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Japan-US joint venture company WaVe Life Sciences announced that it has closed an $18 million Series A financing led by RA Capital Management LLC and Kagoshima Shinsangyo Sosei Investment LP, joining founding investor SNBL Ltd.

The proceeds will fund the advancement of the company's pipeline of stereopure nucleic acid therapeutics including antisense and exon-skipping drug candidates, which are being developed to treat diseases across multiple therapeutic areas.

WaVe is building on its success in establishing the first and only drug discovery platform capable of producing single precisely defined oligonucleotide structures that provide enhanced pharmaceutical properties compared to those of conventional drugs in this class.

"Nucleic acid therapeutics are a rapidly growing area of next-generation drugs that promise to broadly and fundamentally improve the treatment of human disease. Until now the class' full potential has been dramatically limited by products containing complex mixtures of drug molecules. At WaVe we have shown that single drug products demonstrate superior pharmaceutical properties and we have developed the capability to design synthesize and advance these superior products for a broad range of disease indications," said Paul Bolno M.D. President and Chief Executive Officer of WaVe Life Sciences. "Our chemistry intersects with all the major classes of nucleic acid therapeutics currently being developed from antisense to siRNA to mRNA and microRNA and we therefore anticipate having a broad and deep impact on the ability of the entire field to reach its full potential."

Conventional antisense medicines containing a phosphorothioate backbone comprise mixtures of drug products that have as many as 500000 or more individual components each of which behaves differently. WaVe's transformative and commercially scalable chemistry enables programmable control over the structure of the drug product during its synthesis affording precisely tailored drug molecules designed to possess optimized pharmacokinetic and therapeutic properties.

WaVe's technology when applied to antisense directs cellular machinery to disable mRNA through cleavage at defined predetermined sites which enables targeting of specific disease-causing genetic variants known as alleles. It offers a compelling new modality for treating diseases resulting from allelic variation a major unsolved problem in personalized medicine and an area of particularly high unmet medical need.

"WaVe's technology has the potential to both improve upon existing nucleic acid programs in development across the industry as well as solve new problems opening doors to new disease areas," said Peter Kolchinsky Ph.D. Managing General Partner of RA Capital and Director of WaVe.Ã?Â

Dr. Bolno added, "With the powerful financial and intellectual support of our existing and new investors and this additional funding in place we will advance our programs through preclinical development and continue to strengthen our core technology capabilities."

WaVe maintains R&D facilities in Boston and Japan and was founded by two world-renowned scientific leaders, Gregory Verdine and Takeshi Wada. Dr. Verdine is Erving Professor of Chemistry in the Harvard University Departments of Stem Cell and Regenerative Biology, Chemistry and Chemical Biology, and Molecular and Cellular Biology. Dr. Wada is a professor at Tokyo University of Science, Faculty of Pharmaceutical Sciences and Department of Medicinal and Life Science.