

Form 5500-SF

Department of the Treasury Internal Revenue Service

Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation

Short Form Annual Return/Report of Small Employee Benefit Plan

This form is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA), and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code).

Complete all entries in accordance with the instructions to the Form 5500-SF.

OMB Nos. 1210-0110 1210-0089

2024

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

A This return/report is for: [X] a single-employer plan [ ] a multiple-employer plan (not multiemployer) (Pension Plan filers checking this box must attach Schedule MEP. Other plans must attach a list of participating employer information in accordance with the form instructions.)

B This return/report is [ ] the first return/report [ ] the final return/report [ ] an amended return/report [ ] a short plan year return/report (less than 12 months)

C Check box if filing under: [ ] Form 5558 [ ] automatic extension [ ] DFVC program [ ] special extension (enter description)

D If the plan is a collectively-bargained plan, check here [ ]

E If this is a retroactively adopted plan permitted by SECURE Act section 201, check here [ ]

Part II Basic Plan Information—enter all requested information

1a Name of plan ARKEA BIO CORP 401(K) PLAN 1b Three-digit plan number (PN) 001

1c Effective date of plan 01/01/2022

2a Plan sponsor's name (employer, if for a single-employer plan) Mailing address (include room, apt., suite no. and street, or P.O. Box) City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions) ARKEA BIO CORP. 2b Employer Identification Number (EIN) 87-1020483

2c Sponsor's telephone number 978-821-7515

500 RUTHERFOD AVE SUITE 302 CHARLESTOWN, MA 02129

2d Business code (see instructions) 541700

3a Plan administrator's name and address [X] Same as Plan Sponsor. 3b Administrator's EIN

3c Administrator's telephone number

4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report. 4b EIN 4d PN

a Sponsor's name c Plan Name

5a Total number of participants at the beginning of the plan year 21

b Total number of participants at the end of the plan year 28

c(1) Number of participants with account balances as of the beginning of the plan year (only defined contribution plans complete this item) 21

c(2) Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item) 27

d(1) Total number of active participants at the beginning of the plan year 20

d(2) Total number of active participants at the end of the plan year 26

e Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested 0

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including, if applicable, a Schedule SB or Schedule MB completed and signed by an enrolled actuary, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

SIGN HERE Filed with authorized/valid electronic signature. 07/01/2025 SHIRLEY HORNER Signature of plan administrator Date Enter name of individual signing as plan administrator

SIGN HERE Signature of employer/plan sponsor Date Enter name of individual signing as employer or plan sponsor

- 6a** Were all of the plan's assets during the plan year invested in eligible assets? (See instructions.) .....  Yes  No
- b** Are you claiming a waiver of the annual examination and report of an independent qualified public accountant (IQPA) under 29 CFR 2520.104-46? (See instructions on waiver eligibility and conditions.) .....  Yes  No
- If you answered "No" to either line 6a or line 6b, the plan cannot use Form 5500-SF and must instead use Form 5500.**
- c** If the plan is a defined benefit plan, is it covered under the PBGC insurance program (see ERISA section 4021)? .....  Yes  No  Not determined
- If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year \_\_\_\_\_ (See instructions.)

<b>Part III Financial Information</b>			
<b>7</b>		<b>(a) Beginning of Year</b>	<b>(b) End of Year</b>
<b>a</b>	Total plan assets .....	666732	977992
<b>b</b>	Total plan liabilities .....		
<b>c</b>	Net plan assets (subtract line 7b from line 7a) .....	666732	977992
<b>8</b>		<b>(a) Amount</b>	<b>(b) Total</b>
<b>a</b>	Contributions received or receivable from:		
<b>(1)</b>	Employers .....	133161	
<b>(2)</b>	Participants .....	314828	
<b>(3)</b>	Others (including rollovers) .....	16284	
<b>b</b>	Other income (loss) .....	102924	
<b>c</b>	Total income (add lines 8a(1), 8a(2), 8a(3), and 8b) .....		567197
<b>d</b>	Benefits paid (including direct rollovers and insurance premiums to provide benefits) .....	255827	
<b>e</b>	Certain deemed and/or corrective distributions (see instructions) .		
<b>f</b>	Administrative service providers (salaries, fees, commissions) .....	110	
<b>g</b>	Other expenses .....		
<b>h</b>	Total expenses (add lines 8d, 8e, 8f, and 8g) .....		255937
<b>i</b>	Net income (loss) (subtract line 8h from line 8c) .....		311260
<b>j</b>	Transfers to (from) the plan (see instructions) .....		

<b>Part IV Plan Characteristics</b>	
<b>9a</b>	If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristic Codes in the instructions: 2E 2F 2G 2J 2K 2S 2T 3D
<b>b</b>	If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristic Codes in the instructions:

<b>Part V Compliance Questions</b>				
<b>10</b>		<b>Yes</b>	<b>No</b>	<b>Amount</b>
<b>a</b>	Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program) .....		X	
<b>b</b>	Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 10a.) .....		X	
<b>c</b>	Was the plan covered by a fidelity bond? .....	X		67000
<b>d</b>	Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty? .....		X	
<b>e</b>	Were any fees or commissions paid to any brokers, agents, or other persons by an insurance carrier, insurance service, or other organization that provides some or all of the benefits under the plan? (See instructions.) .....		X	
<b>f</b>	Has the plan failed to provide any benefit when due under the plan? .....		X	
<b>g</b>	Did the plan have any participant loans? (If "Yes," enter amount as of year-end.) .....		X	
<b>h</b>	If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.) .....		X	
<b>i</b>	If 10h was answered "Yes," check the box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3 .....			

**Part VI Pension Funding Compliance**

**11** Is this a defined benefit plan subject to minimum funding requirements? (If "Yes," see instructions and complete Schedule SB (Form 5500) and lines 11a and b below.) If this is a defined contribution pension plan, leave line 11 blank and complete line 12 below.  Yes  No

**a** Enter the unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40 **11a**

**b PBGC missed contribution reporting requirements.** If the plan is covered by PBGC and the amount reported on line 11a is greater than \$0, has PBGC been notified as required by ERISA sections 4043(c)(5) and/or 303(k)(4)? Check the applicable box:

Yes.

No. Reporting was waived under 29 CFR 4043.25(c)(2) because contributions equal to or exceeding the unpaid minimum required contribution were made by the 30th day after the due date.

No. The 30-day period referenced in 29 CFR 4043.25(c)(2) has not yet ended, and the sponsor intends to make a contribution equal to or exceeding the unpaid minimum required contribution by the 30th day after the due date.

No. Other. Provide explanation \_\_\_\_\_

**12** Is this a defined contribution plan subject to the minimum funding requirements of section 412 of the Code or section 302 of ERISA? (If "Yes," complete line 12a or lines 12b, 12c, 12d, and 12e below, as applicable.) If this is a defined benefit pension plan, leave line 12 blank and complete line 11 above.  Yes  No

**a** If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions, and enter the date of the letter ruling granting the waiver. Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

**If you completed line 12a, complete lines 3, 9, and 10 of Schedule MB (Form 5500), and skip to line 13.**

**b** Enter the minimum required contribution for this plan year **12b**

**c** Enter the amount contributed by the employer to the plan for this plan year **12c**

**d** Subtract the amount in line 12c from the amount in line 12b. Enter the result (enter a minus sign to the left of a negative amount) **12d**

**e** Will the minimum funding amount reported on line 12d be met by the funding deadline?  Yes  No  N/A

**Part VII Plan Terminations and Transfers of Assets**

**13a** Has a resolution to terminate the plan been adopted in any plan year?  Yes  No

**a** If "Yes," enter the amount of any plan assets that reverted to the employer this year. **13a**

**b** Were all the plan assets distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?  Yes  No

**c** If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

13c(1) Name of plan(s):	13c(2) EIN(s)	13c(3) PN(s)

**Part VIII IRS Compliance Questions**

**14a** Does the plan satisfy the coverage and nondiscrimination tests of Code sections 410(b) and 401(a)(4) by combining this plan with any other plans under the permissive aggregation rules?  Yes  No

**14b** If this is a Code section 401(k) plan, check all boxes that apply to indicate how the plan is intended to satisfy the nondiscrimination requirements for employee deferrals and employer matching contributions (as applicable) under Code sections 401(k)(3) and 401(m)(2).

- Design-based safe harbor method
- "Prior year" ADP test
- "Current year" ADP test
- N/A

**15** If the plan sponsor is an adopter of a pre-approved plan that received a favorable IRS Opinion Letter, enter the date of the Opinion Letter 10 / 06 / 2020 (MM/DD/YYYY) and the Opinion Letter serial number Q704162A.