

饮用水安全专家论坛

## 水环境中耐药菌的研究进展

常晓松<sup>1</sup>/舒为群<sup>1</sup>, /曹 佳<sup>2</sup>

1.第三军医大学军事预防医学院环境卫生学教研室, 重庆 400038; 2.第三军医大学军事预防医学院卫生毒理学教研室, 重庆 400038

收稿日期 2007-1-22 修回日期 2007-4-5 网络版发布日期:

**摘要** 临床和畜牧业抗生素的滥用导致微生物在选择性压力作用下获得并维持耐药性, 并有可能通过质粒和整合子将耐药基因在相同或不同种属中广泛传播转移, 最终导致多重耐药。耐药菌在多种水环境中均有检出, 水环境作为耐药基因传播的媒介, 其庞大的耐药基因库, 将为进入环境中的致病菌及条件致病菌提供获得大量耐药基因的机会, 一旦这些致病菌再次感染人体, 引起爆发性流行, 其治疗将非常困难。本文综述了目前国内水环境中耐药菌的研究现状, 耐药基因传播方式及其对人类的潜在危害。

**关键词** [水环境](#); [耐药菌](#); [耐药基因传递](#)

## Current Study of Antibiotic Resistance Bacteria in Aquatic Environment

CHANG Xi ao-song<sup>1</sup>, SHU Wei -qun<sup>1</sup>, , CAO Ji a<sup>2</sup>

1.Department of Environmental Hygiene, Faculty of Preventive Medicine, Third Military Medical University, Chongqing 400038; 2.Department of Hygienic Toxicology, Faculty of Preventive Medicine, Third Military Medical University, Chongqing 400038, China

**Abstract** The abuses of antibiotics in medicine and livestock exposed to environmental bacteria lead to a large-scale dissemination of antibiotic-resistance bacteria in aquatic environment under selective pressure and the resistant organism could transfer resistance genes across the genus and species by plasmid and integron. Antibiotic resistance microbes are common in aquatic environment and the aquatic environment has become a major reservoir for antibiotic-resistant microbes. Infections caused by those resistant strains usually lead to a higher fatality rate than that observed with non-resistant one, especially among immunocompromised individual. This review describes recent research about current study of antibiotic resistant bacteria, the transfer of resistant gene and the hazardous to the human being.

**Keywords** [aquatic environment](#) [antibiotic-resistance bacteria](#) [transfer of resistant gene](#)

DOI

通讯作者 舒为群 [wqshu@mail.tmmu.com.cn](mailto:wqshu@mail.tmmu.com.cn)

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [\[PDF全文\]\(214k\)](#)
- ▶ [\[HTML全文\]\(43k\)](#)
- ▶ [参考文献](#)

#### 服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [Email Alert](#)

#### 相关信息

- ▶ 本刊中 包含“[水环境; 耐药菌; 耐药基因传递](#)”的 [相关文章](#)
- ▶ 本文作者相关文章

- [常晓松舒为群](#)
- [曹佳](#)