(To Prospectus Dated February 6, 2020)

HELIUS MEDICAL TECHNOLOGIES, INC.

Up to \$9,149,900

Class A Common Stock

This prospectus supplement amends and supplements the information in the prospectus, dated February 6, 2020, filed as a part of our registration statement on Form S-3 (File No. 333-236101), as previously supplemented by our prospectus supplement dated February 6, 2020, or the Prior Prospectus. This prospectus supplement should be read in conjunction with the Prior Prospectus, and is qualified by reference thereto, except to the extent that the information herein amends or supersedes the information contained in the Prior Prospectus. This prospectus supplement is not complete without, and may only be delivered or utilized in connection with, the Prior Prospectus, and any future amendments or supplements thereto.

Under the Prior Prospectus, we initially registered up to \$11,340,000 of our Class A Common Stock, \$0.001 par value per share, for offer and sale pursuant to an At The Market Offering Agreement, dated January 27, 2020, or the Offering Agreement, between us and H.C. Wainwright & Co., LLC, or Wainwright, subject to a maximum of 8,859,375 shares of our Class A Common Stock that we were able to offer and sell under the Offering Agreement and the Prior Prospectus. From January 27, 2020 through the date of this prospectus supplement, we sold an aggregate of 1,065,968 shares of our Class A Common Stock for an aggregate purchase price of \$802,444 under the Prior Prospectus. As of the date of this prospectus supplement, we are decreasing the amount of common stock that we are offering pursuant to the Offering Agreement, such that we are offering up to an aggregate of \$9,149,900 of our Class A Common Stock for sale under the Offering Agreement from and after the date hereof, including the shares of Class A Common Stock under the Offering Agreement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

H.C. Wainwright & Co., LLC

The date of this prospectus supplement is March 18, 2020.