

FOR IMMEDIATE RELEASE

JSR and PeptiDream Begin a Joint Development Program to Identify Peptides Applicable to Affinity Chromatography

TOKYO, JAPAN – September 20, 2019 - JSR Corporation and PeptiDream Inc. have agreed to begin a joint development program to identify peptides applicable to the affinity chromatography^{*1} process used in the purification of biopharmaceuticals such as antibody therapeutics.

PeptiDream and JSR intend to jointly develop new affinity chromatography media by identifying unique peptides that bind to various target proteins in a specific manner, leading to more efficient processing of biopharmaceuticals. The development will be based on PeptiDream's proprietary drug discovery platform, PDPS (Peptide Discovery Platform System), and JSR's extensive knowledge of affinity separation technology.

The manufacturing process of complex biopharmaceuticals, such as antibody therapeutics, generally consists of a target protein generation process, followed by a purification process that uses affinity chromatography to separate the target protein from the cells and various impurities by binding the proteins to a specific ligand or peptide. The development and commercialization of new affinity chromatography media based on unique, synthetic peptides has the potential to simplify the purification process and lower overall costs.

This development effort will specifically focus on ensuring consistent quality and reliable mass production of ligands based on unique peptides that will enhance purification efficiency enabling the purification of biopharmaceuticals that are generally considered difficult to purify through conventional affinity chromatography.

“PeptiDream is focused on expanding the applications of constrained peptides identified from our PDPS platform, including drug candidate identification, development of peptide therapeutics, small molecule therapeutics through X-ray crystallography analysis, and peptide-drug conjugates, such as peptides capable of penetrating the Brain-Blood-Barrier,” said Dr. Keiichi Masuya, director and executive vice president of PeptiDream. “We are very excited to start the development of a new affinity chromatography ligand jointly with JSR and, together contribute to the research, development and production of antibody therapeutics and other modalities.”

“JSR has been contributing to purification cost of ownership reduction for antibody therapeutics with our affinity chromatography media, AmsphereTM, which is developed based on JSR's protein engineering

technologies and particle design capabilities derived from JSR's polymer technologies," said Mr. Nobuo Kawahashi, representative director and president of JSR. "We are pleased to begin innovating with PeptiDream, which has a unique technology for synthesizing special peptides. We hope to accelerate the realization of a society where everyone can easily receive advanced therapies by applying the technologies and products developed from this joint effort."

"At JSR Life Sciences we're focused on finding innovative partners and technologies to advance drug discovery and efficacy to improve the quality of life for patients," said Tim Lowery, Officer and President of JSR Life Sciences. "PeptiDream's platform will enable us to develop the advanced materials, specifically next generation chromatography resins, needed to produce the biopharmaceuticals and therapies of the future."

<About PeptiDream Inc.>

PeptiDream Inc. is a public (Tokyo Stock Exchange 1st Section 4587) biopharmaceutical company founded in 2006 employing our proprietary Peptide Discovery Platform System (PDPS), a state-of-the-art highly versatile discovery platform which enables the production of highly diverse (trillions) non-standard peptide libraries with high efficiency, for the identification of highly potent and selective hit candidates, which then can be developed into peptide-based or small molecule-based therapeutics. PeptiDream aspires to be a world leader in drug discovery and development to address unmet medical needs and improve the quality of life of patients worldwide. For further information, please visit www.peptidream.com.

<About JSR Corporation>

JSR Corporation is a multinational company employing over 8,000 people worldwide and a leading materials supplier in a variety of technology driven markets. JSR's global network is headquartered in Tokyo (Japan) and has factories and offices in Japan, Europe, US, China, Taiwan and Korea. JSR is a research-oriented organization that pursues close collaborations with leading innovators in a number of industries that are a key to the present and future welfare of human society: electronic materials, life-sciences, synthetic rubbers, display and optical materials. For more information about JSR Corporation, please go to http://www.jsr.co.jp/jsr_e

*¹ Affinity Chromatography is the process technology to separate and purify target protein substance based on the reversible adsorption mechanism between the ligand attached to the chromatography carrier and the target protein. Recombinant Protein-A, G, or L are currently applied as such ligand to adsorb the target protein.