



# Chromobacterium violaceum

## General Information

*Chromobacterium violaceum* is a rare opportunistic human pathogen. It is a gram-negative beta-proteobacterium that forms smooth violet colonies on nutrient agar. *C. violaceum* is a facultative anaerobe, which tests positive for oxidase and catalase reactions. It is a saprophyte found mainly in soil and water (optimum temperature 30–35 °C). Although human infections are rare, mortality rates are high leading to *C. violaceum* being considered as an emergent pathogen.

## Host Range

Humans and animals

## Incubation Period

Unknown

## Survival Outside Host

Can survive harsh environments.

## Laboratory Hazards

Contact with broken skin (primary), inhalation, ingestion

## Symptoms of Exposure

*C. violaceum* infection can cause fever, breathing problems, coughing, vomiting, cellulitis, and skin abscesses, with rapid progression to sepsis and multiple organ abscesses, predominantly in the lungs, liver, and spleen.

## Lab Acquired Infections (LAIs)

None reported.

## Personal Protective Equipment



## Disinfection & Inactivation

Susceptible to 10% bleach and 70% ethanol.

## Waste Management

Refer to [USC's Biological and Infectious Waste Management Plan](#).

## Lab Containment

[Biosafety Level 2 \(BSL-2\)](#) for activities with materials and cultures known or reasonably expected to contain *C. violaceum*.

## Animal Containment

[Animal Biosafety Level 2 \(ABSL-2\)](#) for activities with experimentally infected animals.

## Medical Surveillance/Treatment

**Surveillance:** *C. violaceum* infection can be confirmed by a positive mannitol test and API 20NE test

**Prophylaxis:** None

**Vaccines:** None

**Treatment:** Treatment of *C. violaceum* infections can prove challenging owing to its resistance to different antibiotics. It is known to be resistant to penicillins and cephalosporins.

## Spill Procedures

See [USC Biological Spill Procedures](#)

## Exposure Procedures

See [USC Protocol for Post Exposure Evaluation and Follow-up](#) Use of sharps should be strictly limited. A biosafety cabinet should be used when there is a potential to create aerosols or droplets.

## References

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