

PROSPECTUS SUPPLEMENT
(to Prospectus dated January 2, 2024)



Up to \$1,765,939

Common Stock

This prospectus supplement amends and supplements the information in the prospectus, dated January 2, 2024, filed as a part of our registration statement on Form S-3 (File No. 333-275935), or the Registration Statement, as supplemented by our prospectus supplement, dated February 24, 2025, or collectively, the Prior Prospectus, relating to the offering, issuance and sale by us of our shares of common stock, par value \$0.0001 per share, or the Common Stock from time to time that may be issued and sold under the At-the-Market Offering Agreement, dated December 7, 2023, or the offering agreement, by and between us and H.C. Wainwright & Co., LLC, or Wainwright, as sales agent. 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.

We are filing this prospectus supplement to amend the Prior Prospectus, to update the maximum amount of securities we are eligible to sell under our Registration Statement pursuant to General Instruction I.B.6 of Form S-3. As a result of these limitations and the current public float of our shares of Common Stock and in accordance with the terms of the offering agreement, we may offer and sell ADSs having an aggregate offering price of up to \$1,765,939 from time to time through Wainwright, which does not include the shares of Common Stock having an aggregate sales price of approximately \$20,734 that were sold pursuant to the Prior Prospectus to date. In the event that we may sell additional amounts under the offering agreement and in accordance with General Instruction I.B.6, we will file another prospectus supplement prior to making such additional sales.

The aggregate market value of our shares of Common Stock held by non-affiliates pursuant to General Instruction I.B.6 of Form S-3 is \$15,441,621, which was calculated based on 23,756,340 shares of Common Stock outstanding held by non-affiliates and at a price of \$0.65 per share of Common Stock, the closing price of our shares of Common Stock on August 6, 2025, a date that is within 60 days of filing this prospectus supplement. We have sold an aggregate of approximately \$3,381,268 of securities pursuant to General Instruction I.B.6. of Form S-3 during the 12-calendar month calendar period that ends on, and includes, the date of this prospectus supplement. As a result of the limitations of General Instruction I.B.6 of Form S-3, and in accordance with the terms of the offering agreement, we currently have the capacity to sell shares of our Common Stock under the offering agreement having an aggregate offering price of up to \$1,765,939 from time to time through Wainwright.

Our common stock is listed on the NYSE American under the symbol "PHGE." On August 12, 2025, the last reported sale price of our Common Stock on the NYSE American was \$0.56 per share of Common Stock.

Investing in our securities involves significant risks. See "Risk Factors" beginning page 7 of the Prospectus and under the heading "Risk Factors" included in our most recent annual report on Form 10-K, which is incorporated by reference into the Prospectus, and under similar headings in the other documents that are filed after the date hereof and incorporated by reference into this prospectus supplement and the Prospectus for a discussion of the factors you should carefully consider before deciding to purchase our common stock.

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

H.C. Wainwright & Co.

The date of this prospectus supplement is August 13, 2025