

YOUR VOTE IS IMPORTANT. PLEASE VOTE TODAY.

**Vote by Internet – QUICK ★★★ EASY
IMMEDIATE – 24 Hours a Day, 7 Days a Week or by Mail**

ALBIREO PHARMA, INC.

Your internet vote authorizes the named proxies to vote your shares in the same manner as if you marked, signed and returned your proxy card. Votes submitted electronically over the Internet must be received by 7:00 p.m., Eastern Time, on June 8, 2017.



**INTERNET/MOBILE –
www.cstproxyvote.com**

Use the Internet to vote your proxy. Have your proxy card available when you access the above website. Follow the prompts to vote your shares.



MAIL – Mark, sign and date your proxy card and return it in the postage-paid envelope provided.

PLEASE DO NOT RETURN THE PROXY CARD IF YOU ARE VOTING ELECTRONICALLY.

▲ FOLD HERE • DO NOT SEPARATE • INSERT IN ENVELOPE PROVIDED ▲

Please mark your votes like this



1. To elect two Class I directors to serve three year terms expiring in 2020:

FOR the Nominees listed below **WITHHOLD AUTHORITY** to vote for the nominees listed below **FOR ALL EXCEPT** as indicated to the contrary below

ELECTION OF DIRECTORS

NOMINEES:

01 Michael Gutch, Ph.D.

02 Denise Scots-Knight, Ph.D.

INSTRUCTION: To withhold authority to vote for any individual nominee, mark "For All Except" and write that nominee's name in the space provided below: EXCEPTIONS _____

4. To approve, on an advisory basis, the compensation of Albireo's named executive officers as disclosed in the proxy statement.

FOR **AGAINST** **ABSTAIN**

5. To approve, on an advisory basis, the frequency of holding an advisory vote on the compensation of Albireo's named executive officers.

3 YEARS **2 YEARS** **1 YEAR** **ABSTAIN**

2. To approve an amendment to Albireo's Restated Certificate of Incorporation, as amended, to decrease the number of shares of common stock authorized for issuance from 200,000,000 to 30,000,000.

FOR **AGAINST** **ABSTAIN**

3. To ratify the appointment of Ernst & Young LLP as Albireo's independent registered public accounting firm for the fiscal year ending December 31, 2017.

FOR **AGAINST** **ABSTAIN**

COMPANY ID:

PROXY NUMBER:

ACCOUNT NUMBER:

Signature _____ Signature _____ Date _____, 2017.

Please sign exactly as the name appears on your stock certificate. Joint owners should each sign. When signing as attorney, executor, administrator, trustee or guardian, corporation, please give full title as such. If a corporation, please sign in full corporate name by the President or other authorized officer. If a partnership, please sign in partnership name by an authorized person.

Important Notice Regarding the Internet Availability of Proxy Materials for the Annual Meeting of Stockholders

**The 2017 Proxy Statement and the 2016 Annual Report to Stockholders
are available at: <http://ir.albireopharma.com/2017annualmeeting.cfm>**

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ANNUAL MEETING OF STOCKHOLDERS OF

ALBIREO PHARMA, INC.

June 9, 2017, 8:30 a.m. ET

10 Post Office Square, Suite 502 South, Boston, Massachusetts 02109

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

THE UNDERSIGNED APPOINTS DAVID CHISWELL, PH.D. AND RONALD H.W. COOPER AND EACH OF THEM (THE "PROXIES"), AS PROXIES OF THE UNDERSIGNED, WITH THE FULL POWER OF SUBSTITUTION, AND AUTHORIZES EACH OF THEM TO REPRESENT AND VOTE, AS DESIGNATED ON THE REVERSE HEREOF, ALL OF THE SHARES OF COMMON STOCK OF ALBIREO PHARMA, INC., HELD OF RECORD BY THE UNDERSIGNED AT THE CLOSE OF BUSINESS ON APRIL 18, 2017 AT THE ANNUAL MEETING OF STOCKHOLDERS OF ALBIREO PHARMA, INC. TO BE HELD ON JUNE 9, 2017 OR AT ANY ADJOURNMENT OR POSTPONEMENT THEREOF.

The Board of Directors recommends a vote FOR each of the nominees listed in Proposal 1, FOR Proposal 2, FOR Proposal 3, FOR Proposal 4 and for "3 YEARS" on Proposal 5. This proxy, when properly executed, will be voted as specified above. THIS PROXY REVOKES ALL PRIOR PROXIES GIVEN BY THE UNDERSIGNED. THIS PROXY WILL BE VOTED AS DIRECTED OR IF NO SPECIFICATION IS MADE AND THIS PROXY IS RETURNED, THIS PROXY WILL BE VOTED IN FAVOR OF EACH OF THE NOMINEES LISTED IN PROPOSAL 1, FOR PROPOSAL 2, FOR PROPOSAL 3, FOR PROPOSAL 4 AND FOR "3 YEARS" ON PROPOSAL 5.

IN THEIR DISCRETION, THE PROXIES ARE AUTHORIZED TO VOTE UPON SUCH OTHER BUSINESS AS MAY PROPERLY COME BEFORE THE MEETING OR AT ANY ADJOURNMENT OR POSTPONEMENT THEREOF.

PLEASE SIGN, DATE AND MAIL THIS PROXY CARD TO THE COMPANY PROMPTLY.