HEPION PHARMACEUTICALS, INC.

PROXY FOR ANNUAL MEETING TO BE HELD ON JUNE 22, 2023 THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned hereby appoints, Robert Foster, Ph.D. and John Cavan, and each of them, as proxies, each with full power of substitution, to represent and to vote all the shares of common stock of Hepion Pharmaceuticals, Inc. (the "Company"), which the undersigned would be entitled to vote, at the Company's Annual Meeting of Stockholders to be held on June 22, 2023 and at any adjournments thereof, subject to the directions indicated on this Proxy Card.

In their discretion, the proxy is authorized to vote upon any other matter that may properly come before the meeting or any adjournments thereof.

THIS PROXY WILL BE VOTED IN ACCORDANCE WITH THE SPECIFICATIONS MADE, BUT IF NO CHOICES ARE INDICATED, THIS PROXY WILL BE VOTED FOR THE ELECTION OF ALL NOMINEES AND FOR THE PROPOSALS LISTED BELOW.

This proxy is governed by the laws of the State of Delaware.

IMPORTANT—This Proxy must be signed and dated below.

EMAIL ADDRESS: ___

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to Be Held on June 22, 2023 at 9:00 am local time at the Company's offices located at 399 Thornall Street, First Floor, Edison, NJ 08837. The proxy statement and the 2022 Annual Report on Form 10-K are available at https://annualgeneralmeetings.com/hepa2023

THIS IS YOUR PROXY

YOUR VOTE IS IMPORTANT!

Dear Stockholder:

We cordially invite you to attend the Annual Meeting of Stockholders of Hepion Pharmaceuticals, Inc. to be held at the Company's offices located at 399 Thornall Street, First Floor, Edison, NJ 08837, on June 22, 2023, beginning at 9:00 a.m. local time.

Please read the proxy statement which describes the proposals and presents other important information, and complete, sign and return your proxy promptly in the enclosed envelope.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSALS 1-4

R WITHHOLI	1	05. Petrus "Peter" Wijr		FOR	WITHHOLD
		05 Petrus "Peter" Wiir			
		03. Felius Felei Wiji	gaard, Ph.D.		
_		06. Kaouthar Lbiati, M.	D.		
		07. Anand Reddi			
npany's independe	ent registered public	accountants for the fisc	al year ending I	December	31, 2023.
	□ AGAINST		ABSTAIN		
Omnibus Equity In	centive Plan.				
	□ AGAINST		ABSTAIN		
,	Omnibus Equity Ind	☐ AGAINST Omnibus Equity Incentive Plan. ☐ AGAINST , the compensation of the Company's n ☐ AGAINST ears on this proxy. When signing as attored	□ AGAINST □ Omnibus Equity Incentive Plan. □ AGAINST □ , the compensation of the Company's named executive officers □ AGAINST □ ears on this proxy. When signing as attorney, executor, trustee,	□ AGAINST □ ABSTAIN Omnibus Equity Incentive Plan. □ AGAINST □ ABSTAIN , the compensation of the Company's named executive officers. □ AGAINST □ ABSTAIN ears on this proxy. When signing as attorney, executor, trustee, guardian, corp	Omnibus Equity Incentive Plan. AGAINST ABSTAIN , the compensation of the Company's named executive officers. AGAINST ABSTAIN ears on this proxy. When signing as attorney, executor, trustee, guardian, corporate officers.