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This filing relates to the proposed merger of Neurogene Inc., a Delaware corporation ("Neurogene"), with Project North Merger Sub, Inc. ("Merger Sub"), a Delaware corporation and wholly owned subsidiary of Neoleukin Therapeutics, Inc., a Delaware corporation ("Neoleukin"), pursuant to the terms of that certain Agreement and Plan of Merger and Reorganization, dated as of July 17, 2023, by and among Neoleukin, Merger Sub and Neurogene. The following is the script of a joint conference call hosted by Neoleukin and Neurogene held on July 18, 2023:

Neurogene and Neoleukin Announce Definitive Merger Agreement

July 18, 2023

Webcast Call Script

5:30 AM PT / 8:30 AM ET

CORPORATE PARTICIPANTS

Sean Smith, Interim Chief Financial Officer for Neoleukin
Donna Cochener, Interim Chief Executive Officer and General Counsel of Neoleukin
Rachel McMinn, Founder and Chief Executive Officer of Neurogene

PRESENTATION

Operator

Good morning, and welcome to the Neurogene/Neoleukin merger announcement conference call. Please note that today's conference call is being recorded for archive purposes. At this time, I'd like to turn the conference call over to Sean Smith, Interim Chief Financial Officer for Neoleukin Therapeutics. Please go ahead.

Sean Smith

Thank you. Good morning, everyone.

Joining me on today's call are Donna Cochener, Interim Chief Executive Officer and General Counsel of Neoleukin, and Dr. Rachel McMinn, Founder and Chief Executive Officer of Neurogene. Earlier today, Neurogene and Neoleukin issued a joint press release announcing the signing of a definitive merger agreement. A copy of this press release is available on the companies' respective websites at neurogene.com and neoleukin.com.

Slide 2

Before I turn the call over to Donna, I would like to remind everyone that this discussion and the accompanying presentation will contain forward-looking statements based upon the current expectations of Neoleukin and Neurogene, which include, but are not limited to, statements regarding the expected timing, completion, effects and potential benefits of the transaction and our future expectations, and plans and prospects for the combined company. Such statements represent management's judgment and intention as of today and involve assumptions, risks and uncertainties. Neoleukin and Neurogene undertake no obligation to update or revise any forward-looking statements except as required by law.

Slide 2 provides an overview of these forward-looking statements and the risks and uncertainties that could cause actual outcomes and results to differ materially from those contemplated in these forward-looking statements. Please refer to this slide for more details on these forward-looking statements and other important information.

Slide 3

Further, Neoleukin intends to file a registration statement and accompanying proxy statement and prospectus with the SEC relating to the proposed merger. Please be advised to read, when available, the proxy statement and prospectus and other relevant documents filed with the SEC, as these will contain important information about Neoleukin, Neurogene, and the transaction. Once available, these documents can be obtained free of charge from the SEC at sec.gov or on Neoleukin's website.

I'll now turn the call over to Donna Cochener, Interim Chief Executive Officer and General Counsel of Neoleukin.

Donna Cochener

Thank you, Sean, and thank you to everyone joining us on today's call.

Slide 4

This morning, we announced the proposed merger of Neoleukin Therapeutics and Neurogene, a private company developing differentiated genetic medicines for the treatment of rare neurological diseases. Contingent on completion of customary closing conditions, including the approval of the proposed transaction by Neurogene and Neoleukin's respective stockholders, the combined company will focus on advancing Neurogene's differentiated genetic medicines pipeline, which includes a potential best-in-class product for Rett syndrome. Neurogene is at an exciting juncture in its growth, which we will discuss in greater detail shortly.

Today's announcement is the culmination of what was a thoughtful, comprehensive review of strategic alternatives for our business. With multiple potential catalysts on the horizon and a cash runway of the combined company expected into the second half of 2026—which includes multiple anticipated data readouts from their Rett syndrome program—we are confident in Neurogene's management team to drive significant long-term value creation for stockholders.

Slide 5

Let's now review the key details of the proposed all-stock transaction. Upon close, the combined company is expected to have a cash balance of approximately $200 million, inclusive of the $95 million in proceeds expected from Neurogene's oversubscribed concurrent private financing announced in conjunction with the proposed merger, with participation from new and existing healthcare-dedicated specialist and mutual fund institutional investors. Resources are expected to fund operations into the second half of 2026. Upon close, the combined company is expected to be renamed "Neurogene Inc.", trading on the Nasdaq Capital Market under the ticker "NGNE". Expected ownership upon closing will be approximately 84% for pre-merger Neurogene stockholders, including those purchasing Neurogene shares in the concurrent private financing. Pre-merger Neoleukin stockholders are expected to own approximately 16%, subject to adjustment based on Neoleukin's net cash at closing, as further described in the merger agreement.

As part of the transaction, pre-merger Neoleukin stockholders, holders of pre-funded warrants for Neoleukin stock, and holders of certain options to purchase Neoleukin stock will be issued one contingent value right, or CVR, per share of Neoleukin stock held by such stockholder, or underlying such warrants or options held by such warrant holder or option holder, immediately prior to closing. These CVRs will represent the right to receive savings, if any, realized by the reduction of our existing lease obligations, the right to receive proceeds, if any, arising from the potential sale of our legacy assets, and the right to receive certain net proceeds, if any, from an anticipated sales tax refund from the state of Washington.

The existing Neurogene management team will lead the combined company. The combined company's new Board of Directors will include a total of seven members, including five Board members selected by Neurogene and two members selected by Neoleukin. We would like to extend our thanks to the Neoleukin and Neurogene Board members for their dedication and support, having unanimously approved the transaction. Subject to stockholder approval and customary closing conditions, we expect the transaction to close in the fourth quarter of 2023.

With that, I'll now turn the call over to Dr. Rachel McMinn, Founder and Chief Executive Officer of Neurogene, to tell us more about the company.

Rachel McMinn

Slide 6

Thank you, Donna. And thank you to everyone joining us this morning. We believe this transaction and our concurrent private financing represent transformative steps forward in our mission, ultimately strengthening our ability to advance our differentiated pipeline of potentially life-changing genetic medicines for devastating neurological diseases.

What differentiates Neurogene from other clinical stage gene therapy companies is our novel, proprietary, transgene regulation technology platform called EXACT. EXACT represents a meaningful technological advance for the gene therapy field, allowing us to develop therapeutic product candidates for complex neurological diseases, which are not addressable with conventional gene therapy. Importantly, our EXACT pipeline is focused on attractive market opportunities, with our lead program in Rett syndrome and other similarly attractive indications to follow. Beyond the novel science, we also have internal manufacturing, which affords us multiple strategic advantages. Finally, we believe our anticipated cash runway into the back half of 2026 enables us to execute beyond our anticipated clinical inflection points.

Slide 7

NGN-401 for Rett syndrome is a key value driver with preliminary data expected in the fourth quarter of 2024 and additional data in the second half of 2025. We are also advancing a discovery-stage candidate using our novel technology that will expand our pipeline into additional areas of high unmet need that are also commercially attractive. We expect to initiate a clinical study of our lead candidate in 2025, and look forward to providing additional updates on our plans in the future. Finally, we expect to have preliminary data for our second clinical-stage candidate for a rare form of Batten disease in the second half of 2024.

Slide 8

Gene therapy as a modality has proven to be a very powerful tool to treat devastating disorders. However, there are many complex genetic diseases that are not currently treatable with conventional gene therapy, because of the highly variable gene expression associated with AAV administration, and in many cases, because the transgene itself is toxic when overexpressed. Our novel and proprietary EXACT platform is designed to deliver highly controlled, consistent levels of transgene expression, as well as optimize transgene expression to desired levels through modular elements. This technology is compatible with any transgene construct that can be packaged into an AAV vector or with a nonviral delivery mechanism. Through optimizing transgene expression, we anticipate that we will be able to largely avoid transgene-related toxicity, and thereby meaningfully widen the therapeutic window for diseases where conventional gene therapy cannot be used. Additionally, inefficient gene delivery has been and remains a key limitation of gene therapy, particularly in neurological disorders. In order to learn from past failures in the sector and advance the field, we have conducted extensive testing comparing various routes of administration and selected intracerebroventricular, or ICV, delivery to maximize distribution of AAV into key areas of the brain.

Slide 9

In addition to our differentiated pipeline, what also sets Neurogene apart is our fully operational GMP manufacturing facility in Houston, which enables us to continue to own product quality and development timelines, be nimble with our pipeline, and provide us with continuity in our process from preclinical to clinical to commercial

manufacturing in the future. Importantly, with a seamless transition from preclinical to clinical starting with our Rett syndrome program, we are well positioned to avoid future product comparability challenges others have faced. Moreover, we have developed two independent robust and scalable processes using either mammalian or insect cells, which provides us with increased flexibility on a program by program basis.

Internal manufacturing also has two significant financial advantages: (1) it provides us with maximum flexibility to manufacture product at a low cost and (2) it allows us to tightly direct our CMC investments to support pipeline advancement driven by our business needs. Finally, I'm excited to share that NGN-401 has been successfully manufactured at our Houston facility and clinical grade product is available for dosing in our open Phase 1/2 trial for female children with Rett syndrome.

Slide 10

I look forward to introducing the Neurogene team in the coming months, but would like to take a moment to highlight two team members.

Christine Mikail serves as our President and CFO, and beyond a traditional CFO role, she plays a large role in running Neurogene with me, and is responsible for corporate strategy, portfolio management, finance and operations. She brings over two decades of experience in the biotechnology and pharmaceutical industry, with wide ranging responsibilities, and has also led various transformational business development and financing transactions for large, mid-size and small companies.

Dr. Stuart Cobb has a dual appointment as our Chief Scientific Officer and at the University of Edinburgh, where he is a Professor in Translational Neuroscience at the Patrick Wild Centre and Centre for Discovery Brain Sciences. Dr. Cobb brings more than 20 years of experience in translational neuroscience, and his lab is considered one of the top laboratories in the world focused on Rett syndrome. He is responsible for leading our scientific research as well as the development of our scientific strategy in support of both our existing and growing gene therapy portfolio. I also want to mention that we are thankful for the strong backing from leading healthcare investors, many of whom have been supporting Neurogene's development since our early rounds of financing.

Slide 11

I would now like to spend some time discussing our two lead clinical programs, starting with NGN-401, our investigational AAV gene therapy for the treatment of Rett syndrome.

Slide 12

Rett syndrome is an X-linked neurodevelopmental disorder caused by a pathogenic mutation in the MECP2 gene that leads to deficiency of the MeCP2 protein. MeCP2 is a critical protein responsible for normal function in the brain and other parts of the nervous system.

Rett syndrome has an estimated worldwide incidence of 1 in 10,000 to 1 in 15,000 live female births, making it one of the most common genetic causes of developmental and intellectual impairment in females. In the U.S., the prevalence is estimated to be ~6,000-9,000 patients. Although there are treatments available for Rett syndrome, a significant unmet need still exists for new treatment options.

Slide 13

Rett syndrome in females is marked by several cardinal clinical features, including an inability to communicate verbally or with their hands, significantly impaired fine and gross motor function, significant autonomic dysfunction, and a range of other disease manifestations. As we will discuss in our clinical trial design, we are focused on the 4-10 year old age range, as this is a relative period of stability compared with both younger and older girls. Females with Rett syndrome can survive into their 40s-50s, but die prematurely typically due to respiratory infection or sudden death.

Slide 14

Gene therapy seems like the obvious modality of choice to develop a potential treatment for Rett syndrome. It is worth noting that Rett syndrome as modeled in mice has been shown to be inducible and reversible, demonstrating that the MECP2 gene is critical throughout lifespan and offering the prospect of disease reversibility in humans. However, treatment for Rett syndrome with gene replacement is not that straightforward because we know that too little MeCP2 causes Rett syndrome; but too much MeCP2 causes a similarly devastating disease called MECP2 duplication syndrome – so there is a narrow therapeutic window for gene therapy in Rett syndrome. The goal in developing a gene replacement therapy for Rett syndrome is to supply enough MeCP2 to the deficient cells, without causing toxicity to the healthy cells. This translates to requiring very tight control over the level of MECP2 expression on a cell by cell basis.

Therefore, the goal for NGN-401, is to deliver therapeutic levels of MeCP2 to deficient cells, while maintaining a non-toxic level of MeCP2 in unaffected cells. Our EXACT technology offers us the prospect of doing just that.

Slide 15

We think about EXACT as a genetic thermostat, designed to control transgene levels to a targeted range. Importantly, as our preclinical data shows, that the embedded regulatory elements provide the secret sauce for enabling development of a treatment for Rett syndrome and other complex disorders. Most of you will be familiar with the transgene and promoter regulatory elements shown. What is novel in EXACT is the non-mammalian miRNA shown in orange, and its complementary recognition site shown in green. Together this product design is purposefully built to avoid off-target gene regulation.

Let me now walk through how the regulation works. Every time the transgene is transcribed, the miRNA is co-transcribed. Because of the perfect match to the recognition sites, the miRNA bound transcripts are destroyed. Any transcripts escaping miRNA binding can then go on to be translated into transgene derived protein. Importantly, the more transgene that is expressed in a given cell, the more miRNA is also produced, which leads to greater destruction of transcripts. What results is a genetic thermostat, which turns down the transgene expression, thereby avoiding the significant toxicity associated with conventional gene therapy.

Slide 16

Let me explain how NGN-401 is expected to work specifically in Rett syndrome. As you can see from the left-hand panel, AAV produces variable levels of transduction across cells. Despite this variability, EXACT effectively normalizes the levels of MeCP2 protein. The right-hand panel illustrates the goal of EXACT—to deliver levels of functional MeCP2, that when expressed on top of endogenous levels, can be well tolerated; while at the same time delivering a therapeutically relevant level of MeCP2 to deficient cells to allow for efficacy. This is the problem that we believe our EXACT technology solves and offers the possibility of making gene replacement a viable modality to treat complex disorders like Rett Syndrome.

I would now like to walk through some of our compelling preclinical findings.

Slide 17

The NGN-401 construct is shown schematically here, packaged in an AAV9 capsid and containing the EXACT technology I walked through on a prior slide. We employed a one-time ICV delivery of NGN-401 in multiple preclinical models.

Starting with the male knockout model…it is the gold standard for demonstrating efficacy because it has a robust phenotype that overlaps with Rett syndrome. Complete lack of MECP2 leads to a rapid death in these mice with median survival of 9 weeks in untreated animals, with some meeting the humane endpoint or found dead as early as 4-5 weeks. The efficacy profile for NGN-401 in this mouse model was robust, demonstrating a dose-dependent improvement in survival, with concomitant improvements in Rett syndrome-like phenotypes compared to untreated control animals.

Next, to test tolerability, we evaluated the same doses of NGN-401 that demonstrated efficacy in a female mouse model. These mice are genotypically comparable to Rett female patients, and therefore a good model to demonstrate tolerability where 50% of cells have normal levels of MeCP2 expression. As you can see, NGN-401 shown in green was well tolerated, with no negative effects on survival. However, when we conducted a similar experiment using unregulated conventional gene therapy as depicted in purple, these mice experienced immediate toxicity and were dead or reached the humane endpoint within 2-3 weeks. The deaths were associated with significant overexpression of MECP2, illustrating how the EXACT technology is able to control MeCP2 levels to a tolerable level.

Slide 18

Earlier this year, the U.S. FDA cleared the IND application for our planned Phase 1/2 trial, and, notably, is allowing us to dose pediatric Rett female patients for our first in human study.

Traditionally, the FDA requires sponsors to demonstrate safety in adults prior to advancing into children. In order to overcome the high regulatory bar, we successfully demonstrated to the FDA that we had a strong scientific rationale, a positive benefit-risk framework, and preclinical evidence that support a prospect of direct benefit in children with Rett syndrome.

Key pillars of that preclinical evidence are: (1) NGN-401 delivers controlled MeCP2 levels, as is evidenced by the strong efficacy and safety profile; (2) There is a strong translational foundation, as our data show robust MeCP2 expression in key areas of the brain underlying Rett pathology (3) we are maximizing the therapeutic potential of our product by delivering the highly conserved full length gene and (4) we have a comprehensive safety package, with no evidence of transgene toxicity or any off-target effects. There is more detailed preclinical data included in the appendix for those of you interested in learning more.

Slide 19

The Phase 1/2 trial is an open-label, single-arm, multi-center clinical trial that is designed to assess the safety, tolerability, and efficacy of a single dose of NGN-401 delivered using a one-time ICV procedure in female pediatric patients with Rett syndrome.

The first cohort is expected to enroll a total of five girls with a confirmed genetic diagnosis of classic Rett syndrome ages 4-10 years, with dosing commencing in the back half of 2023. The starting clinical dose is bracketed by the two efficacious mouse doses shown earlier in the mouse models and as a result would be expected to be efficacious. In addition, we are making plans to dose escalate and expand the study given the safety margin of >4x from our GLP toxicology study. Key assessments will be taken at 3, 6, and 12 months, with efficacy assessments of interest including autonomic function, hand function, communication, and gross motor function.

We expect to report preliminary data from the study from patients dosed in our first cohort in the fourth quarter of 2024, with additional data from a greater number of patients in the back half of 2025. It is worth noting that the FDA generally requires in a gene therapy study a stagger in between patient dosing, along with the adjudication of safety by an independent data safety monitoring board, or DSMB, before we can proceed to the next patient dosing. This stagger applies to all of the patients in the first cohort. Therefore, we would expect that the 2025 dataset will also have more extensive follow up on these first few patients, as well as an expanded dataset from additional patients.

Slide 20

I will now turn to NGN-101, which we are currently developing for CLN5 Batten disease.

Slide 21

Batten disease is a family of rare neurodegenerative diseases caused by pathogenic changes in one of a series of genes that results in the accumulation of toxic deposits across multiple organ systems. CLN5 Batten disease is a rare, pediatric-onset and rapidly progressive condition caused by a pathogenic mutation in the CLN5 gene, leading to loss of function. It is characterized by loss of vision, seizures, and progressive decline in intellectual and motor capabilities beginning in childhood, leading to substantial impairments and early mortality. Unfortunately, CLN5 disease has no disease specific treatment options.

Slide 22

NGN-101 is being developed as a one-time treatment via a dual brain and ocular route of delivery to target both neurodegeneration in the brain as well as vision loss. NGN-101 uses AAV9 to deliver the gene encoding CLN5.
Preclinical data are compelling, demonstrating that CLN5 gene therapy slows or halts key features of disease progression in a naturally occurring CLN5 deficient sheep model.

Slide 23

Our Phase 1/2 trial of NGN-101, which represents the first trial to assess the treatment of both neurodegenerative and ocular disease manifestations of Batten disease, is ongoing. We expect to report preliminary data from the study in the second half of 2024.

Slide 24

We are planning regulatory interactions with the FDA to clearly define a potential registration path for our CLN5 program. We are planning to have a CMC focused meeting towards year-end, where we will seek specific guidance on potency assay requirements for this program. In addition, we are planning a clinical strategy focused meeting with the FDA in the first half of 2024 to better appreciate the level of clinical evidence required to support a potential future approval.

Slides 25 and 26

As you can see, with several potential value-creating inflection points expected within the next ~18-24 months, this is an extremely exciting time for Neurogene. For NGN-401, we expect to commence dosing of our Phase 1/2 trial in female pediatric patients with Rett syndrome in the second half of the year. We then expect to report preliminary data from the first cohort of patients in the fourth quarter of 2024, and expect to share updated data with an expanded number of patients in the second half of 2025. For NGN-101, we anticipate preliminary data from our ongoing Phase 1/2 study of patients with CLN5 Batten disease, in the second half of 2024.

Beyond our clinical candidates, we are also actively in the process of advancing one of our discovery programs, with clinical testing expected to commence in 2025. With cash on hand at the close of this transaction expected to fund operations into the second half of 2026, we believe we are well positioned to successfully execute on advancing our programs through all of these anticipated milestones.

Slide 27

With our capabilities and novel technology, we believe we have the potential to unlock multi-billion dollar markets to address complex neurological diseases not addressable with conventional gene therapy. We will continue our fiscally disciplined and scientifically rigorous approach to advance our pipeline.

In closing, I would like to take the time to thank all those involved in the transaction for their teamwork and collaboration.

We look forward to providing you with updates in the future on our continued progress.

Thank you all for joining us today, this concludes today’s call.

END

Cautionary Note Regarding Forward-Looking Statements

This communication contains forward-looking statements (including within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended (Securities Act)) concerning Neurogene, Neoleukin, the proposed transactions and other matters. These statements may discuss

goals, intentions and expectations as to future plans, trends, events, results of operations or financial condition, or otherwise, based on current expectations and beliefs of the management of Neoleukin and Neurogene, as well as assumptions made by, and information currently available to, management of Neoleukin and Neurogene. Forward-looking statements generally include statements that are predictive in nature and depend upon or refer to future events or conditions, and include words such as "may," "will," "should," "would," "expect," "anticipate," "plan," "likely," "believe," "estimate," "project," "intend," and other similar expressions or the negative or plural of these words, or other similar expressions that are predictions or indicate future events or prospects, although not all forward-looking statements contain these words. Statements that are not historical facts are forward-looking statements. Forward-looking statements in this communication include, but are not limited to, expectations regarding the proposed merger and financing transactions; the potential benefits and results of such transactions; the sufficiency of the combined company's capital resources; the combined company's cash runway; the expected timing of the closing of the proposed transactions; statements regarding the potential and timing of, and expectations regarding, Neurogene's programs, including NGN-101, NGN-401 and its research stage opportunities; statements by Neoleukin's Interim Chief Executive Officer and General Counsel; and statements by Neurogene's Founder and Chief Executive Officer. Forward-looking statements are based on current beliefs and assumptions that are subject to risks and uncertainties and are not guarantees of future performance. Actual results could differ materially from those contained in any forward-looking statement as a result of various factors, including, without limitation: the limited operating history of each company; the significant net losses incurred since inception of each company; the ability to raise additional capital to finance operations; the ability to advance product candidates through preclinical and clinical development; the ability to obtain regulatory approval for, and ultimately commercialize, Neurogene's product candidates; the outcome of preclinical testing and early clinical trials for Neurogene's product candidates, including the ability of those trials to satisfy relevant governmental or regulatory requirements; Neurogene's limited experience in designing clinical trials and lack of experience in conducting clinical trials; the ability to identify and pivot to other programs, product candidates, or indications that may be more profitable or successful than Neurogene's current product candidates; expectations regarding the market and potential for Neurogene's current product candidates; the substantial competition Neurogene faces in discovering, developing, or commercializing products; the negative impacts of the COVID-19 pandemic on operations, including ongoing and planned clinical trials and ongoing and planned preclinical studies; the ability to attract, hire, and retain skilled executive officers and employees; the ability of Neoleukin or Neurogene to protect their respective intellectual property and proprietary technologies; reliance on third parties, contract manufacturers, and contract research organizations; the risk that the conditions to the closing of the proposed transactions are not satisfied, including the failure to obtain stockholder approval for the proposed transactions from both Neoleukin and Neurogene's stockholders or to complete the transactions in a timely manner or at all; uncertainties as to the timing of the consummation of the proposed transactions and the ability of each of the parties to consummate the proposed transactions; risks related to Neoleukin's continued listing on the Nasdaq Capital Market until closing of the proposed transactions; risks related to Neoleukin's and Neurogene's ability to correctly estimate their respective operating expenses and expenses associated with the proposed transactions, as well as uncertainties regarding the impact any delay in the closing would have on the anticipated cash resources of the combined company upon closing and other events and unanticipated spending and costs that could reduce the combined company's cash resources; the occurrence of any event, change or other circumstance or condition that could give rise to the termination of the merger agreement or the financing transaction; competitive responses to the proposed transactions; unexpected costs, charges or expenses resulting from the proposed transactions; the outcome of any legal proceedings that may be instituted against Neoleukin, Neurogene or any of their respective directors or officers related to the merger, the financing transaction, or the proposed transactions contemplated thereby; potential adverse reactions of changes to business relationships resulting from the announcement or completion of the proposed transactions; the effect of the announcement or pendency of the transactions on Neoleukin's or Neurogene's business relationships, operating results and business generally; the expected trading of the combined company's stock on Nasdaq Capital Market under the ticker symbol "NGNE" and the combined company's ability to remain listed following the proposed transactions; and legislative, regulatory, political and economic developments and general market conditions. The foregoing review of important factors that could cause actual events to differ from expectations should not be construed as exhaustive and should be read in conjunction with statements that are included herein and elsewhere, including the risk factors included in Neoleukin's most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with the SEC, the registration statement on Form S-4 to be filed with the SEC by Neoleukin, as well as risk factors associated with companies, such as Neurogene, that operate in the biopharma industry. There can be no assurance that the conditions of the proposed transactions will be satisfied or that future developments affecting Neurogene, Neoleukin or the proposed transactions will be those that have been anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are

beyond Neurogene and Neoleukin's control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. Nothing in this communication should be regarded as a representation by any person that the forward-looking statements set forth herein will be achieved or that the contemplated results of any such forward-looking statements will be achieved. Forward-looking statements in this communication speak only as of the day they are made and are qualified in their entirety by reference to the cautionary statements herein. Except as required by applicable law, Neoleukin and Neurogene undertake no obligation to revise or update any forward-looking statement, or to make any other forward-looking statements, whether as a result of new information, future events or otherwise.

This communication contains hyperlinks to information that is not deemed to be incorporated by reference into this communication.

No Offer or Solicitation

This communication and the information contained herein is not intended to and does not constitute (i) a solicitation of a proxy, consent or approval with respect to any securities or in respect of the proposed transactions or (ii) an offer to sell or the solicitation of an offer to subscribe for or buy or an invitation to purchase or subscribe for any securities pursuant to the proposed transactions or otherwise, nor shall there be any sale, issuance or transfer of securities in any jurisdiction in contravention of applicable law. No offer of securities shall be made except by means of a prospectus meeting the requirements of the Securities Act of 1933, as amended, or an exemption therefrom.

Subject to certain exceptions to be approved by the relevant regulators or certain facts to be ascertained, the public offer will not be made directly or indirectly, in or into any jurisdiction where to do so would constitute a violation of the laws of such jurisdiction, or by use of the mails or by any means or instrumentality (including without limitation, facsimile transmission, telephone and the internet) of interstate or foreign commerce, or any facility of a national securities exchange, of any such jurisdiction.

NEITHER THE SEC NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THE SECURITIES OR DETERMINED IF THIS COMMUNICATION IS TRUTHFUL OR COMPLETE.

Important Additional Information About the Proposed Transactions Will be Filed with the SEC

This communication is not a substitute for the registration statement or for any other document that Neoleukin may file with the SEC in connection with the proposed transactions. In connection with the proposed transactions, Neoleukin intends to file relevant materials with the SEC, including a registration statement on Form S-4 that will contain a proxy statement/prospectus of Neoleukin. NEOLEUKIN URGES INVESTORS AND STOCKHOLDERS TO READ THE REGISTRATION STATEMENT, PROXY STATEMENT/PROSPECTUS AND ANY OTHER RELEVANT DOCUMENTS THAT MAY BE FILED WITH THE SEC, AS WELL AS ANY AMENDMENTS OR SUPPLEMENTS TO THESE DOCUMENTS, CAREFULLY AND IN THEIR ENTIRETY IF AND WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT NEOLEUKIN, NEUROGENE, THE PROPOSED TRANSACTIONS AND RELATED MATTERS. Investors and stockholders will be able to obtain free copies of the proxy statement/prospectus and other documents filed by Neoleukin with the SEC (when they become available) through the website maintained by the SEC at www.sec.gov. In addition, investors and stockholders should note that Neoleukin communicates with investors and the public using its website (www.neoleukin.com), the investor relations website (https://investors.neoleukin.com/) where anyone will be able to obtain free copies of the proxy statement/prospectus and other documents filed by Neoleukin with the SEC and stockholders are urged to read the proxy statement/prospectus and the other relevant materials when they become available before making any voting or investment decision with respect to the proposed transactions.

Participants in the Solicitation

Neoleukin, Neurogene and their respective directors and executive officers may be considered participants in the solicitation of proxies in connection with the proposed transaction. Information about Neoleukin's directors and executive officers is included in Neoleukin's most recent Annual Report on Form 10-K, including any information incorporated therein by reference, as filed with the SEC, and the proxy statement for Neoleukin's 2023 annual meeting of stockholders, filed with the SEC on April 27, 2023. Additional information regarding the persons who may be deemed participants in the solicitation of proxies will be included in the proxy statement/prospectus relating to the proposed transaction when it is filed with the SEC. These documents can be obtained free of charge from the sources indicated above.