BASEL, Switzerland & SAN DIEGO--(BUSINESS WIRE)--Versant Ventures today announced the debut of Bright Peak Therapeutics, a biotechnology company developing a platform to chemically synthesize and optimize the structure and function of proteins. Versant has made a $35 million Series A commitment to the company, which was launched out of the firm’s Ridgeline Therapeutics Discovery Engine based in Basel, Switzerland.

Bright Peak’s technology platform, licensed from ETH Zürich, allows a wide range of proteins to be chemically assembled de novo. Unlike recombinant technologies, the platform enables specific modification and conjugation at any atom and at multiple sites in the structure of the target protein to optimize its function. Importantly, the technology also allows for the introduction of conjugation handles that can expand an optimized protein into a portfolio of conjugated or multi-targeted products.

The company has validated the platform by creating a portfolio of designer cytokines with the potential to be advanced as novel immune-oncology therapeutics. Amongst other constructs, these include an optimized IL-2 conjugated with targeting antibody moieties such as PD-1 or PD-L1.

“Cytokines are emerging as a fundamental backbone in immuno-oncology,” said Alex Mayweg, Ph.D., managing director at Versant and Bright Peak board member. “Bright Peak’s platform is exciting because it allows us to design and construct superior molecules by precisely engineering the desired pharmacological effects and pharmacokinetic properties.”

**Precision engineering to create superior therapeutic proteins**

Bright Peak’s chemistry know-how originated in the laboratory of co-founder Jeffery Bode, Ph.D., and was exclusively licensed to the company. Dr. Bode is a professor of organic chemistry at ETH Zürich and a leader in the chemical synthesis of proteins. He has developed and optimized the technology over the past several years.

During a two-year stealth period, critical proof of principle experiments have been executed across four areas of protein engineering. These include optimizations of the receptor biology of various cytokines, half-life extensions, fusions to monoclonal antibodies and masking or conditional activation strategies to further harness the therapeutic potential of these
“This is a true medicinal chemistry approach to optimizing the molecular structure of proteins with disease-relevant biology,” said Dr. Bode. “It’s gratifying to see the technology delivering substantial quantities of precisely tailored proteins in our CMC campaigns and I look forward to exploring the breadth of this approach with the team at Bright Peak.”

A growing internal pipeline

A pipeline was developed within Versant’s Ridgeline labs in collaboration with ETH Zürich. This included modified versions of IL-2, IL-18 and IL-7 optimized for the desired biology and pharmacokinetic profiles. Through further conjugation to antibodies or other moieties, each molecule can additionally be turned into its own portfolio of next-generation therapies.

Bright Peak made three modifications to its IL-2 molecule. The first was to completely block the cytokine’s ability to engage the CD25 receptor on regulatory T cells, which dramatically shifted the balance of activity towards effector T cells and eliminated vascular toxicities. The second was to enhance potency on the beta/gamma receptors, which augmented the desired effects on CD8 T cell and NK proliferation. Finally, the molecule’s half-life was significantly extended through site-specific modifications.

The resulting compounds have shown best-in-class properties in a variety of preclinical models. Based on these results, Bright Peak is currently running IND-enabling studies and has launched scale-up and CMC campaigns on the first IL-2 development candidate with the expectation of entering the clinic within a year.

The portfolio is being expanded by installing a conjugation handle on the optimized IL-2 compounds to attach other cytokines or targeted monoclonal antibodies, such as checkpoint inhibitors. The company expects to select a second development candidate from this program later this year.

Bright Peak’s pipeline also includes a modified IL-18, also known as IFN-γ-inducing factor. This cytokine plays a critical role in both the innate and adaptive immune response, but the wild-type version is quickly quenched by its native IL-18 binding protein. This limits the use of the natural protein in cancer therapy.

A modified IL-18 has been designed to specifically overcome these limitations in the natural protein. Enhancements such as half-life extension and further tumor-targeting strategies are underway to unlock its full potential as a cancer therapeutic.

Company leadership and operating plans

Versant has recruited Sef Kurstjens, M.D., Ph.D. to join as Bright Peak president and CEO. Dr. Kurstjens possesses more than 28 years of biotech and pharmaceutical drug development experience, having most recently served as chief medical officer at Astellas Pharma Inc., where he was a member of the corporate executive committee. Dr. Kurstjens also served as president and CEO at Astellas’ Agensys Inc. affiliate.

“I’m excited to lead such a promising company with the potential to transform the field of protein therapeutics by developing products that possess markedly superior properties,” said Dr. Kurstjens. “Each molecule we design can become a portfolio within a protein, which speaks to the power of this technology platform.”

Bright Peak’s internal R&D team is based in Basel and has been working alongside a founding team of leading scientists who have made major contributions to the fields of protein engineering. The company’s scientific founders and advisors include:

- Jeffery Bode, Ph.D., professor of organic chemistry at ETH Zürich. His group has focused on the synthesis of molecules and conjugates that are currently outside the reach of conventional synthetic methods, as well as new approaches to generate structural and functional complexity in small organic molecules. Dr. Bode’s research and teaching have been recognized by numerous awards including an MIT Technology

- John Teijaro, Ph.D., associate professor in the department of immunology and microbiology at the Scripps Research Institute. Dr. Teijaro has published extensively on mechanisms of immune cell stimulation and suppression. His group recently discovered a mechanism for promoting the proliferation of self-renewing T cells, offering a potential new pathway for enhancing cancer immunotherapy.

- Markus Enzelberger, Ph.D., partner at Versant. Dr. Enzelberger possesses deep expertise in the development of proteins and antibodies. He served as CSO and a member of the management board of MorphoSys AG. He joined that company in 2002 and is recognized as an authority in the field of protein engineering.

Bright Peak will operate across sites in Basel, Switzerland, and in San Diego, California. This allows the new company to further refine the protein engineering platform and in parallel launch multiple programs from its current pipeline of candidates.

With Versant’s anchor investment, the company plans to expand its 20-member team to more than 30 scientists this year and expects to advance its lead program into clinical testing in 2021.

To capture the expanding opportunities in the field of cytokine therapeutics and beyond, Bright Peak will pursue Pharma partners in parallel with financial investors over the coming months.

About Bright Peak

Bright Peak Therapeutics is a biotechnology company with a platform capable of chemically synthesizing and optimizing natural proteins such as cytokines. Bright Peak was founded by Versant Ventures, and emerged from Versant’s Ridgeline Therapeutics Discovery Engine in Basel, Switzerland.

About Versant Ventures

Versant Ventures is a leading healthcare venture capital firm committed to helping exceptional entrepreneurs build the next generation of great companies. The firm’s emphasis is on biotechnology companies that are discovering and developing novel therapeutics. With $3.2 billion under management and offices in the U.S., Canada and Europe, Versant has built a team with deep investment, operating and R&D expertise that enables a hands-on approach to company building. Since the firm’s founding in 1999, more than 75 Versant companies have achieved successful acquisitions or IPOs. Versant is currently investing out of its seventh fund, Versant Venture Capital VII, a $600 million global biotech fund closed in December 2018. In parallel the firm co-invests out of its Canadian strategic fund Versant Voyageurs I and its later-stage biotech opportunity fund Versant Vantage I. For more information, please visit www.versantventures.com.

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