

PLACEMENT AGENCY AGREEMENT

November 21, 2024

Aptose Biosciences Inc.
251 Consumers Road, Suite 1105
Toronto, Ontario, Canada M2J 4R3
Attention: William G. Rice, Ph.D.

Dear Dr. Rice:

This letter (the “**Agreement**”) constitutes the agreement between A.G.P./Alliance Global Partners, as placement agent (the “**Placement Agent**”), and Aptose Biosciences Inc., a company incorporated under the laws of Canada (the “**Company**”), that the Placement Agent shall serve as the exclusive Placement Agent for the Company, on a “reasonable best efforts” basis, in connection with the proposed placement (the “**Placement**”) of (i) shares (the “**Shares**”) of the Company’s common shares, no par value per share (the “**Common Shares**”), (ii) warrants to purchase Common Shares of the Company (the “**Common Warrants**”), and/or (iii) pre-funded warrants to purchase Common Shares (the “**Pre-Funded Warrants**”, and together with the Common Warrants, the “**Warrants**,” and collectively with the Shares, the “**Securities**”), depending on the beneficial ownership percentage of the purchaser of the Common Shares following its purchase. The Shares, Common Warrants and Pre-Funded Warrants, along with the Common Shares underlying the Pre-Funded Warrants and Common Warrants shall be offered and sold under the Company’s registration statement on Form S-1 (File No. 333-281201) (the “**Registration Statement**”). The Securities actually placed by the Placement Agent are referred to herein as the “**Placement Agent Securities**.”

The terms of the Placement shall be mutually agreed upon by the Company and the purchasers (each, a “**Purchaser**” and collectively, the “**Purchasers**”); *provided, however*, that nothing herein shall obligate the Company to issue any Securities or complete the Placement. The Company expressly acknowledges and agrees that the Placement Agent’s obligations hereunder are on a reasonable best efforts basis only and that the execution of this Agreement does not constitute a commitment by the Placement Agent to purchase the Securities and does not ensure the successful placement of the Securities or any portion thereof or the success of the Placement Agent with respect to securing any other financing on behalf of the Company. The Placement Agent may retain other brokers or dealers to act as sub-agents or selected-dealers on its behalf in connection with the Placement. Certain affiliates of the Placement Agent may participate in the Placement by purchasing some of the Placement Agent Securities. The sale of Placement Agent Securities to any Purchaser will be evidenced by a securities purchase agreement (the “**Purchase Agreement**”) between the Company and such Purchaser, in a form reasonably acceptable to the Company and the Purchaser. Capitalized terms that are not otherwise defined herein have the meanings given to such terms in the Purchase Agreement. Prior to the signing of any Purchase Agreement, officers of the Company will be available to answer inquiries from prospective Purchasers.

SECTION 1. REPRESENTATIONS AND WARRANTIES OF THE COMPANY; COVENANTS OF THE COMPANY.

A. Representations of the Company. With respect to the Placement Agent Securities, each of the representations and warranties (together with any related disclosure schedules thereto) and covenants made by the Company to the Purchasers in the Purchase Agreement in connection with the Placement, is hereby incorporated herein by reference into this Agreement (as though fully restated herein) and is, as of the date of this Agreement and as of the Closing Date, hereby made to, and in favor of, the Placement Agent. In addition to the foregoing, the Company represents and warrants that there are no affiliations with any FINRA member firm among the Company’s officers, directors or, to the knowledge of the Company, any five percent (5.0%) or greater stockholder of the Company, except as set forth in the Purchase Agreement, the FINRA questionnaires and SEC Reports.

B. Covenants of the Company. The Company covenants and agrees to continue to retain (i) an independent public accounting firm registered with the Public Company Accounting Oversight Board (the “**PCAOB**”) for a period of at least three (3) years after the Closing Date and (ii) a competent transfer agent with respect to the Placement Agent Securities for a period of three (3) years after the Closing Date. In addition, from the date hereof until sixty (60) days after the Closing Date, subject to certain exceptions provided for in the Purchase Agreement, neither the Company nor any Subsidiary shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any

Common Shares or Common Share Equivalents, except that such restriction shall not apply with respect to an Exempt Issuance (as defined in the Purchase Agreement).

SECTION 2. REPRESENTATIONS OF THE PLACEMENT AGENT. The Placement Agent represents and warrants that it (i) is a member in good standing of FINRA, (ii) is registered as a broker/dealer under the Exchange Act, and the securities laws of each state in which an offer or sale of the Placement Agent Securities will be made (unless exempt from the respective state's broker-dealer registration requirements), (iii) is licensed as a broker/dealer under the laws of the United States of America applicable to the offers and sales of the Placement Agent Securities by the Placement Agent, (iv) is and will be a corporate body validly existing under the laws of its place of incorporation, and (v) has full power and authority to enter into and perform its obligations under this Agreement. The Placement Agent will immediately notify the Company in writing of any change in their status with respect to subsections (i) through (v) above. The Placement Agent covenants that they will use their reasonable best efforts to conduct the Placement hereunder in compliance with the provisions of this Agreement and the requirements of applicable law.

SECTION 3. COMPENSATION AND EXPENSES.

A. In consideration of the services to be provided for hereunder, the Company shall pay to A.G.P. or its respective designees a total cash fee equal to seven percent (7.0%) of the aggregate purchase price paid by each purchaser of Securities that are sold in the Offering (the "**Cash Fee**"), other than those certain identified investors as listed in the Engagement Letter dated October 23, 2024 (the "**Engagement Letter**") for which the Company shall pay to the Placement Agent and/or its respective designees a cash fee of six percent (6.0%) of the aggregate purchase price paid by each purchaser of Securities that are sold in the Offering. The Cash Fee shall be paid on the Closing Date. The Company shall not be required to pay the Placement Agent any fees or expenses except for the Cash Fee and the reimbursement of (i) accountable legal fees and other reasonable and documented out-of-pocket expenses incurred by the Placement Agent in connection with the transaction in the amount of up to \$60,000 and (ii) non-accountable expenses equal to \$10,000. Each Placement Agent reserves the right to reduce any item of compensation or adjust the terms thereof as specified herein in the event that a determination shall be made by FINRA to the effect that the Placement Agent's aggregate compensation is in excess of FINRA Rules or that the terms thereof require adjustment. The Company further agrees to issue to A.G.P. (and/or its designees) on the Closing Date, warrants to purchase such number of Common Shares equal to four percent (4.0%) of the aggregate number of Common Shares placed in the Offering (the "**Placement Agent Warrants**"). The Placement Agent Warrants may be exercised in cash or via cashless exercise as set forth therein, and will terminate on the fifth anniversary of the commencement of the Placement. The Placement Agent Warrants shall have the same terms as the warrants issued to the Purchasers except that the exercise price of the Placement Agent Warrants shall be equal to one hundred and ten percent (110%) of the exercise price of the price of the closing price of the Common Shares on November 21, 2024. The Placement Agent Warrants and the Common Shares issuable upon exercise of the Placement Agent Warrants will be deemed compensation by FINRA. The Placement Agent Warrants will provide for registration rights and customary anti-dilution provisions (for stock dividends and splits and recapitalizations) consistent with FINRA Rule 5110, and further, the number of shares underlying the Placement Agent Warrants shall be reduced, if necessary, to comply with FINRA rules or regulations.

B. The Company agrees to pay all costs, fees and expenses incurred by the Company in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including, without limitation: (i) all expenses incident to the issuance, delivery and qualification of the Placement Agent Securities (including all printing and engraving costs); (ii) all fees and expenses of the registrar and transfer agent of the Shares; (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Placement Agent Securities; (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors; (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Preliminary Prospectus and the Prospectus, and all amendments and supplements thereto, and this Agreement; (vi) all filing fees, reasonable attorneys' fees and expenses incurred by the Company in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Placement Agent Securities for offer and sale under the state securities or blue sky laws or the securities laws of any other country; and (vii) the fees and expenses associated with including the Placement Agent Securities on the Trading Market.

SECTION 4. INDEMNIFICATION.

A. To the extent permitted by law, with respect to the Placement Agent Securities, the Company will indemnify the Placement Agent and their affiliates, stockholders, directors, officers, employees, members and controlling persons (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) against all losses, claims, damages, expenses and liabilities, as the same are incurred (including the reasonable fees and expenses of counsel), relating to or arising out of its activities hereunder or pursuant to this Agreement, except to the extent that any losses, claims, damages, expenses or liabilities (or actions in respect thereof) are found in a final judgment (not subject to appeal) by a court of law to have resulted from a Placement Agent's fraud, willful misconduct or gross negligence in executing this Agreement or performing the services described herein. For the avoidance of doubt, this Section 4 is not intended to govern claims between the parties hereto.

B. Promptly after receipt by the Placement Agent of notice of any claim or the commencement of any action or proceeding with respect to which the Placement Agent is entitled to indemnity hereunder, the applicable Placement Agent will notify the Company in writing of such claim or of the commencement of such action or proceeding, but failure to so notify the Company shall not relieve the Company from any obligation it may have hereunder, except and only to the extent such failure results in the forfeiture by the Company of substantial rights or defenses or prejudice to the Company's substantial rights or defenses. If the Company so elects or is requested by the Placement Agent, the Company will assume the defense of such action or proceeding and will employ counsel reasonably satisfactory to the applicable Placement Agent and will pay the fees and expenses of such counsel. Notwithstanding the preceding sentence, the Placement Agent will be entitled to employ its own counsel separate from counsel for the Company and from any other party in such action if counsel for the Placement Agent reasonably determines that it would be inappropriate under the applicable rules of professional responsibility for the same counsel to represent both the Company and the Placement Agent. In such event, the reasonable fees and disbursements of no more than one such separate counsel will be paid by the Company, in addition to fees of local counsel. The Company will have the right to settle the claim or proceeding, provided that the Company will not settle any such claim, action or proceeding without the prior written consent of the Placement Agent, which will not be unreasonably withheld or delayed unless such settlement includes an unconditional, irrevocable release of each Indemnified Person from any and all liability arising out of such claim.

C. The Company agrees to notify the Placement Agent promptly of the assertion against it or any other person of any claim or the commencement of any action or proceeding relating to a transaction contemplated by this Agreement.

D. If for any reason the foregoing indemnity is unavailable to the Placement Agent or insufficient to hold the Placement Agent harmless, then the Company shall contribute to the amount paid or payable by the Placement Agent as a result of such losses, claims, damages or liabilities in such proportion as is appropriate to reflect not only the relative benefits received by the Company on the one hand and the Placement Agent on the other, but also the relative fault of the Company on the one hand and the Placement Agent on the other that resulted in such losses, claims, damages or liabilities, as well as any relevant equitable considerations. The amounts paid or payable by a party in respect of losses, claims, damages and liabilities referred to above shall be deemed to include any legal or other fees and expenses incurred in defending any litigation, proceeding or other action or claim. Notwithstanding the provisions hereof, the liable Placement Agent's share of the liability hereunder shall not be in excess of the amount of fees actually received, or to be received, by the Placement Agent under this Agreement (excluding any amounts received as reimbursement of expenses incurred by the Placement Agent).

E. These indemnification provisions shall remain in full force and effect whether or not the transaction contemplated by this Agreement is completed and shall survive the expiration or termination of this Agreement, and shall be in addition to any liability that the Company might otherwise have to any indemnified party under this Agreement or otherwise.

SECTION 5. ENGAGEMENT TERM. The Placement Agent's engagement hereunder will be until the earlier of (i) December 22, 2024 and (ii) the Closing Date. The date of termination of this Agreement is referred to herein as the "**Termination Date.**" The Placement Agent agrees not to use any confidential information concerning the Company provided to the Placement Agent by the Company for any purposes other than those contemplated under this Agreement.

SECTION 6. PLACEMENT AGENT INFORMATION. The Company agrees that any information or advice rendered by the Placement Agent in connection with this engagement is for the confidential use of the Company only in its evaluation of the Placement and, except as otherwise required by law, the Company will not disclose or otherwise refer to the advice or information in any manner without the Placement Agent's prior written consent.

SECTION 7. NO FIDUCIARY RELATIONSHIP. This Agreement does not create, and shall not be construed as creating rights enforceable by any person or entity not a party hereto, except those entitled hereto by virtue of the indemnification provisions hereof. The Company acknowledges and agrees that the Placement Agent are not and shall not be construed as a fiduciary of the Company and shall have no duties or liabilities to the equity holders or the creditors of the Company or any other person by virtue of this Agreement or the retention of the Placement Agent hereunder, all of which are hereby expressly waived.

SECTION 8. CLOSING. The obligations of the Placement Agent, and the closing of the sale of the Placement Agent Securities hereunder are subject to the accuracy, when made and on the Closing Date, of the representations and warranties on the part of the Company contained herein and in the Purchase Agreement, to the performance by the Company of its obligations hereunder, and to each of the following additional terms and conditions, except as otherwise disclosed to and acknowledged and waived by the Placement Agent:

A. All corporate proceedings and other legal matters incident to the authorization, form, execution, delivery and validity of each of this Agreement, the Placement Agent Securities, and all other legal matters relating to this Agreement and the transactions contemplated hereby with respect to the Placement Agent Securities shall be reasonably satisfactory in all material respects to the Placement Agent.

B. The Placement Agent shall have received from Company Counsel and Company Canadian Counsel such counsel's written opinion with respect to the Placement Agent Securities and negative assurance letter (with respect to the Company Counsel), addressed to the Placement Agent and, with respect to the opinion, the Purchasers, dated as of the Closing Date, in form and substance reasonably satisfactory to the Placement Agent.

C. The Common Shares shall be registered under the Exchange Act and, as of the Closing Date, the Placement Agent Securities shall be listed and admitted and authorized for trading on the Trading Market or other applicable U.S. national exchange and satisfactory evidence of such action shall have been provided to the Placement Agent. The Company shall have taken no action designed to, or likely to have the effect of terminating the registration of the Common Shares under the Exchange Act or removing or suspending from trading the Common Shares from the Trading Market or other applicable U.S. national exchange, nor has the Company received any information suggesting that the Commission or the Trading Market or other U.S. applicable national exchange is contemplating terminating such registration or listing.

D. No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body which would, as of the Closing Date, prevent the issuance or sale of the Placement Agent Securities or materially and adversely affect or potentially and adversely affect the business or operations of the Company; and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued as of the Closing Date which would prevent the issuance or sale of the Placement Agent Securities or materially and adversely affect or potentially and adversely affect the business or operations of the Company.

E. The Company shall have entered into a Purchase Agreement with each of the Purchasers of the Placement Agent Securities that choose to do so and such agreements shall be in full force and effect and shall contain representations, warranties and covenants of the Company as agreed upon between the Company and the Purchasers.

F. FINRA shall have raised no objection to the fairness and reasonableness of the terms and arrangements of this Agreement. In addition, the Company shall, if requested by the Placement Agent, make or authorize Placement Agent's counsel to make on the Company's behalf, any filing with the FINRA Corporate Financing Department pursuant to FINRA Rule 5110, if applicable, with respect to the Placement and pay all filing fees required in connection therewith.

G. The Placement Agent shall have received customary certificates of the Company's executive officers (the "**Officer's Certificate**") as to the accuracy of the representations and warranties contained in the Purchase Agreement, and a certificate of the Company's secretary (the "**Secretary's Certificate**") certifying (i) that the Company's organizational documents are true and complete, have not been modified and are in full force and effect; (ii) that the resolutions of the Company's Board of Directors relating to the Placement are in full force and effect and have not been modified; and (iii) as to the incumbency of the officers of the Company. Each of the Officer's Certificate and Secretary's Certificate shall be dated as of the Closing Date, and all documents referenced in the Secretary's Certificate shall be attached thereto.

H. The Placement Agent shall have received an executed Lock-Up Agreement from each of the Company's directors, officers and 5% stockholders prior to the Closing Date.

I. On the date hereof, the Placement Agent shall have received, a letter from KPMG (the independent registered public accounting firm of the Company), addressed to the Placement Agent, dated as of the date hereof, and a bring-down "comfort letter" addressed to the Placement Agent on the Closing Date, each in form and substance satisfactory to the Placement Agent. The letters shall not disclose any change in the condition (financial or other), earnings, operations or business of the Company, which, in the Placement Agent's sole judgment, is material and adverse and that makes it, in the Placement Agent's sole judgment, impracticable or inadvisable to proceed with the Placement of the Securities.

If any of the conditions specified in this Section 8 shall not have been fulfilled when and as required by this Agreement, all obligations of the Placement Agent hereunder may be cancelled by the Placement Agent at, or at any time prior to, the Closing Date. Notice of such cancellation shall be given to the Company in writing or orally. Any such oral notice shall be confirmed promptly thereafter in writing.

SECTION 9. GOVERNING LAW. This Agreement will be governed by, and construed in accordance with, the laws of the State of New York applicable to agreements made and to be performed entirely in such State. This Agreement may not be assigned by either party without the prior written consent of the other party. This Agreement shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns. Any right to trial by jury with respect to any dispute arising under this Agreement or any transaction or conduct in connection herewith is waived. Any dispute arising under this Agreement may be brought into the courts of the State of New York or into the Federal Court located in New York, New York and, by execution and delivery of this Agreement, the Company hereby accepts for itself and in respect of its property, generally and unconditionally, the jurisdiction of aforesaid courts. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by delivering a copy thereof via overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. If either party shall commence an action or proceeding to enforce any provisions of this Agreement, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorney's fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

SECTION 10. ENTIRE AGREEMENT/MISCELLANEOUS. This Agreement embodies the entire agreement and understanding between the parties hereto, and supersedes all prior agreements and understandings, relating to the subject matter hereof. If any provision of this Agreement is determined to be invalid or unenforceable in any respect, such determination will not affect such provision in any other respect or any other provision of this Agreement, which will remain in full force and effect. This Agreement may not be amended or otherwise modified or waived except by an instrument in writing signed by the Placement Agent and the Company. The representations, warranties, agreements and covenants contained herein shall survive the Closing Date of the Placement and delivery of the Placement Agent Securities. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or a .pdf format file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or .pdf signature page were an original thereof.

SECTION 11. NOTICES. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of (a) the date of transmission, if such notice or communication is sent to the email address specified on the signature pages attached hereto prior to 6:30 p.m. (New York City time) on a business day, (b) the next business day after the date of transmission, if such notice or communication is sent to the email address on the signature pages attached hereto on a day that is not a business day or later than 6:30 p.m. (New York City time) on any business day, (c) the third business day following the date of mailing, if sent by U.S. internationally recognized air courier service, or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages hereto.

SECTION 12. PRESS ANNOUNCEMENTS. The Company agrees that the Placement Agent shall, on and after the Closing Date, have the right to reference the Placement and the Placement Agent's role in connection therewith in the Placement Agent's marketing materials and on its website and to place advertisements in financial and other newspapers and journals, in each case at its own expense.

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Please confirm that the foregoing correctly sets forth our agreement by signing and returning to the Placement Agent the enclosed copy of this Agreement.

Very truly yours,

A.G.P./ALLIANCE GLOBAL PARTNERS

By: (s) Thomas Higgins

Name: Thomas Higgins

Title: Managing Director

Address for notice:

590 Madison Avenue 28th Floor New York,
New York 10022

Attn: Thomas Higgins

Email: thiggins@allianceg.com

[Signature Page to Placement Agency Agreement.]

Accepted and Agreed to as of
the date first written above:

APTOSE BIOSCIENCES INC.

By: (s) William G. Rice

Name: William G. Rice

Title: Chairman, President & Chief Executive Officer

Address for notice:

66 Wellington Street West, Suite 5300

TD Bank Tower, Box 48

Toronto, Ontario M5K 1E6

Canada

Attention: William G. Rice, Ph.D.

Email: wrice@aptose.com

[Signature Page to Placement Agency Agreement.]