



September 10, 2019
Gene Techno Science Co., Ltd.
Code: 4584 (TSE Mothers)
Masaharu Tani, President & CEO

**Announcement of Joint Research Agreement with Showa University School
of Medicine for a Development of Treatments for Bone-related Diseases
using Stem Cells from Human Exfoliated Deciduous Teeth**

Tokyo, September 10, 2019 – Gene Techno Science Co., Ltd. (TSE Mothers: 4584 “GTS”) executed a joint research agreement (“this agreement”) with Showa University School of Medicine (“Showa University”) to develop new therapeutic treatments for bone-related diseases as below.

1. Purpose and background for concluding this agreement

GTS announced GTS 3.0 “Biotech Engineering Company, striving for value creation” a new business stage starting from this fiscal year, which targeted the pediatric disease in addition to the areas GTS has been engaged in such as the orphan disease and intractable disease. By leveraging the knowhow and expertise about biotechnology acquired in the past business activities, GTS is working on the development and provision of new medicines and therapeutic treatment for the purpose of achieving comprehensive healthcare solutions for the patients suffering from these diseases as well as families and caregivers. This Agreement aims to create new therapeutic treatments for such diseases by utilizing the Stem Cells from Human Exfoliated Deciduous Teeth (SHED), which is the cornerstone of our business in cell therapy field.

The number of patients with bone-related diseases has been increasing year by year, and an increase in not only the costs for surgery and treatment, but also total medical costs including long-term rehabilitation after surgery is expected to place a financial burden on the social economy more and more in the future. Also, therapeutic effects of the existing surgery and treatment are not always sufficient for all patients in some diseases. Cell therapy using SHED that have prominent bone regeneration capability may enhance the effectiveness of surgery and treatment for such patients. This will lead to early healing of the disease,

prevention of recurrence, and shortening of the rehabilitation period, which may contribute to improving the efficiency of healthcare services and reducing healthcare expenditure.

The Department of Orthopaedic Surgery, Showa University School of Medicine, daily provides the latest treatment and surgery to many patients suffering from bone-related diseases, while strenuously conducting basic and clinical research to find more effective treatments. We have agreed on the potential of SHED for a new therapeutic treatment and decided to initiate a research collaboration.

2. Contents of this agreement

Using SHED prepared by Advanced Cell Technology and Engineering Ltd., a wholly-owned subsidiary of GTS, GTS and The Department of Orthopaedic Surgery will conduct basic research jointly to find new therapeutic treatments for bone-related diseases.

3. Outline of counterparties to this agreement

1. Name	Showa University School of Medicine
2. Location	1-5-8, Hatanodai, Shinagawa-ku, Tokyo
3. Representative	Tadashi Hisamitsu
4. Counterparty	Department of Orthopaedic Surgery

4. Future outlook

The impact of this transaction on the business results for the fiscal year ending March 2020 is expected to be minimal.