

MOLECULAR TEMPLATES, INC.

INSIDER TRADING POLICY

(October 9, 2017 as amended May 31, 2018)

1. BACKGROUND AND PURPOSE

1.1. Why Have We Adopted This Policy?

The federal securities laws prohibit any member of the Board of Directors (a “Director”) or employee of Molecular Templates, Inc., including its subsidiaries (“the Company”), from purchasing or selling Company securities on the basis of material nonpublic information concerning the Company, or from tipping material nonpublic information to others. These laws impose severe sanctions on individuals who violate them. In addition, the SEC has the authority to impose large fines on the Company and on the Company’s Directors, executive officers and controlling stockholders if the Company’s employees engage in insider trading and the Company has failed to take appropriate steps to prevent it (so-called “controlling person” liability).

This insider trading policy is being adopted in light of these legal requirements, and with the goal of helping:

- (a) prevent inadvertent violations of the insider trading laws;
- (b) avoid embarrassing proxy disclosure of reporting violations by persons subject to Section 16 of the Securities Exchange Act of 1934 (the “Exchange Act”);
- (c) avoid even the appearance of impropriety on the part of those employed by, or associated with, the Company;
- (d) protect the Company from controlling person liability; and
- (e) protect the reputation of the Company, its Directors and its employees.

As detailed below, this policy applies to family members and certain other persons and entities with whom Directors and employees have relationships. However, nothing in this policy is applicable to transactions by the Company itself.

1.2. What Type of Information Is “Material”?

Information concerning the Company is considered material if there is a substantial likelihood that a reasonable stockholder would consider the information important in making an investment decision with respect to the Company’s securities. Stated another way, there must be a substantial likelihood that a reasonable stockholder would view the information as having significantly altered the “total mix” of information available about the Company. Material information can include positive or negative information about the Company. Information concerning any of the following subjects, or the Company’s plans with respect to any of these subjects, would often be considered material:

- (a) the Company's revenues or earnings;
- (b) information related to the results of clinical trials;
- (c) communications sent to or received from the U.S. Food and Drug Administration;
- (d) negotiation or execution of any significant new agreement, or changes to an existing agreement;
- (e) a significant merger or acquisition involving the Company;
- (f) a change in control of the Company;
- (g) a significant change in the management or the Board of Directors of the Company;
- (h) the public or private sale of a significant amount of securities of the Company;
- (i) the Company's decision to commence or terminate the payment of cash dividends;
- (j) the establishment of a stock repurchase program;
- (k) a stock split;
- (l) a default on outstanding debt or preferred stock;
- (m) a bankruptcy filing;
- (n) a new product release or a significant development, invention or discovery;
- (o) the loss, delay or gain of a significant contract, sale or order or other important development regarding customers or suppliers;
- (p) a conclusion by the Company or a notification from its independent auditor that any of the Company's previously issued financial statements should no longer be relied upon; or
- (q) a change in the Company's independent auditor.

This list is illustrative only and is not intended to provide a comprehensive list of circumstances that could give rise to material information.

1.3. When Is Information "Nonpublic"?

Information concerning the Company is considered nonpublic if it has not been disseminated in a manner making it available to investors generally.

Information will generally be considered nonpublic unless (1) the information has been disclosed in a press release, in a public filing made with the Securities and Exchange Commission (such as a Report on Form 10-K, Form 10-Q, or Form 8-K, through a news wire service or daily newspaper of wide circulation or, in some circumstances, on the Company's website, and (2) a sufficient amount of time has passed so that the information has had an opportunity to be digested by the marketplace.

2. PROHIBITIONS RELATING TO TRANSACTIONS IN THE COMPANY'S SECURITIES

2.1. Covered Persons. This Section 2 applies to:

- (a) all Directors;
- (b) all employees;
- (c) all family members of Directors and employees who share the same address as, or are financially dependent on, the Director or employee and any other person who shares the same address as the Director or employee (other than (x) an employee or tenant of the Director or employee or (y) another unrelated person whom the Chief Financial Officer determines should not be covered by this policy); and
- (d) all corporations, partnerships, trusts or other entities controlled by any of the above persons, unless the entity has implemented policies or procedures designed to ensure that such person cannot influence transactions by the entity involving Company securities.

2.2. Prohibition on Trading While Aware of Material Nonpublic Information.

- (a) Prohibited Activities. Except as provided in Section 4, no person or entity covered by Section 2 may:
 - (1) purchase, sell or donate any securities of the Company while he or she is aware of any material nonpublic information concerning the Company or recommend to another person that they do so;
 - (2) disclose to any other person any material nonpublic information concerning the Company if such person may misuse that information, such as by purchasing or selling Company securities or tipping that information to others;
 - (3) purchase, sell or donate any securities of another company while he or she is aware of any material nonpublic information concerning such other company which he or she learned in the course of his or her service as a Director or employee of the Company or recommend to another person that they do so; or
 - (4) disclose to any other person any material nonpublic information concerning another company which he or she learned in the course of his or her service as a Director or employee of the Company if such person may misuse that information, such as by purchasing or selling securities of such other company or tipping that information to others.
- (b) Application of Policy After Cessation of Service. If a person ceases to be a Director or employee of the Company at a time when he or she is aware of material nonpublic information concerning the Company, the prohibition on purchases, sales or donations of Company securities in Section 2.2(a) shall continue to apply to such person until that information has become public or is no longer material.

- 2.3. Prohibition on Pledges. No person or entity covered by this Section 2 may at any time purchase Company securities on margin, borrow against Company securities held in a margin account, or pledge Company securities as collateral for a loan. However, an exception may be granted where a person wishes to pledge Company securities as collateral for a loan (other than a margin loan) and clearly demonstrates the financial capacity to repay the loan without resort to the pledged securities. Any person who wishes to pledge Company securities as collateral for a loan must submit a request for approval to the Chief Financial Officer. In addition, any such request by a Director or executive officer of the Company must also be reviewed and approved by the Audit Committee of the Board of Directors.
- 2.4. Prohibition on Short Sales and Derivative Transactions. No person or entity covered by this Section 2 may engage at any time in any of the following types of transactions:
- (a) short sales of Company securities, including short sales “against the box”;
 - (b) purchases or sales of puts, calls or other derivative securities based on the Company’s securities; or
 - (c) purchases of financial instruments (including prepaid variable forward contracts, equity swaps, collars and exchange funds) that are designed to hedge or offset any decrease in the market value of Company securities.

3. ADDITIONAL PROHIBITIONS APPLICABLE TO DIRECTORS, EXECUTIVE OFFICERS AND DESIGNATED EMPLOYEES

3.1. Covered Persons. Section 3 applies to:

- (a) all Directors;
- (b) all executive officers;
- (c) such other employees as are designated from time to time by the Board of Directors, the Chief Executive Officer or the Chief Financial Officer as being subject to this Section 3 (the “Designated Employees”);
- (d) all family members of Directors, executive officers and Designated Employees who share the same address as, or are financially dependent on, the Director, executive officer or Designated Employee and any other person who shares the same address as the Director, executive officer or Designated Employee (other than (x) an employee or tenant of the Director, executive officer or Designated Employee or (y) another unrelated person whom the Chief Financial Officer determines should not be covered by this policy); and
- (e) all corporations, partnerships, trusts or other entities controlled by any of the above persons, unless the entity has implemented policies or procedures designed to ensure that such person cannot influence transactions by the entity involving Company securities.

3.2. Blackout Periods.

- (a) Regular Blackout Periods. Except as provided in Section 4, no person or entity covered by this Section 3 may purchase, sell or donate any securities of the Company during the period beginning on the last day of the quarter (March 31, June 30, September 30, December 31) and ending upon the completion of the second full trading day after the public announcement of earnings for such quarter (a “regular blackout period”). In effect, this means the blackout starts at the end of each fiscal quarter and lasts until a couple of days after the Company announces results for that quarter.
- (b) Corporate News Blackout Periods. The Company may from time to time notify Directors, executive officers and other specified employees that an additional blackout period (a “corporate news blackout period”) is in effect in view of significant events or developments involving the Company. In such event, except as provided in Section 4, no such individual may purchase, sell or donate any securities of the Company during such corporate news blackout period or inform anyone else that a corporate news blackout period is in effect. (In this policy, regular blackout periods and corporate news blackout periods are each referred to as a “blackout period.”)

3.3 Notice and Pre-Clearance of Transactions.

- (a) Pre-Transaction Clearance. No person or entity covered by this Section 3 (a “Pre-Clearance Person”) may purchase or sell or otherwise acquire or dispose of securities of the Company, other than in a transaction permitted under Section 4, unless such person pre-clears the transaction with the Chief Financial Officer. A request for pre-clearance shall be made in accordance with the procedures established by the Chief Financial Officer. The Chief Financial Officer shall have sole discretion to decide whether to clear any contemplated transaction. All trades that are pre-cleared must be effected within five business days of receipt of the pre-clearance unless a specific exception has been granted by the Chief Financial Officer. A pre-cleared trade (or any portion of a pre-cleared trade) that has not been effected during the five business day period must be pre-cleared again prior to execution. Notwithstanding receipt of pre-clearance, if the Pre-Clearance Person becomes aware of material nonpublic information or becomes subject to a blackout period before the transaction is effected, the transaction may not be completed.
- (b) Post-Transaction Notice. Each person or entity covered by this Section 3 who is subject to reporting obligations under Section 16 of the Exchange Act shall also notify the Chief Financial Officer (or his or her designee) of the occurrence of any purchase, sale or other acquisition or disposition of securities of the Company as soon as possible following the transaction, but in any event within one business day after the transaction. Such notification may be oral or in writing (including by email) and should include the identity of the covered person, the type of transaction, the date of the transaction, the number of shares involved and the purchase or sale price.

- (c) Deemed Time of a Transaction. For purposes of this Section 3.3, a purchase, sale or other acquisition or disposition shall be deemed to occur at the time the person becomes irrevocably committed to it (for example, in the case of an open market purchase or sale, this occurs when the trade is executed, not when it settles).

4. EXCEPTIONS

- 4.1. Exceptions. The prohibitions in Sections 2.2(a) and 3.2 on purchases, sales and donations of Company securities do not apply to:
 - (a) exercises of stock options or other equity awards or the surrender of shares to the Company in payment of the exercise price or in satisfaction of any tax withholding obligations, in each case in a manner permitted by the applicable equity award agreement; provided, however, that the securities so acquired may not be sold (either outright or in connection with a “cashless” exercise transaction through a broker) while the employee or Director is aware of material nonpublic information or, in the case of someone who is subject to Section 3, during a blackout period;
 - (b) acquisitions or dispositions of Company common stock under the Company’s 401(k) or other individual account plan that are made pursuant to standing instructions not entered into or modified while the employee or Director is aware of material nonpublic information or, in the case of someone who is subject to Section 3, during a blackout period;
 - (c) other purchases of securities from the Company (including purchases under the Company’s Employee Stock Purchase Plan) or sales of securities to the Company;
 - (d) *bona fide* gifts, unless the employee or Director making the gift has reason to believe that the recipient intends to sell the securities while such employee or Director is aware of material nonpublic information or, if such employee or Director is subject to Section 3, during a blackout period applicable to such employee or Director; and
 - (e) purchases or sales made pursuant to a binding contract, written plan or specific instruction (a “trading plan”) which is adopted and operated in compliance with Rule 10b5-1; provided such trading plan: (1) is in writing; (2) was submitted to the Company for review by the Chief Financial Officer prior to its adoption; and (3) was not adopted while the employee or Director was aware of material nonpublic information or, in the case of someone who is subject to Section 3, during a blackout period; and provided further that, in the case of someone who is subject to Section 3, if such trading plan is adopted within two weeks prior to the commencement of a regular blackout period (as defined in Section 2.3(a)), trades may not occur pursuant to such trading plan prior to the termination of such regular blackout period.
- 4.2. Partnership Distributions. Nothing in this policy is intended to limit the ability of a venture capital partnership or other similar entity with which a Director is affiliated to distribute Company securities to its partners, members or other similar persons. It is the responsibility of each affected Director and the affiliated entity, in consultation with

their own counsel (as appropriate), to determine the timing of any distributions, based on all relevant facts and circumstances and applicable securities laws.

- 4.3 Underwritten Public Offering. Nothing in this policy is intended to limit the ability of any person to sell Company securities as a selling stockholder in an underwritten public offering pursuant to an effective registration statement in accordance with applicable securities law.

5. REGULATION BTR

If the Company is required to impose a “pension fund blackout period” under Regulation BTR, each Director and executive officer shall not, directly or indirectly, sell, purchase or otherwise transfer during such blackout period any equity securities of the Company acquired in connection with his or her service as a director or officer of the Company, except as permitted by Regulation BTR.

6. PENALTIES FOR VIOLATION

Violation of any of the foregoing rules is grounds for disciplinary action by the Company, including termination of employment. In addition to any disciplinary actions the Company may take, insider trading can also result in administrative, civil or criminal proceedings which can result in significant fines and civil penalties, being barred from service as an officer or director of a public company, or imprisonment.

7. COMPANY EDUCATION AND ASSISTANCE

- 7.1 Education. The Company shall take reasonable steps designed to ensure that all Directors and employees of the Company are educated about, and periodically reminded of, the federal securities law restrictions and Company policies regarding insider trading.
- 7.2 Assistance. The Company shall provide reasonable assistance to all Directors and executive officers, as requested by such Directors and executive officers, in connection with the filing of Forms 3, 4 and 5 under Section 16 of the Exchange Act. However, the ultimate responsibility, and liability, for timely filing remains with the Directors and executive officers.
- 7.3 Limitation on Liability. None of the Company, the Chief Financial Officer, or the Company’s other employees will have any liability for any delay in reviewing, or refusal of, a request to allow a pledge submitted pursuant to Section 2.3, a request for pre-clearance submitted pursuant to Section 3.3(a) or a trading plan submitted pursuant to Section 4.1. Notwithstanding any pre-clearance of a transaction pursuant to Section 3.3(a) or review of a trading plan pursuant to Section 4.1, none of the Company, the Chief Financial Officer, or the Company’s other employees assumes any liability for the legality or consequences of such transaction or trading plan to the person engaging in or adopting such transaction or trading plan.