Bicycle Therapeutics plc

Attendance Card

Please bring this card with you to the Meeting and present it at Shareholder registration/accreditation.

Additional Holders:

The Annual General Meeting of Bicycle Therapeutics plc will be held at Building 900 Babraham Research Campus, Babraham, Cambridge, CB22 3AT, United Kingdom on June 27, 2022 at 12:00 p.m. (midday) London Time (7:00 a.m. Eastern Daylight Time).

Control Number: 917815

SRN:

Shareholder Reference Number

Please detach this portion before posting this proxy form.

Form of Proxy - Annual General Meeting to be held on June 27, 2022



Cast your Proxy online...It's fast, easy and secure!

www.investorcentre.co.uk/eproxy

er (SRN) and PIN shown opposite PIN:

You will be asked to enter the Control Number, Shareholder Reference Number (SRN) and PIN shown opposite and agree to certain terms and conditions,

View the Annual Report online: online: https://investors.bicycletherapeutics.com

Register at www.investorcentre.co.uk - elect electronic communications & manage your shareholding online!

To be effective, all proxy appointments must be lodged with the Company's registrars at Computershare Investor Services PLC, The Pavilions, Bridgwater Road, Bristol BS99 6ZY by June 23, 2022 at 12:00 p.m. (midday) London Time (7:00 a.m. Eastern Daylight Time).

Explanatory Notes:

- 1. Every holder has the right to appoint some other person(s) of their choice, who need not be a shareholder, as his proxy to exercise all or any of his rights, to attend, speak and vote on his behalf at the meeting. If you wish to appoint a person other than the Chairman of the meeting, please insert the name of your chosen proxy holder in the space provided (see reverse). If the proxy is being appointed in relation to less than your full voting entitlement, please enter in the box next to the proxy holder's name (see reverse) the number of shares in relation to which they are authorized to act as your proxy. If returned without an indication as to how the proxy shall vote on any particular matter, the proxy will exercise his discretion as to whether, and if so how, he votes (or if this proxy will exercise hisdiscretion as to whether, and if so how, he votes).
- 2. To appoint more than one proxy, an additional proxy form(s) may be obtained by contacting the Registrar's helpline at 0370 703 0031 or you may photocopy this form. Please indicate in the box next to the proxy holder's name (see reverse) the number of shares with respect to which they are authorized to act as your proxy. Please also indicate by marking the box provided if the proxy instruction is one of multiple instructions being given. All forms must be signed and should be returned together in the same envelope.
- The 'Vote Withheld' option is provided to enable you to abstain on any particular resolution. However, it should be noted that a 'Vote Withheld' is not a vote in law and will not be counted in the calculation of the proportion of the votes 'For' and 'Against' a resolution.
 - Kindly Note: This form is issued only to the addressee(s) and is specific to the unique designated account printed hereon. This personalised form is not transferable between different: (i) account holders; or (ii) uniquely designated accounts. The Company and Computershare Investor Services PLC accept no liability for any

instruction that does not comply with these conditions.

- 4. Pursuant to Regulation 41 of the Uncertificated Securities Regulations 2001, entitlement to attend and vote at the meeting and the number of votes which may be cast thereat will be determined by reference to the Register of Members of the Company at 6:00 p.m. London time (1:00 p.m. Eastern Daylight Time) on June 23, 2022. Changes to entries on the Register of Members after that time shall be disregarded in determining the rights of any person to attend and vote at the meeting.
- 5. To appoint one or more proxies or to give an instruction to a proxy (whether previously appointed or otherwise) via a designated voting platform, any such messages must be received by the issuer's agent prior to the specified deadline within the relevant system. For this purpose, the time of receipt will be taken to be the time (as determined by the timestamp generated by the relevant designated voting platform) from which the issuer's agent is able to retrieve the message. The Company may treat as invalid a proxy appointment sent via a designated voting platform in the circumstances set out in Regulation 35(5)(a) of the Uncertificated Securities Regulations 2001.
- 6. The above is how your address appears on the Register of Members. If this information is incorrect please call the Registrar's helpline on 0370 703 0031 to request a change of address form or go to www.investorcentre.co.uk to use the online Investor Centre service.
- 7. Any alterations made to this form should be initialled.
- 8. The completion and return of this form will not preclude a member from attending the meeting and voting in person.

| All Named Holders | | |
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| . To re-elect Richard Kender as a director. | | | | | partnership organized under the laws of England, as our U.K statutory auditors, to hold office until the conclusion of the ne | | | |
| . To approve, on advisory basis, the compensation of our named executive officers. | | | | 8. | annual general meeting of shareholders. To authorize the Audit Committee to determine our U.K. statu auditors' remuneration for the year ending December 31, 202 | | | |
| To indicate, on an advisory basis, the preferred frequency of | | 2 3 ars Years | Vote Withheld | 9. | To receive and adopt our U.K. statutory annual accounts and reports for the year ended December 31, 2021. | | | |
| shareholder advisory votes on executive compensation. | | or Agains | Vote Withheld | 10. | To approve the directors' remuneration report for the year en December 31, 2021 which is set forth in Annex A to this prox | | | |
| To approve the amendment of the 2020 Equity Incentive Plan to increase the number of shares available for issuance under the plan. | [| or Agains | Widillela | | statement. | y | | |
| To ratify the appointment of PricewaterhouseCoopers LLP, a limited liability partnership organized under the laws of England, as our U.S. independent registered public accounting firm for the year ending December 31, 2022. | | | | | | | | |
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| the case of a Corporation, a letter of representation will be required (in accordar 06) unless this has already been lodged at registration. | ance with S32 | of the Com | oanies Act | | | | | |
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| We hereby appoint the Chairman of the Meeting OR t | the perso | n indicate | ad in the h | ov ab | we as mylaur prove to attend speak and vota in | a respect of m | w/our fi | ıll voti |
| ntitlement* on my/our behalf at the Annual General I | Meeting | of Bicycl | e Therape | eutics | lc to be held at Building 900 Babraham Res | | | |
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