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iBio Further Expands Tech Stack with ShieldTx™; Enhances Immuno-Oncology Development Pipeline with Conditionally Activated MUC16xCD3 Bispecific

- ShieldTx potentially increases safety and developability of therapeutic antibodies for difficult targets and modes of action -

BRYAN, Texas and SAN DIEGO, Nov. 01, 2023 (GLOBE NEWSWIRE) -- iBio, Inc. (NYSEA:IBIO) ("iBio" or the "Company") today announced the expansion of its AI-powered technology stack with the launch of ShieldTx, a patent-pending antibody masking technology designed to enable specific, highly targeted antibody delivery to diseased tissue without harming healthy tissue. By adding ShieldTx to its Drug Discovery Platform, iBio uniquely integrates antibody engineering and masking in one accelerated process to potentially overcome the challenges of complex targets, safety, and developability in next-generation antibody discovery and development.

The Company used ShieldTx to develop masks for its MUC16-targeted bispecific antibody ("Ab") candidates, which were previously developed using iBio's patented Epitope Steering and EngageTx™ AI Platforms. MUC16 is a well-known cancer target often overexpressed in several types of solid tumors, including ovarian, lung, and pancreatic cancers.

One of the main challenges of therapeutic antibody discovery is drug targets are often expressed on both healthy and diseased tissue, resulting in off-tissue side effects. Scientists are increasingly turning to antibody masking to reduce or eliminate these side effects. Masks deactivate Abs until they encounter a specific enzyme only present in the target diseased tissue. When masked Abs engage with this specific enzyme, the mask is removed, and the antibody is activated. This approach reduces or eliminates off-tissue side effects, enhances the therapeutic safety range, and reduces the risk of an unwanted immune response of bispecific Abs[1]. In an *in vitro* laboratory setting, iBio's specially designed MUC16 bispecific Abs were deactivated and then reactivated, demonstrating successful application of the ShieldTx technology.

Traditional masking techniques are complex procedures and require the sequential optimization of antibody and mask. This increases development time and risk by adding more steps to a typically linear development and optimization process.

"Our technology aims to advance antibody masking by fine-tuning both the mask and

antibody in tandem using our StableHu™ antibody optimizer and its mammalian display technology," said Matt Greving, Ph.D., VP & Head of Machine Learning & Platform Technologies at iBio. "This potentially reduces repetitive steps and may significantly boost the probability of success in creating masked antibodies. ShieldTx can be applied to cancer therapeutics, and potentially to autoimmune and inflammatory diseases. iBio intends to use ShieldTx to further optimize its current antibody candidates, particularly the bispecific TROP-2 x CD3 molecules developed using our proprietary T-cell engager antibody panel, EngageTx."

"With 40% of approved antibodies working against just 10 targets[2], there is significant potential for therapeutic development against additional new targets; but unfortunately, these targets are often difficult and complex, and require new technologies to optimize antibody discovery and development," added iBio's Chief Executive Officer and Chief Scientific Officer, Martin Brenner, DVM, Ph.D. "We are rapidly building an integrated end-to-end platform incorporating the most innovative technologies in machine learning, computational biology, and synthetic biology to enable iBio and our partners to craft the next generation of antibody-based therapeutics against difficult targets and modes of action. ShieldTx is the latest example, following the launch of EngageTx earlier this year."

References

1. Kavanaugh, W. M. Antibody prodrugs for cancer. *Expert Opinion on Biological Therapy* **20**, 163–171 (2020).
2. Reference: Lyu, X. *et al.* The global landscape of approved antibody therapies. *Antibody Therapeutics* **5**, 233–257 (2022).

About iBio, Inc.

iBio develops next-generation biopharmaceuticals using computational biology and 3D-modeling of subdominant and conformational epitopes, prospectively enabling the discovery of new antibody treatments for hard-to-target cancers and other diseases. iBio's mission is to decrease drug failures, shorten drug development timelines, and open up new frontiers against the most promising targets. For more information, visit www.ibioinc.com.

FORWARD-LOOKING STATEMENTS

Certain statements in this press release constitute "forward-looking statements" within the meaning of the federal securities laws. Words such as "may," "might," "will," "should," "believe," "expect," "anticipate," "estimate," "continue," "predict," "forecast," "project," "plan," "intend" or similar expressions, or statements regarding intent, belief, or current expectations, are forward-looking statements. These forward-looking statements are based upon current estimates and assumptions and include statements regarding ShieldTx potentially increasing safety and developability of therapeutic antibodies for difficult targets and modes of action, ShieldTx, enabling specific, highly targeted antibody delivery to diseased tissue without harming healthy tissue; the integration of antibody engineering and masking in one accelerated process overcoming the challenges of complex targets, safety, and developability in next-generation antibody discovery and development; therapeutic development against additional new targets; the Company's technology advancing antibody masking by fine-tuning both the mask and antibody in tandem using its StableHu antibody optimizer and its mammalian display technology; the Company's technology reducing

repetitive steps and significantly boosting the probability of success in creating masked antibodies; ShieldTx being applied to cancer therapeutics, and to autoimmune and inflammatory diseases; the Company using ShieldTx to further optimize its current antibody candidates, particularly the bispecific TROP-2 x CD3 molecules developed using the Company's proprietary T-cell engager antibody panel, EngageTx. While the Company believes these forward-looking statements are reasonable, undue reliance should not be placed on any such forward-looking statements, which are based on information available to us on the date of this release. These forward-looking statements are subject to various risks and uncertainties, many of which are difficult to predict that could cause actual results to differ materially from current expectations and assumptions from those set forth or implied by any forward-looking statements. Important factors that could cause actual results to differ materially from current expectations include, among others, the Company's ability to generate successful results from ShieldTx and its ability to increase safety and developability of therapeutic antibodies for difficult targets and modes of action and enable specific, highly targeted antibody delivery to diseased tissue without harming healthy tissue, the ability of the Company's technology to advance antibody masking by fine-tuning both the mask and antibody in tandem, the ability of the Company's technology to reduce repetitive steps and significantly boosting the probability of success in creating masked antibodies, the ability to apply ShieldTx to cancer therapeutics, and to autoimmune and inflammatory diseases and to optimize its current antibody candidates, the Company's ability to continue to execute its growth strategy; its ability to obtain regulatory approvals for commercialization of its product candidates, or to comply with ongoing regulatory requirements; regulatory limitations relating to its ability to promote or commercialize its product candidates for specific indications; acceptance of its product candidates in the marketplace and the successful development, marketing or sale of products; its ability to maintain its license agreements; the continued maintenance and growth of its patent estate; its ability to obtain or maintain the capital or grants necessary to fund its research and development activities and whether the Company will incur unforeseen expenses or liabilities or other market factors; successful compliance with governmental regulations applicable to its manufacturing facility; competition; its ability to retain its key employees or maintain its NYSE American listing; and the other factors discussed in the Company's filings with the SEC including the Company's Annual Report on Form 10-K for the year ended June 30, 2023 and the Company's subsequent filings with the SEC on Forms 10-Q and 8-K. The information in this release is provided only as of the date of this release, and the Company undertakes no obligation to update any forward-looking statements contained in this release on account of new information, future events, or otherwise, except as required by law.

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