## Scanning microscopic Evaluation of interaction between Helicobactor pylori and AGS cells

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Helicobactor pylori is a major etiological agent in several gastroduodenal disorders. The adhesion of H. pylori to gastric epithelial cells is supposed to be the initial step of H. pylori infection. Several patterns of adhesion was revealed by transmission electron microscopy, but scanning electron microscopical observation of the adhesion of H. pylori to the host cells are very rare. So we observed the early interaction with AGS cells to understand the characters of adhesion.

AGS cell line was purchased from ATCC and cultured on 35mm culture dish for 3 days using RPMI-1640 with 10% FBS and appropriate antibiotics. H. pylori (strain 49503) were cultured for 3 days in Mueller Hinton Agar with 10% FBS. The cultured H. pylori were diluted with RPMI-1640 (OD=1.0,  $\lambda$ =600nm), and added onto the cultured AGS cells for 30 min, 1 hr, and 2 hrs. The infected cells were then, processed for scaning electron microscopy and observed with Hitachi S-4700 scanning electron microscope.

H. pylori were associated with many microprocesses of AGS cells. Several patterns were identified; (1) simple contact with microvilli or filopodia, (2) partial or complete wrapping of part of H. pylori by lamellipodia, (3) hooking of part of H. pylori by crossing-over filopodia, and (4) formation of pedestal at the tip of microprocess or fusion of H. pylori to AGS cells.

H. pylori interacts with AGS cells in a variety of ways. Pathophysiological roles of AGS cell microprocesses need to be studied.

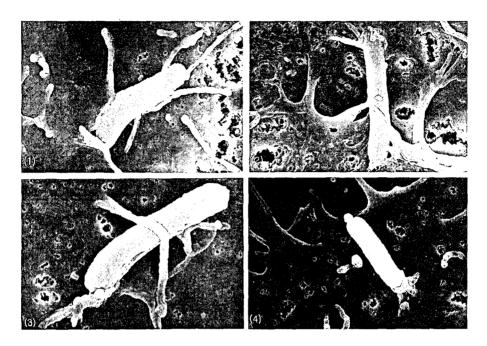


Figure. Several patterns of interaction between H. pylori and AGS cell microprocesses; (1) Simple contact with microvilli or filopodia, (2) Partial or complete wrapping of part of H. pylori by lamellipodia, (3) Hooking of part of H. pylori by crossing-over filopodia, and (4) Formation of pedestal at the tip of microprocess or fusion of H. pylori to AGS cells.