

**SIXTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
CYTEIR THERAPEUTICS, INC.**

Cyteir Therapeutics, Inc., a Delaware corporation (the “Corporation”), hereby certifies that this Sixth Amended and Restated Certificate of Incorporation has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware (the “DGCL”), and that:

A. The name of the Corporation is: Cyteir Therapeutics, Inc.

B. The original Certificate of Incorporation of the Corporation was filed with the Secretary of the State of Delaware on June 4, 2012, as amended by the Certificate of Amendment filed on December 5, 2014. The Certificate of Incorporation was amended and restated and filed on October 26, 2015. The Second Amended and Restated Certificate of Incorporation was filed on October 21, 2016. The Third Amended and Restated Certificate of Incorporation was filed on January 3, 2018, as amended by the Certificate of Amendment filed on March 2, 2018. The Fourth Amended and Restated Certificate of Incorporation was filed on September 26, 2019. The Fifth Amended and Restated Certificate of Incorporation was filed on February 5, 2021, as amended by the Certificate of Amendment filed on June 11, 2021 (the “Original Certificate of Incorporation”).

C. This Sixth Amended and Restated Certificate of Incorporation amends and restates the Original Certificate of Incorporation of the Corporation.

D. The Certificate of Incorporation upon the filing of this Sixth Amended and Restated Certificate of Incorporation, shall read as follows:

ARTICLE I -- NAME

The name of the corporation is Cyteir Therapeutics, Inc. (the “Corporation”).

ARTICLE II -- REGISTERED OFFICE AND AGENT

The address of the Corporation’s registered office in the State of Delaware is located at the Corporation Trust Center, 1209 Orange St, Wilmington, DE 19801 and County of New Castle. The name of the Corporation’s registered agent at such address is The Corporation Trust Company.

ARTICLE III -- PURPOSE

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the DGCL.

ARTICLE IV -- CAPITALIZATION

(a) Authorized Shares. The total number of shares of stock which the Corporation shall have authority to issue is 320,000,000 shares, consisting of 280,000,000 shares of Common Stock, par value \$0.001 per share (“Common Stock”) and 40,000,000 shares of Preferred Stock, par value \$0.001 per share (“Preferred Stock”). Such stock may be issued from time to time by the Corporation for such consideration as may be fixed by the board of directors of the Corporation (the “Board of Directors”).

(b) Common Stock. Subject to the powers, preferences and rights of any Preferred Stock, including any series thereof, having any preference or priority over, or rights superior to, the Common Stock and except as otherwise provided by law and this Article IV, the holders of the Common Stock shall have and possess all powers and voting and other rights pertaining to the stock of the Corporation.

(i) *Voting.* Each holder of Common Stock, shall be entitled to one vote for each share of Common Stock held of record by such holder on all matters on which stockholders generally are entitled to vote; provided, that, except as otherwise required by law, holders of Common Stock, shall have no voting power with respect to and shall not be entitled to vote on any amendment to this Sixth Amended and Restated Certificate of Incorporation (including any certificate of designations relating to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to this Sixth Amended and Restated Certificate of Incorporation (including any certificate of designations relating to any series of Preferred Stock) or pursuant to the DGCL. There shall be no cumulative voting.

(ii) *Dividends.* Dividends of cash or property may be declared and paid on the Common Stock from funds lawfully available therefor as and when determined by the Board of Directors and subject to any preferential dividend rights of any then outstanding Preferred Stock. Except as otherwise provided by the DGCL or this Sixth Amended and Restated Certificate of Incorporation, the holders of record of Common Stock shall share ratably in all dividends payable in cash, stock or otherwise and other distributions, whether in respect of liquidation or dissolution (voluntary or involuntary) or otherwise.

(iii) *No Preemptive Rights.* The holders of the Common Stock shall have no preemptive rights to subscribe for any shares of any class of stock of the Corporation whether now or hereafter authorized.

(iv) *No Conversion Rights.* The Common Stock shall not be convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same class of the Corporation’s capital stock.

(v) *Liquidation Rights.* Upon the dissolution, liquidation or winding up of the affairs of the Corporation, whether voluntary or involuntary, after payment or provision for payment of the debts and liabilities of the Corporation and of the preferential and other amounts, if any, to which the holders of Preferred Stock shall be entitled, holders of Common Stock shall be entitled to receive all assets of the Corporation available for distribution to its stockholders, ratably in proportion to the number of shares held by each such stockholder. A merger or consolidation of the Corporation with or into any other corporation or other entity or a sale or conveyance of all or any part of the assets of the Corporation, in any such case that does not in fact result in the liquidation of the Corporation and the distribution of assets to its stockholders,

shall not be deemed to be a voluntary or involuntary liquidation or dissolution or winding up of the Corporation within the meaning of this Article IV(b)(v).

(c) Preferred Stock. Shares of Preferred Stock may be issued in one or more series, from time to time, with each such series to consist of such number of shares and to have such voting powers relative to other classes or series of Preferred Stock, if any, or Common Stock, full or limited, or no voting powers, and such designations, preferences and relative, participating, optional or other rights, and the qualifications, limitations or restrictions thereof, as shall be stated in the resolution or resolutions providing for the issuance of such series adopted by the Board of Directors of the Corporation, and the Board of Directors is hereby expressly vested with the authority, to the full extent now or hereafter provided by applicable law, to adopt any such resolution or resolutions. Except as otherwise provided in this Sixth Amended and Restated Certificate of Incorporation, no vote of the holders of the Preferred Stock or Common Stock shall be a prerequisite to the designation or issuance of any shares of any series of the Preferred Stock authorized by and complying with the conditions of this Sixth Amended and Restated Certificate of Incorporation, the right to have such vote being expressly waived by all present and future holders of the capital stock of the Corporation. Any shares of Preferred Stock that are redeemed, purchased or acquired by the Corporation may be reissued except as otherwise provided by law or this Sixth Amended and Restated Certificate of Incorporation. Different series of Preferred Stock shall not be construed to constitute different classes of shares for the purposes of voting by classes unless expressly provided in the resolution or resolutions providing for the issue of such series adopted by the Board of Directors.

(d) No Class Vote On Changes In Authorized Number of Shares Of Preferred Stock. Subject to the special rights of the holders of any series of Preferred Stock pursuant to the terms of this Sixth Amended and Restated Certificate of Incorporation, any certificate of designations or any resolution or resolutions providing for the issuance of such series of stock adopted by the Board of Directors, the number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the Common Stock irrespective of the provisions of Section 242(b)(2) of the DGCL.

ARTICLE V -- BOARD OF DIRECTORS

(a) Number of Directors; Vacancies and Newly Created Directorships. The number of directors constituting the Board of Directors shall be not fewer than three (3) and not more than fifteen (15), each of whom shall be a natural person. Subject to the previous sentence and to the special rights of the holders of any class or series of Preferred Stock to elect directors, the precise number of directors shall be fixed exclusively pursuant to a resolution adopted by the Board of Directors. Vacancies and newly-created directorships shall be filled exclusively pursuant to a vote of a majority of the directors then in office, even if less than a quorum, or by a sole remaining director, except that any vacancy created by the removal of a director by the stockholders for cause shall be filled, in addition to any other vote otherwise required by law, only by vote of a majority of the outstanding shares of Common Stock. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director. A director elected to fill a vacancy shall be elected for the unexpired term of his or her predecessor in office and a director chosen to fill a position resulting from an increase in the

number of directors shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of his or her successor and to his or her earlier death, resignation or removal. Subject to the special rights of any holder of any class or series of Preferred Stock to elect directors, the directors of the Corporation may be removed only for cause by the affirmative vote of the holders of a majority of the voting power of the outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose.

(b) Classified Board of Directors. Subject to the special rights of the holders of any class or series of Preferred Stock to elect directors, the Board of Directors shall be classified with respect to the time for which directors severally hold office into three classes, as nearly equal in number as possible. The initial Class I Directors shall serve for a term expiring at the first annual meeting of stockholders of the Corporation following the filing of this Sixth Amended and Restated Certificate of Incorporation; the initial Class II Directors shall serve for a term expiring at the second annual meeting of stockholders following the filing of this Sixth Amended and Restated Certificate of Incorporation; and the initial Class III Directors shall serve for a term expiring at the third annual meeting of stockholders following the filing of this Sixth Amended and Restated Certificate of Incorporation. Each director in each class shall hold office until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. At each annual meeting of stockholders beginning with the first annual meeting of stockholders following the filing of this Sixth Amended and Restated Certificate of Incorporation, the successors of the class of directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of stockholders to be held in the third year following the year of their election, with each director in each such class to hold office until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal.

ARTICLE VI -- LIMITATION OF DIRECTOR LIABILITY; INDEMNIFICATION AND ADVANCEMENT OF EXPENSES

(a) Limitation of Director Liability. To the fullest extent that the DGCL or any other law of the State of Delaware (as they exist on the date hereof or as they may hereafter be amended) permits the limitation or elimination of the liability of directors, no director of the Corporation shall be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. No amendment to, or modification or repeal of, this Article VI(a) shall adversely affect any right or protection of a director of the Corporation existing hereunder with respect to any state of facts existing or act or omission occurring, or any cause of action, suit or claim that, but for this Article VI, would accrue or arise, prior to such amendment, modification or repeal. If, after this Sixth Amended and Restated Certificate of Incorporation is filed with the Secretary of State of the State of Delaware, the DGCL or such other law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL or such other law, as so amended.

(b) Indemnification and Advancement of Expenses. The Corporation shall indemnify and advance expenses to, and hold harmless, to the fullest extent permitted by applicable law as

it presently exists or may hereafter be amended, any person (an “Indemnitee”) who was or is made, or is threatened to be made, a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a “Proceeding”), by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was a director or an officer of the Corporation or, while a director or an officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee, member, trustee or agent of another corporation or of a partnership, joint venture, trust, nonprofit entity or other enterprise (including service with respect to employee benefit plans), against all liability and loss suffered (including expenses (including attorneys’ fees and expenses), judgments, fines and amounts paid in settlement and reasonably incurred by such Indemnitee). Notwithstanding the preceding sentence, the Corporation shall be required to indemnify, or advance expenses to, an Indemnitee in connection with a Proceeding (or part thereof) commenced by such Indemnitee only if the commencement of such Proceeding (or part thereof) by the Indemnitee was authorized by the Board of Directors of the Corporation or the Proceeding (or part thereof) relates to the enforcement of the Corporation’s obligations under this Article VI(b).

(c) Insurance. The Corporation shall purchase and maintain insurance on behalf of any person who is or was a director, officer, trustee or employee of the Corporation, or was serving at the request of the Corporation as a director, officer, trustee or employee of another corporation, partnership, joint venture, trust, non-profit entity or other enterprise (including service with respect to employee benefit plans), against any liability asserted against the person and incurred by the person in any such capacity, or arising out of his or her status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VI.

(d) Non-Exclusivity of Rights. The indemnification provided by this Article VI is not exclusive of other indemnification rights arising under any bylaw, agreement, vote of directors or stockholders or otherwise, and shall inure to the benefit of the heirs and legal representatives of such Indemnitee.

(e) Fulfillment of Standard of Conduct. Any Indemnitee shall be deemed to have met the standard of conduct required for such indemnification unless the contrary has been established by a final, non-appealable judgment by a court of competent jurisdiction.

(f) Indemnification Priority. As between the Corporation and affiliates of the Corporation (other than its direct or indirect subsidiaries) who provide indemnification to the Indemnitees for their service to, or on behalf of, the Corporation (collectively, the “Affiliate Indemnitors”) (i) the Corporation is the indemnitor of first resort with respect to all claims indemnifiable pursuant to Article VI(b) against any such Indemnitee (i.e., the Corporation’s obligations to such Indemnitees are primary and any obligation of any Affiliate Indemnitor to advance expenses or to provide indemnification for the same loss or liability incurred by such Indemnitees is secondary), (ii) the Corporation shall be required to advance the full amount of expenses incurred by any such Indemnitee and shall be liable for the full amount of all liability and loss suffered by such Indemnitee (including expenses (including attorneys’ fees and expenses), judgments, fines and amounts paid in settlement and reasonably incurred by such Indemnitee), without regard to any rights any such Indemnitee may have against any Affiliate Indemnitor and (iii) the Corporation irrevocably waives, relinquishes and releases each Affiliate Indemnitor from any and all claims against such Affiliate Indemnitor for contribution, subrogation or any other recovery of any kind in respect thereof. The Corporation shall

indemnify each Affiliate Indemnitor directly for any amounts that such Affiliate Indemnitor pay as indemnification or advancement on behalf of any such Indemnitee and for which such Indemnitee may be entitled to indemnification from the Corporation pursuant to Article VI(b). No advancement or payment by any Affiliate Indemnitor on behalf of any such Indemnitee with respect to any claim for which such Indemnitee has sought indemnification from the Corporation shall affect the foregoing and the Affiliate Indemnitors shall be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Indemnitee against the Corporation.

ARTICLE VII -- MEETINGS OF STOCKHOLDERS

(a) No Action by Written Consent. Except as otherwise provided for or fixed by or pursuant to the provisions of this Sixth Amended and Restated Certificate of Incorporation or any resolution or resolutions of the Board of Directors providing for the issuance of Preferred Stock, any action required or permitted to be taken by the stockholders of the Corporation may be effected only at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

(b) Special Meetings of Stockholders. Subject to the special rights of the holders of any series of Preferred Stock, and to the requirements of applicable law, special meetings of stockholders of the Corporation may be called only by the Board of Directors pursuant to a resolution adopted by a majority of the total number of directors which the Corporation would have if there were no vacancies.

(c) Election of Directors by Written Ballot. Election of directors need not be by written ballot.

ARTICLE VIII -- AMENDMENTS TO THE BYLAWS AND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

(a) Bylaws. In furtherance and not in limitation of the powers conferred by law, the Board of Directors is expressly authorized to make, alter, amend or repeal the bylaws of the Corporation (the “Bylaws”) subject to the power of the stockholders of the Corporation to alter, amend or repeal the Bylaws; provided, that with respect to the powers of stockholders to make, alter, amend or repeal the Bylaws, the affirmative vote of the holders of at least seventy-five percent (75%) of the voting power of the outstanding shares of capital stock of the Corporation entitled to vote with respect thereto, voting together as a single class, shall be required to alter, amend or repeal the bylaws of the Corporation.

(b) Amendments to the Certificate of Incorporation. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Sixth Amended and Restated Certificate of Incorporation in the manner now or hereafter prescribed by the DGCL, and all rights conferred upon stockholders herein are granted subject to this reservation. Notwithstanding anything to the contrary contained in this Sixth Amended and Restated Certificate of Incorporation, and notwithstanding that a lesser percentage may be permitted from time to time by applicable law, no provision of Article IV, Article V, Article VI, paragraphs (a) and (b) of Article VII and Article VIII may be altered, amended or repealed in any respect, nor may any provision or bylaw inconsistent therewith be adopted, unless, in addition to any other vote required by this Sixth Amended and Restated Certificate of Incorporation or otherwise required by law, such alteration, amendment, repeal or adoption is approved by the affirmative

vote of the holders of at least seventy-five percent (75%) of the voting power of the outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose.

ARTICLE IX — EXCLUSIVE JURISDICTION FOR CERTAIN ACTIONS

(a) Exclusive Forum. Unless the Board of Directors or one of its committees otherwise approves, in accordance with Section 141 of the DGCL, this Sixth Amended and Restated Certificate of Incorporation and the Bylaws, the selection of an alternate forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery of the State of Delaware does not have jurisdiction, the Superior Court of the State of Delaware or, if the Superior Court of the State of Delaware also does not have jurisdiction, the United States District Court for the District of Delaware) shall, to the fullest extent permitted by applicable law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation arising pursuant to any provision of the DGCL, this Sixth Amended and Restated Certificate of Incorporation or the Bylaws, (iv) any action to interpret, apply, enforce or determine the validity of this Sixth Amended and Restated Certificate of Incorporation or the Bylaws or (v) any action asserting a claim against the Corporation governed by the internal affairs doctrine (each a "Covered Proceeding"); provided that, the provisions of this Article IX(a) will not apply to suits brought to enforce any liability or duty created by the Securities Exchange Act of 1934, as amended, or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware.

(b) Personal Jurisdiction. If any action the subject matter of which is a Covered Proceeding is filed in a court other than the Court of Chancery of the State of Delaware, or, where permitted in accordance with paragraph (a) above, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware (each, a "Foreign Action"), in the name of any person or entity (a "Claiming Party") without the prior approval of the Board of Directors or one of its committees in the manner described in paragraph (a) above, such Claiming Party shall be deemed to have consented to (i) the personal jurisdiction of the Court of Chancery of the State of Delaware or, where applicable, the Superior Court of the State of Delaware and the United States District Court for the District of Delaware, in connection with any action brought in any such courts to enforce paragraph (a) above (an "Enforcement Action") and (ii) having service of process made upon such Claiming Party in any such Enforcement Action by service upon such Claiming Party's counsel in the Foreign Action as agent for such Claiming Party.

(c) Notice and Consent. Any person or entity purchasing or otherwise acquiring any interest in the shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Article IX and waived any argument relating to the inconvenience of the forums referenced above in connection with any Covered Proceeding.

(d) Federal Forum. Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for

the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended. Any person or entity purchasing or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to this provision.

ARTICLE X — SEVERABILITY

If any provision or provisions of this Sixth Amended and Restated Certificate of Incorporation shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever: (i) the validity, legality and enforceability of such provision or provisions in any other circumstance and of the remaining provisions of this Sixth Amended and Restated Certificate of Incorporation (including each portion of any paragraph of this Sixth Amended and Restated Certificate of Incorporation containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and (ii) to the fullest extent possible, the provisions of this Sixth Amended and Restated Certificate of Incorporation (including each such portion of any paragraph of this Sixth Amended and Restated Certificate of Incorporation containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to permit the Corporation to protect its directors, officers, employees and agents from personal liability in respect of their good faith service to or for the benefit of the Corporation to the fullest extent permitted by law.

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IN WITNESS WHEREOF, the undersigned has caused this Sixth Amended and Restated Certificate of Incorporation to be executed by the officer below this 22nd day of June, 2021.

CYTEIR THERAPEUTICS, INC.

By: /s/ Markus Renschler

Name: Markus Renschler, M.D.

Title: President and Chief Executive Officer