Arcellx Provides Business Updates and Reports First Quarter 2022 Financial Results

-- First patient dosed in the Phase 1 clinical trial evaluating ACLX-001 utilizing groundbreaking ARC-SparX technology in relapsed or refractory multiple myeloma (r/r MM) --

-- Management to host live webcast event during the 2022 ASCO Annual Meeting on Sunday, June 5, 2022, at 7:00 p.m. CDT to discuss new CART-ddBCMA data with a panel of clinician experts –

FOSTER CITY, Calif., May 12, 2022 /PRNewswire/ -- Arcellx, Inc. (NASDAQ: ACLX), a biotechnology company reimagining cell therapy through the development of innovative immunotherapies for patients with cancer and other incurable diseases, today reported business highlights and financial results for the first quarter ended March 31, 2022.

"This is an exciting time for our company as we successfully completed our initial public offering in February, raising $142 million in gross proceeds and strengthened our balance sheet as we advance our pioneering platform to treat cancer and other incurable diseases," said Rami Elghandour, Arcellx's chairman and chief executive officer. "In our first quarter as a public company, we continued to lay the foundation for our near-term and long-term success and our dedicated team made meaningful strides towards our 2022 milestones. We are looking forward to presenting additional patient and longer-term follow-up data on approximately 25 patients for our lead CART-ddBCMA program for patients with relapsed or refractory multiple myeloma (r/r MM) during an oral presentation at ASCO in June. Recently, we also advanced our development pipeline programs with the dosing of the first patient in our Phase 1 study evaluating ACLX-001 for patients with r/r MM utilizing our ARC-SparX technology. ARC-SparX has the potential to overcome some of the core challenges in cell therapy by reducing toxicities and

addressing antigen heterogeneity, opening up significant market opportunities in harder to treat indications. In the second half of this year, we look forward to initiating our Phase 1 ARC-SparX clinical trial in patients with acute myeloid leukemia and high-risk myelodysplastic syndrome, our Phase 2 CART-ddBCMA pivotal trial in patients with r/r MM, and presenting longer-term patient data from our Phase 1 CART-ddBCMA expansion trial in r/r MM. The capstone of our progress is driven by our D-Domain technology which allows us to choose the right approach for the right indication, and we believe this differentiates our programs from traditional CAR-T therapies."

Recent Business Highlights

Clinical results from CART-ddBCMA Phase 1 study published in *Blood Advances*. On May 9, 2022, Arcellx announced the publication of clinical results from the dose escalation cohorts of its CART-ddBCMA Phase 1 study in patients with r/r MM in *Blood Advances,* the open-access journal of the American Society of Hematology. The data demonstrate 100% ORR and 75% CR/sCR; and evidence of durable clinical benefit in a population with poor prognostic features were observed in the dose escalation cohorts with CART-ddBCMA. The full online publication can be accessed here.

Dosed first patient in Phase 1 clinical trial evaluating ACLX-001 utilizing the ARC-SparX platform for the treatment of patients with r/r MM. On May 10, 2022, Arcellx announced that the first patient was dosed in its open-label, multicenter Phase 1 clinical trial (NCT04155749) to evaluate the company's novel dosable and controllable ARC-SparX program in patients with r/r MM. ARC-SparX is comprised of SparX (soluble protein antigen receptor X-linkers) proteins engineered to target BCMA on myeloma cells together with ARC-T (Antigen Receptor Complex-T) cells that are dosed separately and engineered to activate only when engaged with a SparX protein bound to a myeloma cell. Both the ARC cells and the SparX proteins utilize the company's proprietary novel synthetic binding scaffold called the D-Domain.

CART-ddBCMA accepted as an oral abstract presentation at the 2022 American Society of Clinical Oncology (ASCO) Annual Meeting. On April 27, 2022, Arcellx announced the presentation of new clinical data from its CART-

ddBCMA Phase 1 trial in patients with relapsed or refractory multiple myeloma in an oral abstract session at the 2022 American Society of Clinical Oncology (ASCO) Annual Meeting taking place June 3-7, 2022, in Chicago, Illinois.

Oral Presentation Details:

Title: Phase 1 Study of CART-ddBCMA in Relapsed or Refractory Multiple Myeloma
Speaker: Matthew J. Frigault, M.D., Assistant Director of the Cellular Therapy Service at Massachusetts General Cancer Center, and Instructor at Harvard Medical School
Session Type/Title: Oral Abstract Session/Hematologic Malignancies—Plasma Cell Dyscrasia
Session Date: Sunday, June 5, 2022
Session Time: 8:00 a.m. – 11:00 a.m. CDT
Location: McCormick Place Convention Center, Chicago, Illinois
Abstract Number: 8003

Live webcast event with management and panel of clinician experts. On Sunday, June 5, 2022, at 7:00 p.m. CDT, Arcellx will host a live webcast event with an expert panel of clinicians to discuss the clinical results from its CART-ddBCMA study being presented during ASCO. The event will be accessible from Arcellx's website at www.arcellx.com in the Investors section. A replay of the webcast will be archived and available for 30 days following the event.

First Quarter 2022 Financial Highlights

Cash, cash equivalents, and marketable securities:
As of March 31, 2022, Arcellx had cash, cash equivalents, and marketable securities of $210.9 million, which is anticipated to fund its operations into the second half of 2023.

R&D expenses:
Research and development expenses were $24.4 million and $8.5 million for the quarters ended March 31, 2022 and 2021, respectively, an increase of $15.9 million. This increase was driven by higher external costs associated with the

advancement of our CART-ddBCMA clinical program, preclinical development of our other pipeline candidates, and increased headcount.

G&A expenses:
General and administrative expenses were $8.0 million and $2.8 million for the quarters ended March 31, 2022 and 2021, respectively, an increase of $5.2 million. This increase was driven by increased headcount, professional fees related to consulting and accounting, audit services, and other expenses.

Net loss:
Net loss was $32.4 million and $11.3 million for the quarters ended March 31, 2022 and 2021, respectively.

About the ARC-SparX Platform Technology
The ARC-SparX platform is designed to allow for controllability and adaptability to potentially reduce toxicities that are often associated with serious dose-limiting adverse events and to overcome tumor heterogeneity. It is a modular therapy which utilizes a universal ARC-T cell combined with an off-the-shelf SparX protein to separate the tumor-recognition and tumor-killing functions. SparX (soluble protein antigen-receptor X-linkers) proteins utilize our D-Domain technology engineered to recognize antigens on the surface of diseased cells and flags those cells for detection by the ARC-T cells. ARC-T cells express a D-Domain-based CAR engineered to specifically recognize a unique TAG in the SparX protein. ARC-T cells are dosed separately and only activated to kill the target cell when they encounter a SparX protein bound to the target antigen and thus are controlled through SparX dose modulation. Arcellx has developed a collection of SparX proteins that bind different antigens on the surface of diseased cells. Multiple SparX proteins with different antigen specificity can be administered to potentially address antigen heterogeneity or antigen escape that contribute to relapsed and refractory disease.

About Arcellx, Inc.
Arcellx, Inc. is a clinical-stage biotechnology company reimagining cell therapy by engineering innovative immunotherapies for patients with cancer and other incurable diseases. Arcellx believes that cell therapies are one of

the forward pillars of medicine and Arcellx's mission is to advance humanity by developing cell therapies that are safer, more effective, and more broadly accessible. Arcellx's lead product candidate, CART-ddBCMA, is being developed for the treatment of relapsed or refractory multiple myeloma (r/r MM) in an ongoing Phase 1 study. CART-ddBCMA has been granted Fast Track, Orphan Drug, and Regenerative Medicine Advanced Therapy designations by the U.S. Food and Drug Administration.

Arcellx is also advancing its dosable and controllable CAR-T therapy, ARC-SparX, through two programs: a Phase 1 study of ACLX-001 for r/r MM, initiated in the second quarter of 2022; and ACLX-002 in relapsed or refractory acute myeloid leukemia and high-risk myelodysplastic syndrome, expected to enter the clinic in the second half of 2022.

Visit www.arcellx.com for more information.

Forward-looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements in this press release that are not purely historical are forward-looking statements, including Arcellx's expectations regarding the timing and outcomes of clinical trials for its product candidates, the potential impact of its product candidates and platforms on patients and cell therapy, the timing of achievement of its milestones, its ability to fund operations, and the sufficiency of cash, cash equivalents and marketable securities. The forward-looking statements contained herein are based upon Arcellx's current expectations and involve assumptions that may never materialize or may prove to be incorrect. These forward-looking statements are neither promises nor guarantees and are subject to a variety of risks and uncertainties, including risks that may be found in the section entitled Part II, Item 1A (Risk Factors) in the Quarterly Report on Form 10-Q and other documents that Arcellx files from time to time with the Securities and Exchange Commission. These forward-looking statements are made as of the date of this press release, and Arcellx assumes no obligation to update or revise any forward-

looking statements, whether as a result of new information, future events or otherwise, except as required by law.

ARCELLX, INC.

SELECTED CONSOLIDATED BALANCE SHEET DATA

(unaudited)

(in thousands)

	March 31, 2022	December 31, 2021
Cash, cash equivalents and marketable securities	$ 210,929	$ 104,617
Total assets	243,390	128,782
Total liabilities	21,799	16,918
Redeemable convertible preferred stock	—	233,379
Total stockholders' equity (deficit)	221,591	(121,515)

ARCELLX, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(unaudited)

(in thousands, except share and per share amounts)

	Three Months Ended March 31,	
	2022	2021
Revenue	$ —	$ —
Operating expenses:		
Research and development	24,401	8,521
General and administrative	8,034	2,761
Total operating expenses	32,435	11,282
Loss from operations	(32,435)	(11,282)
Other income, net	50	1
Net loss	(32,385)	(11,281)
Other comprehensive loss:		
Unrealized loss on marketable securities	24	—
Comprehensive loss	$ (32,409)	$ (11,281)
Net loss per share attributable to common stockholders—basic and diluted	$ (1.56)	$ (33.45)
Weighted-average common shares outstanding—basic and diluted	20,760,722	337,302

Investor Contact:
Myesha Lacy
Arcellx, Inc.
ir@arcellx.com
510-418-2412

Media Contact
Andrea Cohen
Sam Brown Inc.

andreacohen@sambrown.com
917-209-7163