

Curriculum Vitae
Justin Courcelle
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Education

- *University of Paris*, Post-doc, Mutagenesis. Nov1999- Dec 2000
- *Stanford University*, Ph.D., Cancer Biology, 1992-1999
- *University of Vermont*, B.S. Biology, 1989-1992

Employment

- *Assistant Professor, Portland State University* 2005-present.
- *Assistant Professor, Mississippi State University*, Dec 2001-2005.
Genomic Stability, Mutagenesis, Cancer, and DNA Replication and DNA repair.
- *Postdoctoral Research, University of Paris*, Nov 1999-Nov 2000.
With Dr. Miroslav Radman. Characterization of the genetic and mechanistic barriers to interspecies recombination.
- *Dissertation Research, Stanford University*, 1994-1999.
With Dr. Philip C. Hanawalt. Title, Recovery of DNA Replication in *Escherichia coli* Irradiated with Ultraviolet Light, 1999. Additional studies on DNA repair mechanisms of UV-induced DNA lesions.
- *Graduate Research, Stanford University*, 1992-1994
With Dr. Michael Lieber. Generation of antigenic diversity in the immune system. Biochemical studies elucidating the mechanisms of immunoglobulin class switch and V-D-J recombination.
- *Undergraduate Research, University of Vermont*, 1989-1992
With Dr. Susan S. Wallace. Inducible responses to oxygen stress in *Escherichia coli* and the mutagenic variability of DNA lesions based upon sequence context

Publications

- Belle JJ; Casey A; Courcelle CT; **Courcelle J**. Inactivation of the DnaB helicase leads to the collapse and degradation of the replication fork: a comparison to UV-induced arrest. *Journal of Bacteriology* (2007) 189: 5452-5462.
- Chow KH; **Courcelle J**. RecBCD and RecJ/RecQ initiate DNA degradation on distinct substrates in UV-irradiated *Escherichia coli*. *Radiation Research* (2007) 168: 499-506.
- Koroleva O; Makharashvili N; Courcelle CT; **Courcelle J**; Korolev S. Structural conservation of RecF and Rad50: implications for DNA recognition and RecF function. *EMBO Journal* (2007) 26:867-77.
- Donaldson JR; Courcelle CT; **Courcelle J**. RuvABC Is Required to Resolve Holliday Junctions That Accumulate following Replication on Damaged Templates in *Escherichia coli*. *Journal of Biological Chemistry* (2006) 281:28811-21.
- Courcelle CT; Chow KH; Casey A; **Courcelle J**. Nascent DNA processing by RecJ favors lesion repair over translesion synthesis at arrested replication forks in *Escherichia coli*. *Proceedings of the National Academy of Sciences of the United States of America* (2006) 103: 9154-9.
- Courcelle CT; **Courcelle J**. Monitoring replication following UV-induced damage in *Escherichia coli*. *Methods in Enzymology*. (2006) 409:425-41.
- Courcelle CT; Belle JJ; **Courcelle J**. Nucleotide excision repair or Pol V-mediated lesion bypass can act to restore UV-arrested replication forks in *Escherichia coli*. *Journal of Bacteriology* (2005) 187:6953-61.
- **Courcelle J**. Recs preventing wrecks. *Mutation Research*. (2005) 577:217-27.
- **Courcelle J**; Belle JJ; Courcelle CT. When replication travels on damaged templates: bumps and blocks in the road. *Research in Microbiology* (2004) 155 231-7.
- Donaldson JR; Courcelle CT; **Courcelle J**. RecG or RuvAB is not required for the resumption of replication following UV irradiation *Escherichia coli*. *Genetics* (2004) 166:1631-40.
- Chow KH; **Courcelle J**. RecO functions together with RecF and RecR to stabilize DNA damage-blocked replication forks following UV irradiation *Escherichia coli*. *Journal of Biological Chemistry* (2004) 279:3492-6.
- **Courcelle J**, Hanawalt, PC. RecA-dependent repair of arrested replication forks. *Annu Rev Genet* (2003) 37: 611-46.
- **Courcelle J**, Donaldson JR, Chow KH, Courcelle CT. UV-induced replication fork regression and processing in *Escherichia coli*. *Science*, (2003) 299:1064-7.
(highlight) LeBrasseur, N. Rec'd and repaired. *Journal of Cell Biology* (2003) 106:464-5

Publications cont.

- Crowley DJ, **Courcelle J**. Answering the Call: Coping with DNA Damage at the Most Inopportune Time. *Journal of Biomedicine and Biotechnology* (2002) 2: 66-74.
- **Courcelle J**; Hanawalt PC. Participation of recombination proteins in rescue of arrested replication forks in UV-irradiated *Escherichia coli* need not involve recombination. *Proceedings of the National Academy of Sciences of the United States of America* (2001) 98: 8196-8202.
- Courcelle CT; **Courcelle J**; Prichard MN; Mocarski ES. Requirement for Uracil-DNA Glycosylase during the Transition to Late-Phase Cytomegalovirus DNA Replication *Journal of Virology* (2001) 75: 7592-7601.
- **Courcelle J**; Ganesan AK; Hanawalt PC. Therefore, what are recombination proteins there for? *BioEssays* (2001) 23:463-470.

(editorial) Gene names: the approaching end of a century-long dilemma
Wilkins A.S. *BioEssays* (2001) 23:377-378.
- **Courcelle J**; Khodursky A; Peter B; Brown PO; Hanawalt PC Comparative gene expression profiles following UV exposure in wild type and SOS deficient *Escherichia coli*. *Genetics* (2001) 158: 41-64.
- **Courcelle J**; Hanawalt PC. RecQ and RecJ Process Blocked Replication Forks Prior to the Resumption of Replication in UV-Irradiated *Escherichia coli*. *Molecular and General Genetics* (1999) 262:543-51.
- **Courcelle J**; Crowley DJ; Hanawalt PC. Recovery of DNA replication in UV-Irradiated *Escherichia coli* requires both excision repair and RecF protein function. *Journal of Bacteriology* (1999)181:916-22.
- **Courcelle J**; Carswell-Crumpton C; Hanawalt PC. *recF* and *recR* are required for the resumption of replication at DNA replication forks in *Escherichia coli*. *Proceedings of the National Academy of Sciences of the United States of America* (1997) 94:3714-9.

(commentary) Kogoma T. Is RecF a DNA replication protein? *Proceedings of the National Academy of Sciences of the United States of America* (1997) 94:3483-4.
- Koehler DR; **Courcelle J**; Hanawalt PC. Kinetics of pyrimidine(6-4) pyrimidone photoproduct repair in *Escherichia coli*. *Journal of Bacteriology* (1996) 178:1347-50.
- Sodora DL; **Courcelle J**; Brojatsch J; Berson A; Wang YC; Dow SW; Hoover EA; Mullins JI. Analysis of a feline immunodeficiency virus; provirus reveals patterns of gene sequence conservation distinct from human immunodeficiency virus type1. *Aids Research and Human Retroviruses* (1995) 11:531-3.
- Evans J; Maccabee M; Hatahet Z; **Courcelle J**; Bockrath R; Ide H; Wallace S. Thymine ring saturation and fragmentation products: lesion bypass, misinsertion and implications for mutagenesis. *Mutation Research* (1993) 299:147-56

Presentations at Professional Meetings

Invited Speaker

- Gordon Conference; Nucleic Acids; Newport, RI June 2005.
- American Society for Biochemistry and Molecular Biology; San Diego, CA Apr 2005.
- American Society for Microbiology Conference on DNA Repair; Bermuda, Nov 2004.
- Asilomar Conference on DNA Repair Mechanisms; Monterey, CA, Oct 2004.
- Gordon Conference; Carcinogenesis & Mutagenesis; Ventura, CA Mar 2004
- Asilomar Conference on DNA Repair Mechanisms; Monterey, CA, Oct 2002.
- Keystone Symposia; Molecular Mechanisms in DNA Replication and Recombination; Snowbird, UT, Jan 2002.
- Fallen Leaf Lake Conference; Workshop on DNA Repair; Lake Tahoe, CA Oct 2001
- Keystone Symposia; Molecular Mechanisms in DNA Replication and Recombination; Taos, NM, Feb 1999.
- Gordon Conference; Mutagenesis; Plymouth State College, NH, Jun 1996.
- Cancer Biology; Asilomar Conference Center, CA, Sept 1995-1997.

Invited Seminars

- Dept of Biochem & Mol Biol, Univ of Minnesota, Minneapolis, MN Mar 2008.
- Dept of Biology, Santa Clara University, Santa Clara, CA May 2007.
- Dept of Biochem and Biophys, Oregon St U, Corvallis, OR May 2007.
- Dept of Genetics, OHSU, Portland, OR Feb 2007.
- Dept of Biology, Reed College, Portland, OR Sept 2006.
- Dept of Mol Biol and Pharm, U Mass Sch of Med, Worcester, MA Oct 2005.
- Dept of Biochemistry, Univ of Mississippi Med Center, Jackson, MS May 2005.
- Dept. of Rad Oncology, City of Hope, Duarte, CA. Sept 2004.
- Dept of Biology, Cameron Univ, Lawton, OK. Feb 2004.
- Dept of Biology, Univ of Louisiana, Lafayette, LA. Jan 2004.
- Dept of Micro & Immun, Univ of California, Irvine, CA. Dec 2003.
- Dept of Micro & Immun, Temple Univ Sch of Med, Philadelphia, PA. Nov 2003.
- Dept. of Rad Oncology, Univ Maryland Sch of Med, Baltimore, MD. Oct 2003.
- Dept of Biochem & Mol Bio, St Louis U. Sch of Med, St. Louis, MO. Aug 2003.
- Dept of Biology, Troy State University, Troy, AL. Mar 2003
- Dept of Molec Biol., Univ of Texas Health Center at Tyler. Tyler, TX. Mar 2003
- Dept of Molec Biochem., Rice University, Houston, TX. Mar 2003.
- Dept of Biol., University of Southern Mississippi, Hattiesburg, MS Jan 2003
- Dept of Biol., University of Alabama, Tuscaloosa, AL Nov 2002
- Dept of Biol., Portland State University, Portland, OR Feb 2002
- Dept of Biol., University of the Pacific, Stockton, CA. Jan 2002
- Dept of Microbiol., University of Hawaii, Honolulu, HI. Jan 2002
- Dept. Rad. Onc., Washington University, St. Louis, MO. Dec 2001.
- Biol Dept., Southeastern Louisiana University, Hammond, LA. Nov 2001.
- Dept of Biochem., Mississippi State University, Miss State, MS. May 2000, Jan 2001.
- Dept of Molec Biol., University of Texas Health Center at Tyler. Tyler, TX. May 1999.
- Dept of Biol., Centenary College. Shreveport, LA. May 1999.
- Dept of Biol., Grinnell College. Grinnell, IA. Apr 1999.

Grants, Fellowships, Honors

Grants

- National Science Foundation 0622789 (2006), **\$9,900 CAREER: *Processing DNA damage during replication, ROA supplement.***
- National Science Foundation MCB0551798 (2005-2010), **\$748,718 CAREER: *Processing DNA damage during replication.***
- National Research Service Award F32 GM068566-01 (awarded to CT Courcelle 2003-2006) **\$155,712 *DNA Replication Termination in Escherichia coli***
- National Science Foundation MCB0319119 (2003-2004), **\$26,769 *Recovery of Replication Following UV-induced DNA damage, minority supplement.***
- National Science Foundation MCB0130486 (2002-2005), **\$416,377 *Recovery of Replication Following UV-induced DNA damage.***
- Research Initiation Program (2001-2002), **\$10,000, *Determination of the Mechanism by which Replication Recovers Following Disruption by DNA Damage***

Fellowships and Honors

- Faculty Research Award, College of Arts and Sciences, MSU 2004.
- European Molecular Biology Organization (EMBO) Post-Doctoral Fellowship, 1999-01.
- National Cancer Institute Traineeship, Cancer Biology Program, 1996-1999
- National Science Foundation Predoctoral Fellowship, 1993-1996
- Vermont-NEA Townsend Scholarship, 1993
- Benedict Award in Biology, UVM, 1992
- HELiX minigrant award, UVM, 1991
- Chemical Rubber Company Chemistry Award, UVM, 1990

Service

Outside University/Department

- Review Panelist NASA Astrobiology: Exobiology and Evolutionary Biology, 2007
- Review panelist, National Science Foundation, Molecular and Cellular Biosciences 2003, 2004, 2005, 2006. 2007
- Ad-Hoc Referee for the following Journals: *Proc Nat Acad Sci USA, Nature, Science, Genetics, Molec and Gen Genet, Cell, Mol Cell, J Bact., Genes to Cells, EMBO, Mol. Microbiol, Nucl Acid Res., Mut. Res, Rad Res, DNA Repair, FEMS Letters.*
- Ad-Hoc Referee for the following Granting Agencies: National Science Foundation, US Military Research Office, LA State Science Foundation

Within University/Department

@Portland State University

- Executive Committee 2007-present
- Promotion and Tenure Committee 2006-2007
- Departmental Secretary 2005-present

@Mississippi State University

- Research Advancement Committee 2004-2005
- Hazardous Waste Committee, 2002-2004
- Radiation Safety Committee, 2002-2004
- Microbiology Undergraduate Curriculum Committee, 2002-2005
- Biology Undergraduate Curriculum Committee, 2001-2005

@Stanford University

- Freshman and Sophomore Academic Advisor, 1995-1999
- Graduate Admissions Committee, Program in Cancer Biology, 1998

Teaching

@PSU

- Intro Genetics BI 341U & BI 341R
- Microbial Genetics BI 410/510
- Recombinant DNA Lab BI 431/531
- Biology Seminar Series BI 607
- Adv Biology Topics BI 507
- Graduate Research Prospectus BI 598

@MSU

- Bacterial Genetics BIO4443/6443
- Topics in Genome Stability BIO 8990
- Topics in Cancer Biology BIO 8990
- Biology Seminar Series BIO 8011/8021

Mentoring

- Katherine Ona MS 2006-present
- Arthur Jeiranian MS 2006-present
- David Crowley, Visiting Scientist 2006
- Charmain Courcelle, Post-Doc 2004-2006
- Jerilyn Belle, PhD 2003-2007
- Janet R Donaldson, PhD 2001- 2004
- Kin-Hoe Chow, MS 2001-2003
- Undergraduate, High School, and Student Researchers: (@ PSU) Kevin Stein, Qais Al-Hadid, Allison J Landstrom, Elizabeth Campbell, Andrew Casey, Craig Johnston. (@ MSU) Oleksandr Tokarskyy, Aparna Nandiraju, Joshua McGuire, Melissa Morton, Misty Hubenthal, LaRhonda Jefferson, Cynthia Doffitt, Padmini Jayaraman, Krista Mophett.

Graduate Committee Member for (@PSU)

Steven W. Wells, MS Dept Environmental Sciences.

Julia Kottmeier, MS Dept Biology

Melissa Abraham, MS Dept Biology

James Laidler, PhD Dept Biology

Adam Clore, PhD Dept Biology

Timothy Cleaver, MS Dept Biology