

## Micro - Nano Bubble Technology – An In-Situ Treatment for Microbial Community Changes in Urban River

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### ABSTRACT

Urban watercourses are essential and important to the urban ecosystem, landscape ecology and citizen's life. However, in recent decades, rapid industrialization and urbanization has accelerated the worsening waters in urban area in China. Urban rivers are usually used as drains for sewage, industrial wastewater and even domestic garbage, which contained various pollutants. When organic pollutants are discharged to rivers, part of them is precipitated in the sediment and the others are metabolized by microbes. During the metabolism, the microbes exhaust the dissolved oxygen in the water and make the aquatic environment anoxic, which promotes the growth of anaerobic microbes. As a result, the river is in anoxic condition, showing black appearance and stinking smell. These black-odor rivers flows through the cities affect residents' life and pose a serious threat to human health. During the metabolism, the microbes exhaust the dissolved oxygen in the water and make the aquatic environment anoxic, which promotes the growth of anaerobic microbes. As a result, the river is in anoxic condition, showing black appearance.

**Keywords:** Parasite; Bacteria; Microorganisms; Microbiology; Bacteroides

### INTRODUCTION

Contaminations are a significant reason for dreariness and mortality on the planet. Of the roughly 53 million passing's worldwide in 2009, in any event a third was because of irresistible sicknesses. In the United States, pneumonia is the fifth driving reason for death by and large and the most well-known reason for death identified with contamination. What's more, obtrusive infection brought about by *Streptococcus pneumoniae* and network gained pneumonia generally speaking have expanded in frequency over the previous decade. AIDS takes steps to disturb the social texture in numerous nations of Africa and is seriously upsetting the medical care framework in the United States and different pieces of the world. The year 2006 denoted the 25th "commemoration" of the AIDS plague. Roughly 33 million individuals overall are presently tainted with Human Immunodeficiency Infection (HIV)

host. The host could possibly be indicative. For instance, HIV contamination may cause no unmistakable signs or manifestations of ailment for quite a long time. The meaning of contamination ought to likewise remember the augmentation of microorganisms for the surface or in the lumen of the host that causes signs and side effects of ailment or illness. For instance, poison delivering strains of *Escherichia coli* may duplicate in the gut and cause a diarrheal sickness without attacking tissues. Organisms can cause infections without really interacting with the host by ethicalness of poison creation. *Clostridium botulinum* may fill in certain inappropriately prepared nourishments and produce a poison that can be deadly on ingestion. A generally minor disease, for example, that brought about by *Clostridium tetani* in a little stabbing can cause crushing sickness due to a poison delivered from the living being filling in tissues.

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verdure really shields us from disease. Decrease of gut colonization expands defenselessness to contamination by microorganisms, for example, *Salmonella enteritidis*. Microorganisms that establish the typical verdure are thought to apply their defensive impact by a few components: [1] using supplements and involving an ecologic specialty, accordingly contending with microbes; [2] creating antibacterial substances that repress the development of microorganisms; and [3] initiating host resistance that is cross-responsive and viable against microorganisms. These ends seem, by all accounts, to be over simplistic, notwithstanding. For instance, colonization of the gastrointestinal plot with *Bacteroides fragilis* communicating an immunodominant bacterial polysaccharide[4], through dendritic cell initiation and enlistment of a TH1-interceded reaction, prompts a splenic reaction portrayed by ordinary quantities of CD4+ T cells, lymphoid engineering, and foundational lymphocytic[5] development. Along these lines, a solitary bacterial atom in our gut is important to make us "immunologically fit." notwithstanding the typical vegetation; transient colonization might be seen with known or likely microorganisms [6]. This might be an uncommon issue in hospitalized patients since it can prompt nosocomial contamination.

#### REFERENCES

1. Rajagopalan PTR, Grimme S, Pei D. Characterization of cobalt (II)-substituted peptide deformylase: function of the metal ion and the catalytic residue Glu-133. *Biochemistry*. 2000;39(4):779-790.
2. Watanabe A, Yamaguchi T, Murota K, Ishii N, Terao J, Okada S, et al. Isolation of lactic acid bacteria capable of reducing environmental alkyl and fatty acid hydroperoxides, and the effect of their oral administration on oxidative-stressed nematodes and rats. *PLoS One*. 2020;15(1):e0215113.
3. Niimura Y, Ohnishi K, Yarita Y, Hidaka M, Masaki H, Uchimura T, et al. A flavoprotein functional as NADH oxidase from *Amphibacillus xylanus* Ep01: purification and characterization of the enzyme and structural analysis of its gene. *J Bacteriol*. 1993;175(24):7945-7950.
4. Niimura Y, Poole LB, Massey V. *Amphibacillus xylanus* NADH oxidase and *Salmonella typhimurium* alkyl-hydroperoxide reductase flavoprotein components show extremely high scavenging hydroperoxide reductase 22-kDa protein component. *J Biol Chem*. 1995;270(43):25645-25650.
5. Niimura Y, Nishiyama Y, Saito D, Tsuji H, Hidaka M, Miyaji T, et al. A hydrogen peroxide-forming NADH oxidase that functions as an alkyl hydroperoxide reductase in *Amphibacillus xylanus*. *J Bacteriol*. 2000;182(18):5046-5051.
6. Tartaglia LA, Storz G, Brodsky MH, Lai A, Ames BN. Alkyl hydroperoxide reductase from *Salmonella typhimurium*. Sequence and homology to thioredoxin reductase and other flavoprotein disulfide oxidoreductases. *J Biol Chem*. 1990;265(18):10535-10540.