year ended December 31, 2015. This increase in revenue is primarily attributable to the Company's previously announced license agreement with Pieris Pharmaceuticals, Inc.
  - *Research and Development Expenses:* Research and development expenses decreased by \$1.6 million to \$4.9 million for the year ended December 31, 2016, as compared to \$6.5 million for the year ended December 31, 2015. This decrease is primarily due to a decrease in payroll and personnel expenses, a decrease in laboratory expenses, and a decrease in patent costs, offset by an increase in facilities costs.
  - *General and Administrative Expenses:* General and administrative expenses decreased by \$1.1 million to \$4.6 million for the year ended December 31, 2016, as compared to \$5.7 million for the year ended December 31, 2015. This decrease is primarily due to a decrease in payroll and personnel expenses, a decrease in professional services fees, and a decrease in investor relations costs.
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- *Other Income (Expense)*: Other income (expense) changed by \$18.9 million to (\$4.9) million for the year ended December 31, 2016, as compared to \$14.0 million for the year ended December 31, 2015. This change is primarily due to the following: (i) a decrease in non-cash income from the change in the fair value of the warrants issued in connection with the Company's July 2014 private placement offering of \$12.4 million, (ii) a change in interest income (expense) of \$4.9 million primarily resulting from the expense recognized for the contingent beneficial conversion feature on the Company's 12% Senior Promissory Notes (the "Notes") that was resolved when the Notes were converted into shares of the Company's common stock as part of the Company's December 2016 warrant tender offer (the "Warrant Tender Offer"), and (iii) a loss on extinguishment of derivative liabilities of \$1.6 million associated with the exercise, issuance and modification of warrants in connection with the Warrant Tender Offer.
- *Net Income (Loss)*: Net income (loss) changed by \$15.2 million to (\$11.9) million for the year ended December 31, 2016, as compared to \$3.3 million for the year ended December 31, 2015.

#### **About Enumeral**

Enumeral is a biopharmaceutical company focused on the discovery and advancement of next generation therapeutics in cancer, auto-immune, and other diseases. The Company utilizes a proprietary microwell array technology to identify cell type and measure functioning of individual cells from tissue samples, and to retrieve individual live cells of interest, for cell culture or gene cloning. This technology provides key insights for target validation, drug candidate selection, and rational drug development. The company has built a pipeline of immune checkpoint modulators for targets including PD-1, TIM-3, CD39, and others. For more information on Enumeral, please visit [www.enumeral.com](http://www.enumeral.com).

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## **Forward Looking Statements Disclosure**

This press release contains certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Such statements reflect current beliefs of Enumeral Biomedical Holdings, Inc. (“Enumeral” or the “Company”) with respect to future events and involve known and unknown risks, uncertainties, and other factors affecting operations, market growth, Enumeral’s stock price, services, products and licenses. No assurances can be given regarding the achievement of future results, and although Enumeral believes that the expectations reflected in these forward-looking statements are based on reasonable assumptions, actual results may differ from the assumptions underlying the statements that have been made regarding anticipated events. Factors that may cause actual results, performance or achievements, or industry results to differ materially from those contemplated by such forward-looking statements may include, without limitation, (a) Enumeral’s ability to raise capital when needed and on acceptable terms and conditions, cash flows and resulting liquidity, (b) Enumeral’s expectations regarding market acceptance of the Company’s business in general and the Company’s ability to penetrate the antibody discovery and development fields in particular, as well as the timing of such acceptance, (c) Enumeral’s ability to attract and retain management with experience in biotechnology and antibody discovery and similar emerging technologies, (d) Enumeral’s ability to partner with other companies to bring product candidates through the development stage and eventually to market, (e) the scope, validity and enforceability of Enumeral’s and third party intellectual property rights, (f) Enumeral’s ability to comply with governmental regulation, (g) the intensity of competition, (h) changes in the political and regulatory environment and in business and fiscal conditions in the United States and overseas, and (i) general economic conditions.

More detailed information about Enumeral and risk factors that may affect the realization of forward-looking statements, including forward-looking statements in this press release, is set forth in Enumeral’s filings with the Securities and Exchange Commission. Enumeral urges investors and security holders to read those documents free of charge at the Commission’s website at <http://www.sec.gov>. Forward-looking statements speak only as to the date they are made, and except for any obligation under the U.S. federal securities laws, Enumeral undertakes no obligation to publicly update any forward-looking statement as a result of new information, future events or otherwise.

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**Enumeral Biomedical Holdings, Inc.**  
Condensed Consolidated Balance Sheets  
(Unaudited)

	<b>As of December 31,</b>	
	<b>2016</b>	<b>2015</b>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 3,162,400	\$ 3,596,262
Other current assets	236,385	586,491
Total current assets	3,398,785	4,182,753
Property and equipment, net	902,097	1,511,493
Other assets	646,336	649,352
Total assets	\$ 4,947,218	\$ 6,343,598
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 308,857	\$ 343,736
Accrued expenses	386,355	714,384
Derivative liabilities	-	2,138,091
Other liabilities	266,136	371,012
Total current liabilities	961,348	3,567,223
Other long term liabilities	77,956	303,318
Total liabilities	1,039,304	3,870,541
Total stockholders' equity	3,907,914	2,473,057
Total liabilities and stockholders' equity	\$ 4,947,218	\$ 6,343,598

**Enumeral Biomedical Holdings, Inc.**  
Condensed Consolidated Statements of Operations  
(Unaudited)

	<b>Year Ended December 31,</b>	
	<b>2016</b>	<b>2015</b>
<b>Revenue:</b>		
Collaboration and license revenue	\$ 1,999,666	\$ 1,100,000
Grant revenue	453,202	389,385
Total revenue	2,452,868	1,489,385
<b>Cost of revenue and expenses:</b>		
Research and development	4,865,056	6,493,859
General and administrative	4,561,076	5,695,932
Total cost of revenue and expenses	9,426,132	12,189,791
Loss from operations	(6,973,264)	(10,700,406)
<b>Other income (expense):</b>		
Interest income (expense)	(4,913,545)	9,699
Loss on extinguishment of derivative liabilities	(1,577,896)	-
Change in fair value of derivative liabilities	1,608,474	13,980,711
Total other income (expense), net	(4,882,967)	13,990,410
Net income (loss) before income taxes	(11,856,231)	3,290,004
Provision for income taxes	-	-
Net income (loss)	\$ (11,856,231)	\$ 3,290,004
<b>Income (loss) per common share:</b>		
Basic	\$ (0.21)	\$ 0.06
Diluted	\$ (0.21)	\$ 0.06
<b>Weighted-average number of common shares outstanding:</b>		
Basic	56,188,284	51,679,230
Diluted	56,188,284	52,365,494

**Contact:**

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