

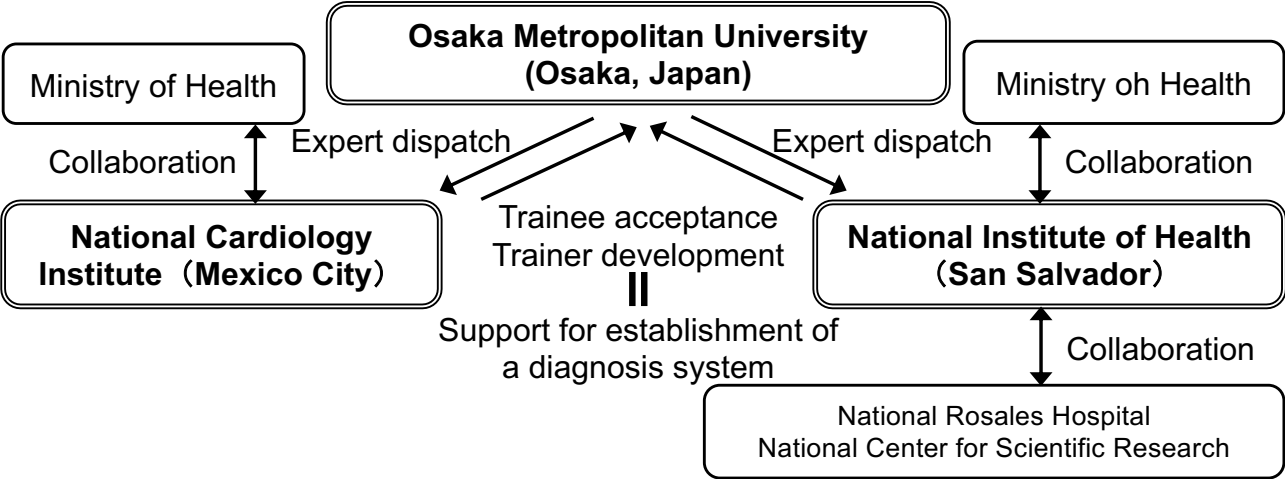
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Standardizing Chagas Disease Diagnosis through POCT and Molecular Diagnostics optimization
in Mexico and El Salvador
Year 2 of a 3-Year Project

Chagas disease is a neglected tropical disease that mainly affects populations in remote areas of Latin America. In endemic regions, limited diagnostic resources and unstable POCT performance due to local strain differences remain major challenges. In addition, advanced molecular diagnostic systems such as ddPCR and MALDI-TOF are not fully utilized because of shortages of trained personnel.

This project aims to improve the quality and accessibility of Chagas disease diagnosis by standardizing POCT screening optimized for local endemic strains and implementing high-plex molecular diagnostics using ddPCR and MassARRAY. Physicians from Osaka Metropolitan University will collaborate with national institutes and core hospitals in Mexico and El Salvador to provide bidirectional training programs, including local training, advanced technical training in Japan, and implementation-based practical training.

Through hands-on training, the project will develop personnel capable of independently performing POCT and advanced molecular diagnostics. Over the three-year project period, trained participants will also become trainers for the next generation, promoting sustainable diagnostic systems and reducing diagnostic disparities.



- <Training schedule plan for 2026>
- Aug 2026; Dispatching experts from JAPAN
(El Salvador, 2 experts)
 - ✓ Theoretical training on POCT-based screening methods and high-plex molecular differential diagnostics
 - Nov 2026; Dispatching experts from JAPAN
(Mexico, 2 experts)
 - ✓ Theoretical training on POCT-based screening methods and high-plex molecular differential diagnostics
 - Jan 2027; Accepting trainees to JAPAN · Development of trainers (Total 2 participants)
 - ✓ Practical training on POCT optimization and high-sensitivity/high-plex molecular diagnostics