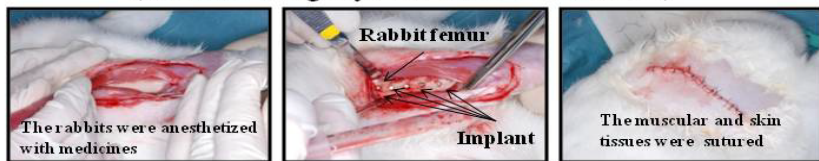


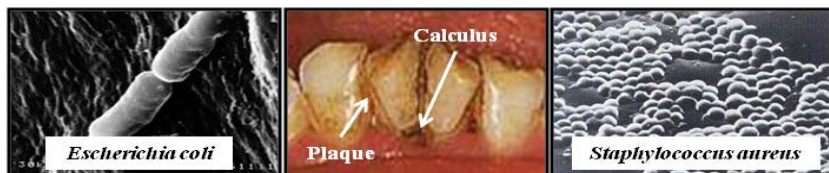
# Biomedical Study on Materials, Microbiology & Regenerative medicine

Professor Osamu Yamamoto

## Development of biomaterials and implants (Animal surgery: in vivo evaluation)

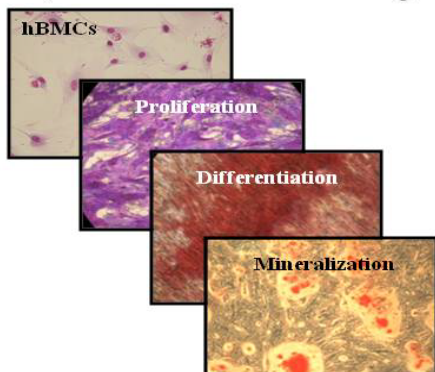


## Antibacterial and antifungal activity of composites (Antibacterial agent for oral diseases)



Oral diseases with bacterial growth are among the leading acute and chronic diseases afflicting humanity. The materials possessing two functions such as a tooth abrasive and an antibacterial activity, are needed.

## Regenerative medicine of bone and skin (in vitro evaluation using stem cells)



## Cancer treatment (Drug delivery)



Novel protein-derived molecules with 20nm size are injected locally into cancer cells.

## Content:

We are studying the biomedical engineering fields on materials science, microbiology, and regenerative medicine as follows;

- 1) Development of biomaterials and dental implants for improving the human functions: The aim of this work is to ensure a healthy life of the patients suffering from bone disease and anodontia.
- 2) Antibacterial and antifungal activity of the composites consisting of ceramics, metals and organic compounds: The aim of this work is to protect the human health from the bio-infection originating from harmful bacteria.
- 3) Regenerative medicine of bone and skin: The aim of this work is to produce the tissues, skin and bone graft, unable to regenerate voluntarily.
- 4) Cancer treatment (Drug delivery): The aim of this work is to develop new anticancer agents for the treatment of solid tumors and metastases.

We possess various measuring instruments: RT-PCR, XRD, SEM, TEM, FT-IR, UV-vis, etc.

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Regenerative medicine

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