Welcome to our website of the Division of Disease Control & Molecular Epidemiology, Department of Oral Growth & Development at the School of Dentistry of the Health Sciences University of Hokkaido. I am Itsuo Chiba, D.D.S, Ph.D., Professor of this Division.

Faculty Members
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Our Mission
The mainstay of work is the providing of education to undergraduate students of the School of Dentistry and its adjunct College of Dental Hygienists.
Research done at the Division extends from public health surveys towards social, behavioral, legal and ethical,
epidemiologic and biostatistic studies being related to dental medicine. Herein, priority is given to investigations in microbiology, epidemiology, molecular epidemiology, and research about the prevention of oral diseases, about health politics and health care conditions in and outside of Japan.

**Objectives of Preventive Dentistry**
What would be an appropriate understanding of the objectives of Preventive Dentistry? Indeed, prevention of dental caries and regular screening of pupils for dental diseases remain important. But a much broader image of oral health is required these days. Oral health correlated strongly with overall well-being and, therefore, prevention of oral diseases must imply health promotion on a very broad scale.

Dental caries, as an example, is an infectious disease but it is also related to our lifestyles. Smoking, one among such lifestyle-related factors, exerts health damaging functions, induces periodontal diseases, oral mucosal lesions, halitosis, or even bronchitis, pneumonia, and lung cancer. And this, of course, implies that in order to preserve oral health we should avoid smoking.

Brushing one's teeth alone may not suffice to promote oral health. Meanwhile, an adjustment of lifestyle may be a powerful means to prevent oral diseases. This is why our Division looks beyond too narrow definitions of oral health towards a broader objective of "general health" Such “general health”, last not least, should be approached by means of motivating and educating people with respect to these issues.

**Oral Cancer Prevention Project**
Activities of our Division also include a project for oral cancer prevention in Sri Lanka. Oral cancer exhibits one of the highest recorded incidences in developing countries, comprising as much as 20-30% of all neoplasms. Especially, oral cancer is a strong factor with regard to cancer mortality in Sri Lanka as well as other South Asian or Southeast Asian countries. Epidemiologically, it is quite obvious that this very high incidence of oral cancer is related to customary chewing of betel quid, and this has been also demonstrated in pathological or genetic studies of oral cancer and precancer in those regions. However, very few efforts have been made towards cancer prevention. It is there where our project concerning oral cancer prevention in Sri Lanka is needed and, hopefully, can become effective.

**Current publications**
HBD-2 is downregulated in oral carcinoma cells by DNA hypermethylation, and increased expression of hBD-2 by DNA demethylation and gene transfection inhibits cell proliferation and invasion. Kamiyo Y, Kurashige Y, Uehara O,


