

## **Editorial**

### **Salivary Proteomics in Microgravity**

Indulging gene expression is the key to unfolding the mechanisms behind, and ultimately, finding effective countermeasures to spaceflight-induced alterations in oral cavity. Significant progress has been made in identifying the genes responsible for these changes. Although many of these genes were observed to be either upregulated or downregulated, there is a lack of systemic study of gene and protein expression in individual cells exposed to microgravity. Models for long-term study of the effects of microgravity on cells in vitro and possible countermeasures are essential as we send astronauts on long-term missions, i.e., to Mars and back. In the future it will be important to design human bed rest and NASA studies to determine the optimal combination of countermeasures. In addition to modifications related to gravity alone, it will be important to understand the potential effects of co-exposure to cosmic radiation to provide the maximum possible protection to astronauts.

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