VELAN CAPITAL, L.P.
1055b Powers Place
Alpharetta, GA 30009

May 22, 2019

Dear Fellow Progenics Stockholder:

Velan Capital, L.P., together with the other participants (collectively, "Velan" or "we") in its call for change at Progenics Pharmaceuticals, Inc. ("Progenics" or the "Company"), collectively beneficially own approximately 9.2% of the Company's outstanding shares, making us the Company's second largest stockholder.

You are receiving this letter because, like us, you are an owner of Progenics. You have a stake in a pharmaceutical company with an opportunity to save lives and alter the treatment landscape for cancer patients. Unfortunately, this economic possibility and social responsibility is left unfulfilled. Progenics' Board of Directors (the "Board") has failed to hold management accountable for its repeated failures and inability to maximize the Company's full potential.

Specifically, we are deeply concerned with the Board's persistent track record of presiding over:

1. Dismal Share Price Performance
2. Botched Commercial Execution
3. Questionable Clinical Program Decision Making
4. Ineffective Oversight of Underqualified Management
5. Entrenchment-Minded Tactics and Egregious Governance Actions
6. Lack of Transparency
7. Inefficient Financial Management

These problems span years if not decades. **Change is long overdue.**

As experienced investors and specialty pharmaceutical operators, we tried to work constructively with the Board to address our concerns as well as the opportunities that we believe are available to drive value for the benefit of all Progenics stockholders. Given the seeming lack of urgency in addressing our concerns and to preserve our rights as stockholders, we nominated a slate of director candidates for election to the Board at the Company's 2019 Annual Meeting of Stockholders (the "Annual Meeting"). Unfortunately, the Board, led by Chairman Peter J. Crowley, and the Nominating and Corporate Governance Committee, led by Chairman Michael D. Kishbauch, chose to invalidate our nomination on technical grounds[1], solidifying our belief that change is immediately required at Progenics. While we believe our highly qualified and experienced nominees were the right individuals to help turn around the Company, we refuse to be silenced by an entrenchment-minded Board. Instead, we are emboldened by the actions of Messrs. Crowley and Kishbauch and are pursuing alternate means of protecting stockholders' interests.

We are therefore asking for your vote on the **GREEN** proxy card **AGAINST** the re-election of **Messrs. Crowley and Kishbauch** as directors at the upcoming Annual Meeting. By voting **AGAINST** Mr. Crowley as Chairman of the Board, who we believe is largely responsible for the overall lack of accountability at Progenics given the Company's persistent underperformance and execution failures, and Mr. Kishbauch as Chairman of the Nominating and Corporate Governance Committee, who oversaw the invalidation of our nomination due to a mere technicality, and who together represent the sole members of the Compensation Committee that has approved excessive compensation to Progenics' directors and officers, **we can send a strong message to the Board that meaningful change is immediately required and that stockholders will not sit idly by as value is destroyed**.

We, like many other stockholders, are frustrated. We expect to be long-term investors, consistent with our typical practice, and our campaign for change will endure long past this Annual Meeting. We owe it to ourselves, we owe it to employees, and most importantly, we owe it to patients.

The Board is asking you to trust its judgment over that of your fellow stockholders, even though there is minimal alignment with stockholders. **The non-executive directors collectively own approximately 0.06% of Progenics common stock and together, Messrs. Crowley and Kishbauch own ZERO shares of Progenics common stock.[2]**

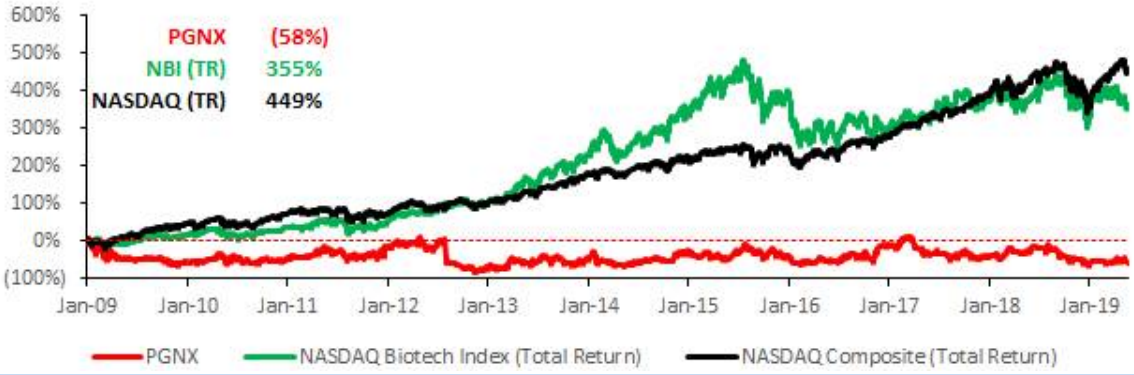
The Company's slogan is "Find, Fight, and Follow" -- we urge stockholders to "Find" the status quo unacceptable, "Fight" years of value destruction and squandered opportunities, and "Follow" our call to action by voting **AGAINST** the re-election of **Messrs. Crowley and Kishbauch** on the **GREEN proxy card**.

IT IS TIME TO FINALLY HOLD THE BOARD ACCOUNTABLE AND CREATE LONG-TERM VALUE FOR ALL PROGENICS STOCKHOLDERS

1. Dismal Share Price Performance

As experienced investors and specialty pharmaceutical operators having built, financially sponsored, and successfully monetized multiple companies since 2009, we know the difference between value creation and value destruction. Conversely, as evidenced by its share price performance, Progenics has destroyed stockholder value under the incumbent Board. Mr. Crowley and CEO Mark Baker joined the Board in 2009. Since the height of the financial crisis and during the longest bull market in recent memory, Messrs. Crowley and Baker have utterly failed stockholders. This abysmal performance record also holds true for Mr. Kishbauch, who joined the Board in September 2013.

SHARE PRICE PERFORMANCE SINCE 2009[3]



SHARE PRICE PERFORMANCE SINCE SEPTEMBER 2013

This speaks to underperformance versus nearly any reasonable comparator for not just years, but across decades, and the Board, overseen by Chairman Peter Crowley, has failed to hold anyone accountable for the Company's pronounced and prolonged stock price underperformance. The Company's 2019 preliminary proxy statement states: "Furthermore, our stock price is a meaningful measure of our progress against these [development and commercialization] goals". Per the Company's own statement, it seems quite clear that the Board and management have made minimal progress and failed stockholders.

2. Botched Commercial Execution

As a pharmaceutical company, Progenics must focus on improving and saving the lives of patients. Under the current leadership, Progenics has failed patients in this regard. We believe the Company's management team and Board have failed to successfully execute AZEDRA's launch. AZEDRA was approved by the FDA in July 2018, and as of May 9, 2019, no patients had received therapy with AZEDRA.[4] The Company recorded ZERO sales for the product in the first three quarters since approval. Can you think of a commercial pharmaceutical/biotechnology company that has not been able to treat a single patient nine months into the launch? We searched and couldn't come up with ONE example.

We researched the market extensively by calling on Key Opinion Leaders ("KOLs") and treating physicians that cover the majority of the top institutions treating patients with pheochromocytoma and paraganglioma ("pheo" and "para").[5] These physicians provided a completely different picture than that being painted by the Company. During these interviews, physicians expressed to us a desire to secure the product for their patients but appear to have been stymied by the Company. Examples of physician statements and/or feedback regarding their interactions with Progenics (which we shared with the Company in February and March 2019) include:

i. The Company would be unable to supply product until mid-April 2019 due to manufacturing issues;
ii. The Company was waiting on reimbursement coverage decisions more than nine months into AZEDRA's launch (physicians appeared flabbergasted at the delay given their experience with products for unmet medical needs); and
iii. Physicians saw or talked to the Company's sales representatives initially after approval but then disappeared from Progenics' radar soon after, noting words like "AWOL" and "they ghosted us".

Such delays are particularly concerning given that AZEDRA has no FDA Orange Book patents – each day delayed is another day lost of its FDA orphan drug exclusivity. Patients afflicted by pheo or para continue to take an unapproved, compounded MIBG product while the Company's management team has been unable to get AZEDRA in the hands of physicians and patients who need it.

The Company stated on its Q1 2019 earnings call that it was "pleased by the momentum" of having 22 patients currently undergoing scheduling – we find it difficult to fathom how nine months since approval with no patients having been dosed could be considered pleasing or reflective of any momentum. The Company also disclosed a market size of "400 to 600" patients while previously disclosing up to 800 eligible patients per year – is Progenics changing its perspective on market size based on its limited commercial experience? Stockholders deserve clarity.

The Velan team has extensive experience launching 20+ drugs, including several rare disease drugs and complex supply chain and distribution drugs, and we believe (as supported by KOL commentary) the Company has botched the launch of AZEDRA. We believe a combination of poor planning, inadequate

preparation and clumsy execution by inexperienced operators, supervised by an ineffective Board, led to this result.

3. Questionable Clinical Program Decision Making

Progenics acquired Molecular Insight Pharmaceuticals, Inc. ("MIP") and the rights to AZEDRA and development pipeline projects "1404", and "1095" over six years ago, in January 2013. The early clinical results of 1095 covering subjects treated between 2011 and 2013 were published in July 2014 (Zechmann et al.) and March 2017 (Afshar-Oromieh et al.) and as of today, this remains the most recent subject data referenced by the Company in its corporate presentation. Only after the license of PSMA-617 by competitor Endocyte, Inc. did the Company illustrate an eagerness to move the 1095 program to a Phase 2 trial. Endocyte, Inc., in contrast, acquired the rights to a similar asset in October 2017, created substantial value in the platform within a year, and sold the business to Novartis Pharmaceuticals Corporation for approximately $2.1 billion.[6]

Instead of harnessing its potential first-mover advantage, Progenics is now behind a well-capitalized competitor. It took a competitor's quick and successful execution for the Board to see the light and begin developing MIP-1095. During these six years, the Company has not disclosed if it discussed and received input from the FDA regarding its Phase 2 trial design, which we believe is an expensive and risky proposition regarding potentially its most valuable product. Did the Board sit idly these past six years while a direct competitor achieved notable clinical advancement and is that much closer to providing an alternative for cancer patients?

The current lack of urgency at Progenics is further exemplified by its 2018 10-K disclosure that 1095's current patent coverage expires from 2027 through 2031, with the 2027 composition of matter patent being the "most significant". This provides limited protection in the event of a potential 2026 commercial launch (Progenics' disclosed commercial milestone date in the 2018 10-K). Previously, the 2017 10-K noted 2025 as the expected timing of MIP-1095's launch - should investors expect further delays?

Moreover, KOL feedback suggested that, despite being cautioned by experts that the product was doomed to fail under its trial design, Progenics management stubbornly pursued the 1404 program. This program was essentially discontinued in 2018 after the Company incurred material opportunity costs and expended substantial resources at the expense of Progenics stockholders. While, in our view, time and resources were wasted by poor decision-making, the Board assessed management's 2018 goal of "increase[ing] value of pipeline" at 100% of its target.

We believe the Board and management have failed to provide an acceptable rationale for the delays of both AZEDRA and MIP-1095. Unfortunately, stockholders remain in the dark while leadership squanders opportunities and in our view, neglects these life-saving products.

4. Ineffective Oversight of Underqualified Management[7]

In 2017, the Board determined that 100% of Progenics corporate goals were met, including "AZEDRA commercialization ready" which goal the Board determined was exceeded at 133% of its objective. Yet more than 15 months later, no patient has been treated and no sales have been generated.

Would investors give this management team grades of 114%, 99% and 100% on its corporate goals for 2015, 2016 and 2017, respectively? Progenics disclosed that in 2018 the Board gave management an

overall performance score of 91%, including 80% for "maximize[ing] value of AZEDRA" and 100% for "increase[ing] value of pipeline", during a period in which AZEDRA generated zero sales, the 1404 clinical trial did not reach statistical significance, and the 1095 Phase 2 trial was not initiated. Failing a clinical trial and moving on to the next pipeline asset (which arguably should have been the focus all along) does not warrant a passing grade, let alone a perfect score. We wish the Progenics Board graded our homework assignments.

We question how the Board has seemingly failed to recognize the need to hire senior executives with relevant experience necessary to run a specialty pharmaceutical company and improve execution. Outside of Bryce Tenbarge, the Company's Senior Vice President, Commercial, no other members of the management team have commercial launch experience or have held a commercial senior leadership role in the pharmaceutical industry prior to joining Progenics. Mr. Tenbarge's immediate experience prior to Progenics was at a development-stage company, Celldex Therapeutics, which has yet to receive FDA approval for a single product.

To exacerbate this issue, prior to joining Progenics, Mr. Baker had zero operational experience within the pharmaceutical industry, and limited operational experience of any kind, yet he was appointed as CEO. Since joining the Company, Mr. Baker appears to have demonstrated more of an interest in fending off whistleblowers[8] who have legitimate concerns instead of focusing on creating long-term stockholder value. True accountability is desperately needed in the boardroom.

The Board's apparent inability to provide effective oversight of the Company is further demonstrated by the committee governance at Progenics. We are unaware of a comparable pharmaceutical corporation that has a majority of scientific committee members with no scientific or medical background. In 2017, Progenics' compensation committee met more often than the scientific committee. Compare this to 2016 when the compensation committee met twice as often as the scientific committee.[9] One might ask **"does the Board regard pay as a more pressing matter than scientific advancement and clinical success?"**

5. Entrenchment-Minded Tactics and Egregious Governance Actions

We are seriously concerned with the Board's decision, under the direction of Messrs. Crowley and Kishbauch, as Chairman of the Board and Chairman of the Nominating and Corporate Governance Committee, respectively, to invalidate our nomination on technical grounds. A stockholder's right to nominate director candidates is an important and long-standing part of the stockholder franchise. We exercised this right because we believe meaningful change on the Board is required to address the Company's persistent underperformance and operational failures and to instill accountability in the boardroom. Unfortunately, rather than address the concerns of one of its largest stockholders and acknowledge the real issues facing the Company, the Board chose to nullify our right to nominate director candidates in order to, in our view, preserve the troubling status quo and entrench the Board.

How can Progenics stockholders trust a Board that invalidated a major stockholder's nomination of director candidates on a mere technicality?

Despite our sincere efforts to engage constructively with the Company, Progenics has shown no desire for true stockholder representation on the Board. Further, the Board effectively stymied the chance for stockholders to vote on alternate and, in our view, superior candidates. Sadly, fighting to maintain a status quo where lackluster performance and minimal accountability is awarded appears to be this Board's

preference. It is time for real change at Progenics and we intend to do whatever it takes to bring about that change and hold the Board and management accountable.

6. Lack of Transparency

Progenics has long exhibited substandard disclosures on key matters. Progenics' recent actions and disclosure (or lack thereof) regarding AZEDRA's commercial launch, AZEDRA's manufacturing situation, MIP-1095 regulatory interactions and financial expenses have left stockholders in the dark. In April 2019, Mr. Baker refused to take time for investor questions after his presentation at the Needham Healthcare Conference. In an effort to improve transparency, Velan publicly called on the Company to answer key business questions on Progenics' Q1 2019 earnings call held on May 9, 2019. Despite Velan's public call for improved transparency and the Company' claim in two separate press releases that it "intends to provide meaningful updates regarding its commercial and clinical initiatives on its first quarter 2019 earnings call," Progenics failed to share much incremental information on the May 9th earnings call. In fact, when asked questions by research analysts on the call, management either provided a vague answer or ignored the question altogether. These questions remain unanswered to-date.

One of a public company's most important obligations is to be open and transparent with its stockholders. We believe that Progenics could drastically improve in this regard.

- Commercialization. Management has not provided any sales guidance and stockholders have waited patiently for three quarters to see sales even though the Board apparently decided that AZEDRA was "commercialization ready" as of the end of 2017 per its corporate goals. Given the amount of time that has passed, we believe Progenics should have been (and should continue to be) more transparent with its stockholders regarding the delay (outside of logistics) in providing the product to patients and in providing sales expectations and forecasts. What has caused this delay – manufacturing, payor approval, other? Given the finite life of AZEDRA, what is the Company's plan regarding compounded MIBG? If the Company won't be straightforward with stockholders, we hope it was transparent with hospitals and patients who depend on AZEDRA for their cancer treatment.

- Regulatory Interactions. Progenics has noted its FDA interactions in its conference calls but has failed to disclose key items discussed with, and the resulting feedback from, the FDA. Given the potential value inherent in its pipeline, specifically 1095, we believe Progenics should disclose to stockholders the nature of its discussions with the FDA and any potentially material feedback received.

- Manufacturing. Progenics acquired a facility in Somerset, NJ in February 2019, and established a third-party manufacturing arrangement with International Isotopes, Inc. in April 2019. The Company has not made any public announcement regarding its arrangement with International Isotopes.[10] Why take these manufacturing initiatives six months after FDA approval of AZEDRA? Why establish a "redundant" manufacturing arrangement when (i) no patient has been dosed and (ii) Progenics purchased the Somerset, NJ facility noting at the time it was capable of producing multiple products, including AZEDRA? We believe Progenics should be forthright with stockholders and disclose the rationale and benefits (and timing thereof) regarding its manufacturing arrangements.

- Financial Profile. The Company has refused to provide answers to important questions related to the Company's revenue and expense base. For example, what is the expected ramp of AZEDRA sales? What is the cost of, and capacity covered by, the manufacturing arrangement with International Isotopes? What resources are being expended on artificial intelligence projects and when should that turn profitable? How much does the Company plan to spend to "dramatically expand the indications for AZEDRA"?

7. Inefficient Financial Management

In 2018, the Compensation Committee allocated "finance manages expenses and financing" as 125% of its corporate goal. This is while the Company reported SG&A and development expenses, excluding one-time write-offs, north of $60 million in 2018 (which exceeded even its undemanding internal budget).[11] The accumulated deficit has surpassed an eye popping $600 million.[12] What has contributed to these out-sized expenses?

- In 2018 and 2017, the Board was paid over $7 million in compensation (including Mr. Baker's service as CEO), with $2.8 million to non-executive directors, including over $800,000 to Mr. Crowley.[13] Messrs. Crowley and Kishbauch are the sole members of the Compensation Committee that has handsomely rewarded lackluster performance with hefty paydays.

- Progenics' headquarters is comprised of a 26,000 square foot lease at One World Trade Center in New York City, one of the most expensive cities in the world. In response to our questioning during a meeting with Mr. Baker, he stated that "the impression the Company creates is important for a commercial company". We believe that is an easy comment to make when it isn't your capital at stake and stockholder dilution is seen as an avenue to keep the expenses covered.

The Q1 2019 earnings report illustrated an alarming continuation of high cash burn with little to show in the way of topline progress. We believe that prudent expense management, including evaluating lower-cost alternatives and solid execution, is more important and would ultimately result in favorable returns to Progenics stockholders.

The Company's capital allocation decisions also leave plenty to be desired for stockholders. Repeatedly raising costly equity capital allows management to keep wasting financial resources for a longer duration at stockholders' expense. We believe finding creative, non-dilutive ways to fund the business would be much more advantageous. However, in our meeting on March 25, 2019 with Messrs. Crowley and Baker, Mr. Baker launched into a series of flawed statements around the purported drawbacks of certain non-dilutive financing alternatives and seemed to prefer financing the Company through extensive (and dilutive) equity offerings, essentially claiming that this was a superior cost of capital decision. Mr. Crowley (the supposed financial expert on the Board) appeared resolute in his concurrence. We strongly disagree, and we suspect most stockholders would share in our disapproval.

YOUR CHOICE AND VOICE CAN BE HEARD – VOTE TO PROTECT THE VALUE OF YOUR INVESTMENT

Change is desperately needed at Progenics. Given the gravity of the situation, modest or superficial change will not suffice. At a minimum, change should include true accountability (the removal of select existing directors), addition of requisite skills and qualifications (specialty pharmaceutical commercialization and development experience, financial sophistication and successful track records), and proper alignment of interests (stockholder representation on the Board).

The first step toward achieving this change is by making your voices heard at the upcoming Annual Meeting by voting **AGAINST** the re-election of **Messrs. Crowley and Kishbauch**. By voting **AGAINST** Mr. Crowley as Chairman of the Board, who has overseen the destruction of significant stockholder value, and Mr. Kishbauch as Chairman of the Nominating and Corporate Governance Committee that rejected our nomination due to a mere technicality, and together as sole members of the Compensation Committee that has approved excessive compensation, stockholders will be sending a strong message to the Board that egregious corporate governance and entrenchment-minded actions, a lack of accountability and the destruction of stockholder value is no longer acceptable.

The Company has a director resignation policy in place for uncontested elections pursuant to which each director submits a contingent resignation that becomes effective if he or she fails to receive a sufficient number of votes for re-election at the Annual Meeting and the Board accepts the resignation. We believe the failure of the Board to accept any such tendered resignations that may result from the Annual Meeting would be an egregious violation of proper corporate governance, and in direct opposition to a clear stockholder directive.

The Company's slogan is "Find, Fight, and Follow" -- we suggest that stockholders "Find" the status quo unacceptable, "Fight" years of value destruction and squandered opportunities, and "Follow" our call to action by voting **AGAINST** the re-election of **Messrs. Crowley and Kishbauch** on the **GREEN Proxy Card**.

We genuinely appreciate and value the opinions and voices of all stockholders. Together we believe we can save Progenics.

SEND A STRONG MESSAGE TO THE BOARD THAT STOCKHOLDERS WANT TO SEE CHANGE AT PROGENICS NOW!

Sincerely,

Bala Venkataraman

Additional information about Velan's call for change at Progenics can be found at: www.SavePGNX.com

If you need assistance in voting your shares or have other questions, please contact Velan's proxy solicitor, Okapi Partners LLC, toll-free at (888) 785-6673 or via email at info@okapipartners.com.

YOUR SUPPORT IS EXTREMELY IMPORTANT – VOTE THE GREEN PROXY CARD TODAY

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[1] On the date Velan submitted its nomination, it beneficially owned shares of Progenics in "street" name. While Velan is currently a stockholder of record of Progenics, it was not a stockholder of record on the date it submitted its nomination pursuant to the Company's Bylaws.

[2] Source: the Company's 2019 preliminary proxy statement and Q1 2019 10-Q. Excludes shares underlying exercisable options.

[3] We chose the Nasdaq Biotechnology Total Return Index (NBI) and NASDAQ Composite Total Return Index as benchmarks relative to Progenics. The Company was chosen as part of the NBI in 2013 and the NASDAQ Composite Index is a commonly accepted benchmark for overall market performance. We chose total return indices to account for all returns during the periods shown. Stock prices through May 20, 2019.

[4] Source: the Company's Q1 2019 earnings call and press release.

[5] Velan interviewed approximately ten KOLs and physicians nationwide and surveyed numerous other physicians in 2019. Permission to quote from such physicians was neither sought nor obtained.

[6] Source: Endocyte, Inc. public filings and press releases.

[7] See the Company's 2016, 2017 and 2018 proxy statements and 2019 preliminary proxy statement for all corporate goals and related disclosure in this section and elsewhere in this letter.
[8] See http://www.americanlawyer-digital.com/americanlawyer-ipauth/201611flaip?article_id=1231747&pg=NaN#pgNaN
[9] Source: the Company's 2017 and 2018 proxy statements and 2019 preliminary proxy statement.
[10] See https://www.prnewswire.com/news-releases/international-isotopes-inc-announces-execution-of-a-contract-manufacturing-agreement-with-progenics-pharmaceuticals-inc-300827947.html
[11] Source: the Company's 2019 preliminary proxy statement.
[12] Source: the Company's 2018 10-K.
[13] Source: the Company's 2018 proxy statement and 2019 preliminary proxy statement.