Human digestive tract (DT) is one of the most vulnerable organs to microbial aggressions. A natural bacterial flora in the DT is a source of maturation of immune systems: *Lactobacilli, Bifidobacterium lactis* contribute to children growth. Normal adult intestinal flora includes *Enterobacteriaceae, Escherichia coli, Proteus* spp., and anaerobes, as contributors to digestive tract functions. In adults who suffered of recurrent gastric pain, the discovery of *Helicobacter pylori*, Gram negative micro-aerophilic, helix-shaped organism, has been shown as responsible for gastric ulcer, Malt lymphoma, adeno-carcinoma: living in acidic areas, (upper digestive tract, 50% of elderly), treatment omeprazole+ clarithromycin has proven efficacy. Lower intestinal tract can be invaded by species responsible for diarrhea, contagious, of variable severity: *Shigella, Salmonella spp, Vibrio cholerae*: in countries with poor hygiene, cholera epidemics often occur. *Yersinia enterocolitica, Y.pseudotuberculosis* carried by pigs and contaminant to humans, determine sporadic acute gastro-enteritis, (contact with animals, contaminated food). Intestinal infections should not be treated with antibiotics systematically, as in some cases they result in aggravation, emergence of *Clostridium difficile*. The presence in intestinal flora of *Escherichia coli* resistant to β-lactams is a threat for treatment failure. *E. coli* resistant to β-lactams and carriage of genes of resistance became international problems. In ICU patients, disorganized flora occurs whatever treatment used: pathogenic MDR are often isolated. To re-establish equilibrium with a “normal” flora, the development of *Fecal Microbiota Transplant* becomes extensively used (in pills or tablets). Another option has been successful using living organisms (“probiotics”) such as fungi (*Saccharomyces spp., S.boulardii sp.*) can control ICU diarrhea.

### Biography

Eugénie Bergogne-Bérézin is Professor of Clinical Microbiology at the University Paris 7. She is Doctor in Medicine (MD and PhD), specialized in Microbiology-Infectious Diseases. She has developed several fields of research: 1- *Acinetobacter* spp as a nosocomial pathogen (epidemiology, resistance, infections); 2- Pharmacology of antibiotics tissue and body fluid distribution Pharmacodynamics of Antibiotics - 3 Intestinal microbial Ecology, jejunal flora, bacterial adhesion to intestinal mucosa, impact of antibiotic therapy on intestinal flora. She has published ~200 International Articles, 6 Medical Books, she contributed to Chapters in recent International Books of Infectious Diseases (Mosby), Pneumology (Respiratory Infection, James Pennington Ed, Raven Press), Antimicrobial Therapy (Victor Yu). She continues to work on *Acinetobacter* at an International level.

Eugenieberezin@gmail.com