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BioCryst Pharmaceuticals and Idera Pharmaceuticals Announce Merger to Combine Capabilities to Serve More Patients with Rare Diseases

- Combination creates a well-funded company with a diversified late-stage clinical pipeline, a proven rare disease commercial track record, and validated scientific and clinical acumen -
 - Robert Ingram to be Chairman of the Board, Vincent Milano to be CEO of combined company -
 - Investor Conference Call & Webcast Today, January 22, 2018 at 10:00 AM ET -

Research Triangle Park, NC and Exton, PA — January 22, 2018 —BioCryst Pharmaceuticals, Inc. (NASDAQ: BCRX), and Idera Pharmaceuticals, Inc. (NASDAQ: IDRA), today announced that they have signed a definitive merger agreement to form a new enterprise focused on the development and commercialization of medicines to serve more patients suffering from rare diseases. The combined company will be renamed upon closing and will be led by Vincent Milano, CEO of Idera, who will also serve as a member of the Board. BioCryst Chairman, Robert Ingram, will be Chairman of the Board of the combined company and BioCryst CEO Jon P. Stonehouse will serve as a member of the Board of Directors.

"Both of our companies have aspired to become successful providers of therapeutics for patients suffering from rare life-threatening diseases. Both share a culture that puts patients first and keeps their interests at the very core of what we do, and how we do it," stated Vincent Milano, Idera's Chief Executive Officer. "By merging our unique talents, experiences and assets, we instantly strengthen our ability to become a significant force for patients suffering from a broad range of rare diseases. We will also gain operational synergies and strengthen our financial position."

"The new company will have a robust late-stage pipeline with two Phase 3 candidates and two Phase 2 candidates, with several important catalysts for these programs anticipated in 2018. We will also have a deep early-stage pipeline that will continue to expand via our combined drug discovery capabilities and clinical expertise. We are extremely excited about our combined rare disease portfolio. We believe we will be well positioned to bring that portfolio to market with our proven commercial leadership team and business development opportunities."

"Bringing these two companies together accelerates the strategic initiatives of both organizations and immediately forms a substantial and differentiated biotech company serving patients in the rare disease community," stated Jon P. Stonehouse, BioCryst's President and Chief Executive Officer. "Combining our respective pipelines, infrastructures and financial resources should enable the new company to grow faster, deliver for patients more rapidly and ultimately create sustainable shareholder value well beyond what either would achieve separately.'

The combination of two companies is expected to capitalize on the collective skills sets, internal expertise and combined assets to create a comprehensive, sustainable rare disease-focused biotechnology leader highlighted by:

- A robust development pipeline, including 4 late stage programs that provide near-term commercial and partnering opportunities:
 - BCX7353 Phase 3 program for the prophylactic treatment of Hereditary Angioedema (HAE) in a capsule formulation with FDA orphan drug designation
 - IMO-2125 Phase 3 program for the treatment of PD1-refractory melanoma in combination with ipilimumab with FDA orphan drug designation
 - IMO-8400 Phase 2 program for dermatomyositis
 - BCX7353 Phase 2 program for the acute treatment of HAE in a liquid formulation
- Proven leadership across commercial, development, scientific and clinical functions, providing a combination of management and scientific talent that marries the necessary ingredients for a successful, sustainable biotech company.
- Synergistic discovery engines highlighted by two distinct research technologies and expertise which expands the number of rare disease therapeutic targets and candidates.
- Financial strength with approximately \$243 million net cash balance (unaudited proforma cash balance as of December 31, 2017), with opportunities to add further non-dilutive capital to fund internal clinical development efforts, commercial launch efforts, and continued business development

activities.

Transaction Summary

Under the terms of the merger agreement, each share of BioCryst common stock will be exchanged for 0.50 shares of the new company stock and each share of Idera common stock will be exchanged for 0.20 shares of the new company stock. The exchange ratio reflects an "at market" combination based upon the approximate 30-day average volume weighted trading prices for each company. On a proforma, fully diluted basis, giving effect to all dilutive stock options, units and warrants, BioCryst stockholders will own 51.6 percent of the stock of the combined company and Idera stockholders will own 48.4 percent. The stock issuance in the merger is expected to be tax-free to stockholders.

The merger agreement has been approved by the boards of directors of both companies. The transaction is subject to approval by the stockholders of both companies, as well as regulatory approvals and satisfaction of other customary closing conditions. A significant stockholder of each company has agreed to enter into a voting and support agreement and has agreed to vote in favor of the transaction. This stockholder owns approximately 9% of Idera shares outstanding and approximately 14% of BioCryst shares outstanding. The transaction is expected to be completed by the end of the second quarter of 2018.

The combined company, which will be renamed post-closing, will be headquartered in Exton, PA, at the current Idera headquarters, with a consolidated research center in Birmingham, AL. In addition to Mr. Milano's role as CEO of the combined company, Dan Soland will join the combined company and will serve in the role of Chief Operating Officer.

J.P. Morgan Securities LLC acted as exclusive financial advisor to BioCryst and Skadden, Arps, Slate, Meagher & Flom, LLP acted as BioCryst's legal counsel in connection with the transaction. Goldman Sachs & Co. LLC acted as exclusive financial advisor to Idera and Latham & Watkins, LLP acted as Idera's legal counsel in connection with the transaction.

Investor Event and Webcast

BioCryst and Idera will host a conference call and live webcast on Monday, January 22, 2018 at 10:00 A.M. ET to discuss the proposed merger and to answer questions to investors and analysts. To participate in the conference call, please dial (844) 882-7837 (domestic) and (574) 990-9824 (international). The webcast can be accessed live or in archived form in the "Investors" section of the companies' websites at www.biocryst.com and www.iderapharma.com. A related slide presentation has been posted to each companies' corporate websites in the "Investors" section which will be referenced during the conference call.

About BioCryst

BioCryst Pharmaceuticals designs, optimizes and develops novel small molecule drugs that block key enzymes involved in rare diseases. BioCryst has several ongoing development programs: BCX7353 and other second generation oral inhibitors of plasma kallikrein for hereditary angioedema, and galidesivir, a broad spectrum viral RNA polymerase inhibitor that is a potential treatment for filoviruses. RAPIVAB® (peramivir injection), a viral neuraminidase inhibitor for the treatment of influenza, is BioCryst's first approved product and has received regulatory approval in the U.S., Canada, Japan, Taiwan and Korea. Postmarketing commitments for RAPIVAB are ongoing, as well as activities to support regulatory approvals in other territories.

About Idera

Harnessing the approach of the earliest researchers in immunotherapy and the company's vast experience in developing proprietary immunology platforms, Idera's lead development program is focused on priming the immune system to play a more powerful role in fighting cancer, ultimately increasing the number of people who can benefit from immunotherapy. Idera continues to invest in research and development, and is committed to working with investigators and partners who share the common goal of addressing the unmet needs of patients suffering from rare, life-threatening diseases.

Additional Information and Where to Find It

In connection with the proposed merger, Idera and BioCryst plan to file with the SEC and mail or otherwise provide to their respective stockholders a joint proxy statement/prospectus regarding the proposed transaction. BEFORE MAKING ANY VOTING DECISION, IDERA'S AND BIOCRYST'S RESPECTIVE STOCKHOLDERS ARE URGED TO READ THE JOINT PROXY STATEMENT/PROSPECTUS IN ITS ENTIRETY WHEN IT BECOMES AVAILABLE AND ANY OTHER DOCUMENTS FILED BY EACH OF IDERA AND BIOCRYST WITH THE SEC IN CONNECTION WITH THE PROPOSED MERGER OR INCORPORATED BY REFERENCE THEREIN BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED TRANSACTION AND THE PARTIES TO THE PROPOSED TRANSACTION. Investors and stockholders will be able to obtain a free copy of the joint proxy statement/prospectus and other documents containing important information about Idera and BioCryst, once such documents are filed with the SEC, through the website maintained by the SEC at www.sec.gov. Idera and BioCryst make available free of charge at www.iderapharma.com and www.biocryst.com, respectively (in the "Investors" section), copies of materials they file with, or furnish to, the SEC.

Participants in the Solicitation

This document does not constitute a solicitation of proxy, an offer to purchase or a solicitation of an offer to sell any securities. Idera, BioCryst and their respective directors, executive officers and certain employees and other persons may be deemed to be participants in the solicitation of proxies from the stockholders of Idera and BioCryst in connection with the proposed merger. Security holders may obtain information regarding the names, affiliations and interests of Idera's directors and officers in Idera's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, which was filed with the SEC on March 15, 2017, and its definitive proxy statement for the 2017 annual meeting of stockholders, which was filed with the SEC on April 28, 2017. Security holders may obtain information regarding the names, affiliations and interests of BioCryst's directors and officers in BioCryst's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, which was filed with the SEC on February 27, 2017, and its definitive proxy statement for the 2017 annual meeting of stockholders, which was filed with the SEC on April 12, 2017. To the extent the holdings of Idera securities by Idera's directors and executive officers or the holdings of BioCryst securities by BioCryst's directors and executive officers have changed since the amounts set forth in Idera's or BioCryst's respective proxy statement for its 2017 annual meeting of stockholders, such changes have been or will be reflected on Statements of Change in Ownership

on Form 4 filed with the SEC. Additional information regarding the interests of such individuals in the proposed merger will be included in the joint proxy statement/prospectus relating to the proposed merger when it is filed with the SEC. These documents (when available) may be obtained free of charge from the SEC's website at www.sec.gov, Idera's website at www.iderapharma.com and BioCryst's website at www.biocryst.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the federal securities law. Such statements are based upon current plans, estimates and expectations that are subject to various risks and uncertainties. The inclusion of forward-looking statements should

not be regarded as a representation that such plans, estimates and expectations will be achieved. Words such as "anticipate," "expect," "project," "intend," "believe," "may," "will," "should," "plan," "could," "target," "contemplate," "estimate," "predict," "potential" and words and terms of similar substance used in connection with any discussion of future plans, actions or events identify forward-looking statements. All statements, other than historical facts, including statements regarding the expected timing of the closing of the merger; the ability of the parties to complete the merger considering the various closing conditions; the expected benefits of the merger, such as efficiencies, cost savings, tax benefits, enhanced revenues and cash flow, growth potential, market profile and financial strength; the competitive ability and position of the combined company; and any assumptions underlying any of the foregoing, are forward-looking statements. Important factors that could cause actual results to differ materially from Idera's and BioCryst's plans, estimates or expectations could include, but are not limited to: (i) Idera or BioCryst may be unable to obtain stockholder approval as required for the merger; (ii) conditions to the closing of the merger may not be satisfied; (iii) the merger may involve unexpected costs, liabilities or delays; (iv) the effect of the announcement of the merger on the ability of Idera or BioCryst to retain and hire key personnel and maintain relationships with customers, suppliers and others with whom Idera or BioCryst does business, or on Idera's or BioCryst's operating results and business generally; (v) Idera's or BioCryst's respective businesses may suffer as a result of uncertainty surrounding the merger and disruption of management's attention due to the merger; (vi) the outcome of any legal proceedings related to the merger; (vii) Idera or BioCryst may be adversely affected by other economic, business, and/or competitive factors; (viii) the occurrence of any event, change or other circumstances that could give rise to the termination of the merger agreement; (ix) risks that the merger disrupts current plans and operations and the potential difficulties in employee retention as a result of the merger; (x) the risk that Idera or BioCryst may be unable to obtain governmental and regulatory approvals required for the transaction, or that required governmental and regulatory approvals may delay the transaction or result in the imposition of conditions that could reduce the anticipated benefits from the proposed transaction or cause the parties to abandon the proposed transaction; (xi) risks that the anticipated benefits of the merger or other commercial opportunities may otherwise not be fully realized or may take longer to realize than expected; (xii) the impact of legislative, regulatory, competitive and technological changes; (xiii) risks relating to the value of the new holding company shares to be issued in the merger; (xiv) expectations for future clinical trials, the timing and potential outcomes of clinical studies and interactions with regulatory authorities; and (xv) other risks to the consummation of the merger, including the risk that the merger will not be consummated within the expected time period or at all. Additional factors that may affect the future results of Idera and BioCryst are set forth in their respective filings with the SEC, including each of Idera's and BioCryst's most recently filed Annual Report on Form 10-K, subsequent Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other filings with the SEC, which are available on the SEC's website at www.sec.gov. See in particular Item 1A of Idera's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 under the heading "Risk Factors" and Item 1A of BioCryst's Quarterly Report on Form 10-Q for the quarter ended September 30, 2017 under the heading "Risk Factors." The risks and uncertainties described above and in Idera's most recent Annual Report on Form 10-K and BioCryst's most recent Quarterly Report on Form 10-Q are not exclusive and further information concerning Idera and BioCryst and their respective businesses, including factors that potentially could materially affect their respective businesses, financial condition or operating results, may emerge from time to time. Readers are

urged to consider these factors carefully in evaluating these forward-looking statements, and not to place undue reliance on any forward-looking statements. Readers should also carefully review the risk factors described in other documents that Idera and BioCryst file from time to time with the SEC. The forward-looking statements in this press release speak only as of the date of this press release. Except as required by law, Idera and BioCryst assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

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