

Researching the utility of genomic analysis in tuberculosis control in Ishikawa Prefecture

OPT-OUT
FORM

Period of Research: April 1st, 2025 – March 31st, 2028

The Ishikawa Prefectural Institute of Public Health and Environment is conducting research on the genomic analysis of *Mycobacterium tuberculosis*.

Principal Investigator: Nakamura Sachiko.

Research goals

We will compare the results of genomic analysis of *M. tuberculosis* in patients in Ishikawa Prefecture with epidemiological information in order to verify the utility of such genomic analysis. The results of this comparison will be used as source data for the development of a molecular epidemiological analysis system with the goal of strengthening measures to prevent the spread of infection from *M. tuberculosis* in Ishikawa Prefecture.

Research Method

The conducting of epidemiological surveys of *M. tuberculosis* under the provisions of Article 15 of the Infectious Diseases Act, is an important avenue of investigation that contributes to the identification of the sources and modes of tuberculosis infection. Ishikawa Prefecture is collecting and storing *M. tuberculosis* strains for molecular epidemiological surveys. Of those strains, genomic analysis in this study will be conducted on the following:

- (1) Strains collected between 01-Apr-2024 – 31-Mar-2026
- (2) Strains which, by investigating VNTRs (Variable Number of Tandem Repeat), were found to match strains from previous research (conducted 01-Apr-2016 – 31-Mar-2019)
- (3) Strains which, by investigating VNTRs, were found to match strains from previous research (conducted 01-Apr-2021 – 31-Mar-2024)

The results of the genomic analysis will be compared with the results of epidemiological surveys conducted at health centers to verify the utility of the former. No patient's genetic data will be analyzed, only the genetic data of *M. tuberculosis* bacteria will be analyzed. Patients' personal data will be anonymized, so as to protect patients' personal data.

Participation in this research is voluntary. Non-participation will have no effect on the standard of care patients receive. In addition, participants may withdraw from the research. To withdraw, the patient (or someone acting on their behalf) should contact the Principal Investigator using the phone number or email below.

Contact Information:

Research Institute: Bacteriology Group, Health and Food Safety Department, Ishikawa Prefectural Institute of Public Health and Environmental Science , Nakamura Sachiko

Phone: 076-229-2011

E-mail: hokan-04@pref.ishikawa.lg.jp

Explanation of terminology:

Epidemiological Survey: Interviews conducted with patients, at health centers under the provisions of the Infectious Diseases Act.

VNTR: The examination of regions in a bacterium's genome known as a tandem repeat, which allows for the identification of their genotype, and for the determination of their dissimilarity to other strains to be made.

Genomic analysis: Analysis of the entire gene sequence of a strain of bacteria at once to gain a detailed understanding of the how the infection was transmitted.