Preclinical Data Demonstrates Anti-Siglec-15 Treatment Enhanced Generation of Quality Bone with Better Mechanical Properties in Mice with Moderate-to-Severe Osteogenesis Imperfecta

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BELTSVILLE, Md., Nov. 19, 2024 (GLOBE NEWSWIRE) -- NextCure, Inc. (Nasdaq: NXTC), a clinical-stage biopharmaceutical company committed to discovering and developing novel, first-in-class and best-in-class therapies to treat cancer, today announced the presentation of preclinical data demonstrating that treatment with NC605, a novel anti-Siglec-15 (S15) antibody, resulted in enhanced generation of quality bone with better mechanical properties, in an oral presentation at the Osteogenesis Imperfecta Federation Europe virtual Investigator Meeting on November 15th, 2024. These results demonstrate that NC605 is a highly effective treatment for Osteogenesis Imperfecta (OI), also known as brittle bone disease in a well-established model of disease.

OI is a rare disorder that results in high bone turnover, abnormal bone formation, bone fragility and recurrent fractures. There is no cure for OI. Current anti-resorptive treatments inhibit both bone loss and bone formation leading to an increase in bone density, but overall poor bone quality. In contrast, NC605 inhibits bone loss and enhances osteoblast recruitment, to produce new bone, resulting in the generation of quality bone with increased density.

Fracture incidence and bone quality were assessed in male and female OI mice (*oim*) treated with 20 mg/kg of surrogate antibody NP159 (murine mAb parent to NC605) and compared to control groups. Key findings include:

- In the treated mice, 90% of male *oim* and 80% of female *oim*, had no fractures post-sacrifice, compared to 85% and 55% in the control groups, respectively.
- For the treated *oim* population, both sexes showed:
  - Increased trabecular and cortical tissue mineral density.
  - Increased cortical bone mineral density.
  - Collectively, all changes resulted in overall enhanced bone quality with better mechanical properties.
- In contrast, only the treated male *oim* population showed:
  - Increased trabecular bone volume fraction, including an increase in the number of trabeculae and a decreased separation between trabeculae.
  - Increased cortical thickness.
  - Collectively, the changes resulted in an increase of max load and stiffness, measures of mechanical bone strength.

“We have again demonstrated that, NP159, a surrogate murine antibody for NC605, reduces fracture incidence in both male and female OI mice. Given sexual dimorphism seen with OI, we noted improved bone quality in the treated male mice specifically,” said Solomon Langermann, Ph.D., NextCure’s chief scientific officer. “We continue to believe that NC605 has the potential to be a transformative agent for both female and male OI patients.”

The data were generated in collaboration with Dr. Cathleen Raggio, Hospital for Special Surgery, New York.

About NextCure, Inc.

NextCure is a clinical-stage biopharmaceutical company that is focused on advancing innovative medicines that treat cancer patients that do not respond to, or have disease progression on, current therapies, through the use of differentiated mechanisms of actions including antibody-drug conjugates, antibodies and proteins. We focus on advancing therapies that leverage our core strengths in understanding biological pathways and biomarkers, the interactions of cells, including in the tumor microenvironment, and the role each interaction plays in a biologic response. http://www.nextcure.com

Cautionary Statement Regarding Forward-Looking Statements

Statements made in this press release that are not historical facts are forward-looking statements. Words such as “expects,” “believes,” “intends,” “hope,” “forward” and similar expressions are intended to identify forward-looking statements. Forward-looking statements involve substantial risks and uncertainties that could cause actual results to differ materially from those projected in any forward-looking statement. Such risks and uncertainties include, among others: our limited operating history and no products approved for commercial sale; our history of significant losses; our need to obtain additional financing; risks related to clinical development, including that early clinical data may not be confirmed by later clinical results; risks that pre-clinical research may not be confirmed in clinical trials; risks related to marketing approval and commercialization; and NextCure’s dependence on key personnel. More detailed information on these and additional factors that could affect NextCure’s actual results are described in NextCure’s filings with the Securities and Exchange Commission (the “SEC”), including NextCure’s most recent Form 10-K and subsequent Form 10-Q. You should not place undue reliance on any forward-looking statements. NextCure assumes no obligation to update any forward-looking statements, even if expectations change.

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