

# Recurrent *Escherichia coli* Urinary Tract Infection Triggered by *Gardnerella vaginalis* Bladder Exposure in Mice

Valerie P. O'Brien<sup>1,2,6</sup>, Matthew S. Joens<sup>3,7</sup>, Amanda L. Lewis<sup>1,2,4,8</sup>, Nicole M. Gilbert<sup>2,5</sup>

<sup>1</sup>Department of Molecular Microbiology, Washington University School of Medicine in Saint Louis <sup>2</sup>Center for Women's Infectious Disease Research, Washington University School of Medicine in Saint Louis <sup>3</sup>Center for Cellular Imaging, Washington University School of Medicine in Saint Louis

<sup>4</sup>Department of Obstetrics and Gynecology, Washington University School of Medicine in Saint Louis <sup>5</sup>Department of Pediatrics, Washington University School of Medicine in Saint Louis <sup>6</sup>Fred Hutchinson Cancer Research Center <sup>7</sup>TESCAN USA, Inc. <sup>8</sup>University of California San Diego

## Corresponding Author

Nicole M. Gilbert  
gilbert@wustl.edu

## Citation

O'Brien, V.P., Joens, M.S., Lewis, A.L., Gilbert, N.M. Recurrent *Escherichia coli* Urinary Tract Infection Triggered by *Gardnerella vaginalis* Bladder Exposure in Mice. *J. Vis. Exp.* (), e61967, doi:10.3791/61967 (2020).

## Date Published

December 4, 2020

## DOI

10.3791/61967

## URL

jove.com/video/61967

## Materials

Name	Company	Catalog Number	Comments
30G x 1/2 needles	BD	305106	for catheters
5 1/2" straight forcep hemostat	McKesson	487377	<i>in situ</i> bladder fixation
ACE 600 Sputter coater	Leica		SEM sample processing
aluminum SEM stub	Ted Pella	16111	SEM sample processing
Calcium chloride	EMS	12340	<i>in situ</i> bladder fixation
conductive carbon adhesive tab	Ted Pella	16084-1	SEM sample processing
Conductive silver paint	Ted Pella	16034	SEM sample processing
CPD 300 Critical Point Drier	Leica		SEM sample processing
Cytofunnel metal clip	Simport	M964B	cytospun urinalysis
Ethanol	EMS	15050	SEM sample processing
Glucose	Sigma	G7528	for NYCIII <i>G. vaginalis</i> growth media
glutaraldehyde	EMS	16320	<i>in situ</i> bladder fixation
Hema 3 staining kit	Fisher	23123869	cytospun urinalysis
HEPES	Cellgro	25-060-CI	for NYCIII <i>G. vaginalis</i> growth media
iridium	Ted Pella	91120	SEM sample processing
isofluorane			mouse anaesthesia
kanamycin	Gibco	11815024	add to UPEC LB selective plates (50 ug/mL)
Luria-Bertani agar	BD	DF0445174	UPEC growth plates
Luria-Bertani broth	BD	DF0446173	UPEC growth media
Merlin FE-SEM	Zeiss		scanning electron microscope
Milli-Q Water Purifier	Millipore	IQ-7000	SEM sample processing
NaCl	Sigma	S3014	for NYCIII <i>G. vaginalis</i> growth media
Olympus Vanox AHBT3 microscope	Olympus		cytospun urinalysis

osmium tetroxide	EMS	19170	SEM sample processing
paraformaldehyde	EMS	15710	<i>in situ</i> bladder fixation
polyethylene tubing	Intramedic	427401	for catheters
Proteose Peptone #3	Fisher	DF-122-17-4	for NYCIII <i>G. vaginalis</i> growth media
PTFE coated double edge razor blade	EMS	72000	cutting bladders for SEM
Shandon Cyto centrifuge	Thermo Scientific	A78300002	cytospun urinalysis
Shandon cytofunnel filter	Simport	M965FWDV	cytospun urinalysis
Shandon Double cytofunnel	Simport	M964-1D	cytospun urinalysis
Shandon double cytoslides (coated)	Thermo Scientific	5991055	cytospun urinalysis
sodium cacodylate trihydrate	EMS	12310	<i>in situ</i> bladder fixation
spectrophotometer	BioChrom	80-3000-45	measuring bacterial OD600
streptomycin	Gibco	11860038	add to <i>G. vaginalis</i> NYCIII selective plates (1 mg/mL)
tuberculin slip tip syringe	BD	309659	for catheters
Yeast Extract	Fisher	DF0127-17-9	for NYCIII <i>G. vaginalis</i> growth media