



Agrobacterium tumefaciens / *Agrobacterium radiobacter*
Pathogen Safety Data Sheet

Pathogenicity/Toxicity

Agrobacterium radiobacter (more commonly known as *Agrobacterium tumefaciens*) is the causal agent of crown gall disease (the formation of tumors) in over 140 species of plants. The DNA transmission capabilities of *Agrobacterium tumefaciens* have been vastly explored in biotechnology as a means of inserting foreign genes into plants.

Hazard Identification

Epidemiology	Distributed worldwide
Host Range	Dicotyledonous
Transmission	Bacterium lives in the soil and infect the roots by direct contact, with wounds in the plant, <i>A. tumefaciens</i> also have a flagellum, being able to move across the plant.
Infectious Dose	Unknown
Incubation Period	Unknown
Communicability	N/A

Stability/Viability

Drug Susceptibility	N/A
Drug Resistance	N/A
Susceptibility to Disinfectants	Susceptible to 10% Bleach, 70% ethanol, and 2% glutaraldehyde.
Physical Inactivation	Inactivated by moist heat (15 minutes at 121°C) and dry heat (1 hour at 160-170°C)
Survival Outside Host	Naturally occur on soil, living indefinitely in soil.

First Aid/Medical

Immunization	None
Prophylaxis	Sterilizing pruning tools, avoiding wounding the crowns/roots of the plants during cultivation.
Treatment	None.

Laboratory Hazards

Laboratory Acquired Infections (LAIs)	None have been reported
Primary Hazards	None
Special Hazards	None

Exposure Controls

Containment	BSL-1 for all procedures involving infectious specimens or cultures; BSC for procedures that would cause splashes and aerosol.
Required PPE	Lab coats, closed toed shoes and gloves required. Eyewear when conducting procedures that have the potential to create splashes. Additional PPE may be required depending on lab specific SOPs.
Other Precautions	Use of BSC for procedures that may produce aerosols & those that involve high concentrations/large volumes; limited sharps usage

Exposure Procedures

Personnel Exposure	In the event that a substance enters the mouth, eyes, lungs, or penetrates/makes contact with skin: <ul style="list-style-type: none"> Alert others in the lab Remove contaminated PPE & clothing Flush eyes/mouth with water for 5 min or wash exposed skin with soap & water
Reporting	Report immediately to the PI or lab/facility manager. Report to the Biosafety Office with 48 hours. Complete an Employee Injury Report form (if required) and submit to EHS.
Emergency Assistance	Emergency assistance can be obtained by dialing 911.
Medical Follow-up	<u>During Business Hours</u> University Health Services 1202 W. Farm Road Stillwater, OK 74078 <u>After Business Hours</u> Stillwater Medical Center ER 1323 W. 6 th Ave. Stillwater, OK 74074.

OSU Biosafety Office Contacts

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