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Company Name: AnGes Inc.

Presentative: Ei Yamada, President & CEO
(Code Number 4563, Mothers of the TSE)

**Joint development between AnGes and Osaka university for DNA vaccine targeting novel
Coronavirus (COVID-19)**

-Peptide Institute joins for the peptide synthesis research-

Regarding joint development between Osaka University and AnGes for DNA vaccine targeting novel coronavirus. Peptide Institute, Inc. joins in the research on peptide synthesis for antibody titer measurement. AnGes aims to move to clinical trials promptly with highly accurate antibody titer measurement

【About Peptide Institute, Inc.】

- Peptide Institute, Inc. originates from the Institute for Protein Research, Osaka University, and researches and manufactures peptide drug substances, bioactive peptides for research, and antibodies against peptides

<Peptide synthesis for antibody titer measurement>

High-quality peptide-bovine serum albumin conjugate (BSA conjugate) prepared with peptide synthesis technology cultivated over many years by Peptide Institute enables an accurate antibody titer measurement

【Overview of the development of preventive DNA vaccines against the novel coronavirus, using plasmid DNA manufacturing technology-Reference information from the press release after March 5】

- Joint development of DNA vaccine against novel coronavirus between AnGes and Osaka University (Department of Clinical Gene Therapy; Department of Health Development and Medicine) based on the previous achievement of plasmid DNA product.
- The manufacturing process can be established in a shorter period of time with the manufacture of DNA vaccines, compared with the vaccine with using inactivated viruses (attenuated vaccines) or the vaccine with using genetically modified virus protein.
- The manufacturing operations will be undertaken by Takara Bio Inc. that possesses manufacturing technology and facilities of plasmid DNA.
- Daicel is developing an intradermal gene transfer method, using this new administration device, and promote research with Osaka University (Impulse Science for Medicine; Department of Health Development and Medicine), aiming at its clinical application.
- Use of this new administration device is expected to increase the efficiency of intradermal genetic expression and antibody production capability, enabling the development of more efficient DNA vaccines.
- EPS Group supports to proceed the clinical trials rapidly

<About DNA vaccine>

DNA vaccines are safe and can be produced in a short time period without using any dangerous pathogens. By inoculating a circular DNA (plasmid) encoding the protein of the target pathogen, the pathogen protein is produced in the body and immunized against the pathogen. Unlike attenuated vaccines, DNA vaccines are safe as they have no pathogenicity.



The impact this will have on the full-year consolidated results for this fiscal year is currently being examined.

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