

Supplementary Information for

**Genetic and Chemical Controls of Sperm Fate and Spermatocyte Dedifferentiation in
*Caenorhabditis elegans***

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Table S1. *C. elegans* strains used in this study

Strain	Genotype	Citation
N2	<i>wild-type (Bristol strain)</i>	[1]
JK3231	<i>puf-8(q725)</i>	[34]
AH102	<i>lip-1(zh15)</i>	[68]
JK3961	<i>puf-8(q725)/mln[mls14 dpy-10(e128)]; lip-1(zh15)</i>	[23]
SD939	<i>mpk-1(ga111) unc-79(e1068)</i>	[31, 43]
JK3997	<i>puf-8(q725)/mln[mls14 dpy-10(e128)]; lip-1(zh15); mpk-1(ga111) unc-79(e1068)</i>	[23]
JK816	<i>fem-3(q20) gain-of-function</i>	[35]
MHL58	<i>puf-8(q725)/mln[mls14 dpy-10(e128)]; fem-3(q20gf)</i>	This study
DG3913	<i>tn1541[GFP::tev::s::lin-41]</i>	[37]
MHL106	<i>puf-8(q725)/mln[mls14 dpy-10(e128)]; fem-3(q20gf); tn1541[GFP::tev::s::lin-41]</i>	This study

Table S2. Antibodies used in this study

Antibody against	Resource
MSP (a marker for sperm fate)	DSHB (Cat#: 4A5)
HIM-3 (a marker for meiotic cells)	NOVUS (Cat#: 53470002)
GFP (Green Fluorescent Protein)	Abcam (Cat#: Ab290)
pERK1/2	Cell Signaling (Cat#: 9101)
ERK1/2	Cell Signaling (Cat#: 9102)
Tubulin	Sigma Aldrich (Cat#: T8203)

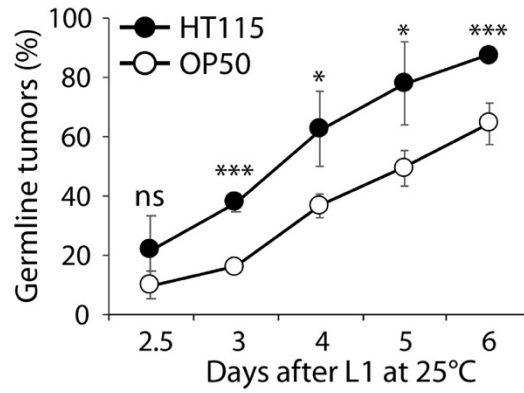


Figure S1. The effect of bacterial foods on spermatocyte dedifferentiation-mediated tumorigenesis in *puf-8(q725); fem-3(q20gf)* mutants at 25°C. The *puf-8(q725); fem-3(q20gf)* mutants fed HT115 *E. coli* had significantly more germline tumors than those fed OP50 *E. coli*. ***, $p < 0.001$; **, $p < 0.01$; *, $p < 0.05$; ns, not statistically significant.