

CURRICULUM VITAE

Christine J. Picard

BIBLIOGRAPHICAL INFORMATION

Academic Rank

Assistant Professor, Department of Biology

Education

Degree	Institution	Date Degree Granted
B.Sc.	University of New Brunswick Biology/Chemistry	2000
M.Sc.	University of Toronto Chemistry (Organic)	2002
Ph.D.	West Virginia University Biology	2010

Positions/Employment

Indiana University Purdue University Indianapolis, Indianapolis Assistant Professor, Department of Biology	8/2011-present
Texas A&M University, College Station, TX Postdoctoral Fellow, Department of Entomology	2010-2011
West Virginia University, Morgantown, WV PhD Student, Department of Biology [Advisor: Dr. Jeffrey D. Wells]	2005-2010
Affinium Pharmaceuticals, Toronto, Canada Medicinal Chemist	2002-2005
University of Toronto, Toronto, Canada MSc Student, Chemistry [Advisor: Dr. Andrei K. Yudin]	2000-2002

Current Professional Organization Memberships

North American Forensic Entomology Association
European Association of Forensic Entomology
Entomological Society of America
American Academy of Forensic Scientists
Midwestern Association of Forensic Scientists

HONORS AND AWARDS

External Sources

(2012) Entomological Society of America International Travel Award (\$3000)

(2010) Best PhD Student Presentation (NAFEA)
(2008) Smithsonian Institute Samuel Wendell Williston Diptera Research Award (\$1615)
(1996) Rotary Club Scholarship (\$1000)
(1996) Governor-General Award
(1996) Josten's Ring of Excellence

West Virginia University (2005-2010)

WVU Dissertation Fellowship (\$6000)
WVU HERF Supplemental Teaching Fellowship (\$4000)
WVU Doctoral Student Research Award (\$1200)
WVU Leah Williams Graduate Student Fellowship (\$800)
WVU Graduate Travel Awards (\$2000)
Robert E. Stitzel Graduate Student Travel Award (\$1000)

University of Toronto (2000-2002)

U of T Open Fellowship (\$5000)

University of New Brunswick (1996-2000)

UNB Entrance Scholarship

RESEARCH AND SCHOLARSHIP

Grants

External Sources

National Institute of Justice 2013-DN-BX-K019: *Species and age determination of blow fly pupae based upon headspace analysis*. Award: \$197,491, PI: John Goodpaster (IUPUI), Co-PI: Christine J. Picard, 2014-2015.

National Institute of Justice 2012-DN-BX-K024: *Genomic tools to reduce error in PMI estimates derived from entomological evidence*. Award: \$496,661, PI: Aaron Tarone (Texas A&M University), Co-PI: Christine J. Picard, Sing-Hoi Sze, Co-PI (Texas A&M University), 2013-2014.

Pending

National Institute of Justice Research and Development in Forensic Science for Criminal Justice Purposes: Development of a Multiplex Forensic Phenotypic Profile (FPP) Assay. \$221,812, PI: Christine J. Picard. Submitted 4/2014.

Department of Defense: *Combined DNA extraction and trace analyses of explosives residues from pre- and post-blast materials*. \$555,815, PI: Christine J. Picard, Co-PIs: John Goodpaster (IUPUI), Nicholas Manicke (IUPUI). Submitted 4/2014.

Not Funded

NSF DEB Preliminary Proposal: *Metapopulation community dynamics of multi-trophic organisms in extreme climates*. PI: Christine J. Picard, Co-PIs: Eric Benbow (Michigan State University), David Tallmon (University of Alaska Southeast). Submitted 1/2014.

NSF DEB Preliminary Proposal: *The resiliency of successional arthropods on carrion*. PI: Jeffery Tomberlin (Texas A&M University), Co-PI: Christine J. Picard. Submitted 1/2014.

National Institute of Justice Applied Research and Development in Forensic Science Grant: *Development and validation of a genetic method for detecting postmortem relocation of a corpse*. \$325,820, PI: Christine J. Picard, Co-PI: Jeffrey Wells (Florida International University). Submitted 4/2013

National Institute of Justice Applied Research and Development in Forensic Science Grant: *Development and validation of a genetic method for detecting postmortem relocation of a corpse*. \$574,329, PI: Christine J. Picard, Co-PI: Jeffrey Wells (Florida International University). Submitted 4/2012

Department of Defense: *Combined DNA extraction and trace analyses of explosives residues from improvised explosive devices*. \$404,192. PI: Christine J. Picard, Co-PI: John Goodpaster (IUPUI). Full proposal submitted 12/2011.

Department of Defense White Paper: *Extraction and identification of "lifestyle markers" during mitochondrial DNA testing of human hair*. \$400,000, PI: John Goodpaster (IUPUI), Co-PIs: Christine J. Picard, Michael Wagner (IU School of Medicine). Submitted 11/2011.

Department of Defense White Paper: *Next-generation sequencing to identify regions of the human genome that resist degradation: Improving the analysis of challenging DNA samples*. \$700,000, PI: Aaron Tarone (TAMU), Co-PI: Christine J. Picard, Lori Baker (Baylor University), Daniel Westcott (Texas State University). Submitted 11/2011.

Department of Homeland Security White Paper: *Simultaneous identification of mitochondrial DNA and explosives residues in human hair*. \$300,000, PI: John Goodpaster, Co-PI: Christine J. Picard. Submitted 10/2011.

Publications

Referred Journal Articles (# in rank, *mentored students)

1. ****KJ Faulds, JD Wells, CJ Picard** "Verification of AFLP kinship methods by sequencing." *Forensic Science International*. *In review*.
2. ****GM Dembinski, CJ Picard** (2014) "Evaluation of the IrisPlex DNA-based eye color prediction tool the United States." *Forensic Science International: Genetics*. 9:111-117.
3. **#CJ Picard** (2013) "First record of *Chrysomya megacephala* Fabricius (Diptera: Calliphoridae) in Indiana, U.S.A." *Proceedings of the Entomological Society of Washington* 115: 265-267.
4. **CJ Picard, *K DeBlois, *F Tovar, J Bradley, JS Johnston, AM Tarone** (2013) "Increasing precision in PMI estimates: What's sex got to do with it?" *Journal of Medical Entomology* 50: 425-431.
5. **CJ Picard, JD Wells** (2012) "A test for carrion fly full siblings: a tool for detecting postmortem movement of a corpse." *Journal of Forensic Sciences* 57: 535-538.

6. **CJ Picard**, JS Johnston, AM Tarone (2012) "Genome sizes of forensically relevant Diptera." *Journal of Medical Entomology* 49: 192-197.
7. **CJ Picard**, MH Villet, JD Wells (2012) "Amplified fragment length polymorphisms confirms reciprocal monophyly in *Chrysomya putoria* and *C. chloropyga*: A correction of reported shared mtDNA haplotypes. *Medical and Veterinary Entomology* 26: 116-119.
8. AM Tarone, **CJ Picard**, C Spiegelman, DR Foran (2011) "Population and temperature effects on *Lucilia sericata* (Diptera: Calliphoridae) body size and minimum development time." *Journal of Medical Entomology* 1062-1068.
9. **CJ Picard**, JD Wells (2010) "The population genetic structure of North American *Lucilia sericata* (Diptera: Calliphoridae) and the utility of genetic assignment methods for reconstruction of postmortem corpse relocation." *Forensic Science International* 195-63-67.
10. PB Sampson, **CJ Picard**, S Handerson, TE McGrath, M Domagala, A Leeson, V Romanov, DE Awrey, D Thambipillai, E Bardounotis, N Kaplan, JM Berman, HW Pauls (2009) "Spiro-naphthyridinone piperidines as inhibitors of *S. aureus* and *E. coli* enoyl-ACP reductase (FabI)." *Bioorganic and Chemistry Letters* 19: 5355-5358.
11. **CJ Picard**, JD Wells (2009) "Survey of the genetic diversity of *Phormia regina* (Diptera: Calliphoridae) using amplified fragment length polymorphisms." *Journal of Medical Entomology* 46: 664-670.
12. T Siu, **CJ Picard**, AK Yudin (2005) "Development of electrochemical processes for nitrene generation and transfer." *Journal of Organic Chemistry* 70: 932-937.
13. S Yetka, LB Krasnova, B Mariampillai, **CJ Picard**, G Chen, S Pandiaraju, AK Yudin (2004) "Preparation and catalytic application of partially fluorinated binaphthol ligands." *Journal of Fluorine Chemistry* 125-517-525.
14. A Caiazzo, S Dalili, **CJ Picard**, M Sasaki, T Siu, AK Yudin (2004) "New methods for the synthesis of heterocyclic compounds." *Pure & Applied Chemistry* 105:603-613.

Book Chapters

1. **CJ Picard**, JJ Parrott, J Whale. "Population genetics and molecular evolution of carrion-associated arthropods" in: *Carrion Ecology, Evolution and Their Applications*, ME Benbow, JK Tomberlin and AM Tarone Eds., Taylor & Francis, London UK.
2. AM Tarone, **CJ Picard**, B Singh. "Molecular biology in forensic entomology" in: *International Dimensions and Frontiers in Forensic Entomology*, JK Tomberlin, ME Benbow, AM Tarone, Eds. Taylor & Francis, London UK.
3. T Sui, **CJ Picard**, AK Yudin (2003) "Electrochemical nitrogen transfer reactions for organic synthesis" in: *Mechanistic and Synthetic Aspects of Organic and Biological Electrochemistry*, DG Peters, J Simonet, H Tanaka, Eds., The Electrochemical Society Inc., Pennington, New Jersey, pp. 105-108.

Presentations and Posters (#invited, *oral presentation, @mentored students)

1. *ML Pimsler, S-H Sze, CD Jones, M Scott, S Fu, **CJ Picard**, @AA Andere, JK Tomberlin, AM Tarone. Males are from Mars, females are from Venus... and Earth? Adventures in sex determination and transcriptomics. Entomological Society of America Annual Meeting, Portland, OR November 16-19th, 2014.
2. *@AA Andere, **CJ Picard** *De novo genome assembly of Phormia regina (Diptera: Calliphoridae)*. North American Forensic Entomology Association Annual Meeting, St. Petersburg, FL July 15-17th, 2014.
3. #***CJ Picard** *Selection for optimal phenotypes using genomics*. Workshop on Insect Sensing, China Agricultural University, China, June 13th, 2014.
4. #***CJ Picard** *Selection for optimal phenotypes using genomics*. Symposium of Sino-America on application of insect-microorganisms to treat organic waste materials. Zibo, China, June 12th, 2014.
5. #***CJ Picard** *Selection for optimal phenotypes using genomics*. Phoenix Black Soldier Fly Rearing Facility Workshop, Xi'an, China. June 11th, 2014.
6. #***CJ Picard** *Genetic selection for optimal protein production and biodegradation phenotypes*. Northwest Agricultural and Forestry University, Yangling, China. June 9th, 2014.
7. #***CJ Picard** *Genetic selection for optimal protein production and biodegradation phenotypes*. International Symposium on Organic Waste Bioconversion Mechanisms and Applications by Microbes and Insects, Wuhan, China. June 8th, 2014.
8. #***CJ Picard** *Importance of understanding the genetic diversity of stratiomyids*. Huazhong University, Wuhan, China June 4th, 2014.
9. #***CJ Picard** *Genetic selection for optimal protein production and biodegradation phenotypes*. Zhejiang University, Hangzhou, China June 2nd, 2014.
10. *@KG Smolar, **CJ Picard**, A Dagnon (2014) *Investigating the order of the dual examination of touch prints via fingerprinting and DNA analyses*. American Academy of Forensic Sciences (AAFS) Annual Meeting, Seattle, WA February 17-22nd.
11. ***CJ Picard**, AA Andere, J Parrott, M Pimsler, E Ramos, AM Tarone, J Whale (2014) *How genomics is advancing the field of forensic entomology*. American Academy of Forensic Sciences (AAFS) Annual Meeting, Seattle, WA February 17-22nd.
12. #***CJ Picard** (2013) *The temporal and spatial population structure of Phormia regina (Diptera: Calliphoridae)*. The Entomological Society of America Annual Meeting, Austin, TX November 10-14th.
13. *E Ramos, **CJ Picard**, AM Tarone (2013) *Selecting for blow fly development forensically important Cochliomyia macellaria*. The Entomological Society of America Annual Meeting, Austin, TX November 10-14th.

14. *AM Tarone, **CJ Picard**, L Ellis, JS Johnston (2013) *Consequences of genome size variation in forensic entomology*. The Entomological Society of America Annual Meeting, Austin, TX November 10-14th.
15. *@AA Andere, **CJ Picard** (2013) *Sex determination in Chrysomya rufifacies (Diptera: Calliphoridae)*. 2nd Annual Department of Biology Retreat, Bradford Woods, IN, October 2013.
16. @J Whale, **CJ Picard** (2013) *Population of the blow fly Phormia regina (Meigen)*. 2nd Annual Department of Biology Retreat, Bradford Woods, IN, October 2013.
17. @G Dembinski, **CJ Picard** (2013) *Evaluation of the IrisPlex DNA-based eye color prediction tool on a North American population*. 2nd Annual Department of Biology Retreat, Bradford Woods, IN, October 2013.
18. *@AA Andere, **CJ Picard** (2013) *De novo genome assembly of Phormia regina (Diptera: Calliphoridae)*. North American Forensic Entomology Association (NAFEA) Annual Meeting, Dayton, OH, July 16-19th.
19. *@G. Dembinski, **CJ Picard** (2013) *Evaluation of the IrisPlex DNA-based eye color prediction tool in the United States*. American Academy of Forensic Sciences (AAFS) Annual Meeting, Washington, D.C. February 18-23rd.
20. @G. Dembinski, **CJ Picard** (2012) *Validation of IrisPlex in the United States: a DNA-based tool for the prediction of eye color*. Midwestern Association of Forensic Scientists (MAFS) 2012 Meeting, Milwaukee, WI September 24-28th
21. @J. Espino, **CJ Picard** (2012) *The effect of maggot mass generated temperature on blow fly development*. IUPUI Research Day, August 2012.
22. ***CJ Picard** (2012) *A Novel, Universal DNA-based Method for Full Sibship Detection of Flies for Inferring Postmortem Movement of a Corpse*. Midwestern Association of Forensic Scientists 2012 Meeting, Milwaukee, WI September 24-28th
23. #***CJ Picard** (2012) *Population Genetics in Forensic Entomology*. Invited symposia to the XXIV International Congress of Entomology, Daegu, South Korea August 19-25th.
24. ***CJ Picard** (2012) *Review of recent forensic entomological literature*. 10th Annual Meeting of the North American Forensic Entomology Association, Las Vegas, NV July 17-19th.
25. ***CJ Picard**, @F Tovar, @K DeBlois, JS Johnston, AM Tarone (2012) *Applications of genome sizes in forensic entomology*. 9th Annual Meeting of the European Association of Forensic Entomology, Torun, Poland April 16-18th.
26. **CJ Picard**, @F Tovar, @K DeBlois, JS Johnston, AM Tarone (2011) *Increasing precision in PMI_{MIN} estimates: What's sex got to do with it?* North American Forensic Entomology Association (NAFEA) 9th Annual Conference, College Station, TX July 21-22nd.

27. **CJ Picard**, JS Johnston, AM Tarone (2011) *Genome sizes of forensically relevant Diptera*. North American Forensic Entomology Association (NAFEA) 9th Annual Conference, College Station, TX July 21-22nd.
28. ***CJ Picard**, JD Wells (2010) *Fine spatial and temporal population structure of Phormia regina*. North American Forensic Entomology Association (NAFEA) 8th Annual Conference, Windsor, Ontario July 7-9th. Winner: Best PhD Student Presentation
29. ®R Viradia, **CJ Picard**, JD Wells (2010) *Use of mitochondrial sequence data for the verification of calculations of kinship using a dominant genotype*. West Virginia Capitol Research Day, Charleston, West Virginia January 26th.
30. ***CJ Picard**, JD Wells (2009) *Detecting a needle in a haystack: A novel, universal DNA-based method for full sibling detection*. North American Forensic Entomology Association (NAFEA) 7th Annual Conference, Miami, FL July 16-17th.
31. ***CJ Picard**, JD Wells (2009) *An Insect DNA-based Method for the Detection of Post Mortem Transportation of a Corpse*. European Association for Forensic Entomology (EAFE) 7th Annual Conference, Uppsala, Sweden, June 9-12th.
32. ***CJ Picard**, JD Wells (2009) *A Universal Method for the Detection of Full Siblings*. Research Horizons Day, West Virginia University, Morgantown, WV, March 26th.
33. ***CJ Picard**, JD Wells (2008) *The application of population genetic assignment tests to forensic entomological questions*. North American Forensic Entomology Association (NAFEA) 6th Annual Conference, Atlantic City, NJ June 8-10th.
34. ***CJ Picard**, JD Wells (2008) *Genetic Diversity of Phormia regina (Diptera: Calliphoridae) using Amplified Fragment Length Polymorphisms*. Research Horizons Day, West Virginia University, Morgantown, WV, March 13th.
35. ***CJ Picard**, JD Wells (2007) *Genetic Diversity of Phormia regina (Diptera: Calliphoridae) using Amplified Fragment Length Polymorphisms*. North American Forensic Entomology Association (NAFEA) 5th Annual Conference, Simon Fraser University, BC July 11-14th.
36. **CJ Picard**, JD Wells (2007) *Validation of a new and improved human genotyping multiplex containing 13 CODIS loci, amelogenin and 3 new additional loci*. American Association of Forensic Sciences (AAFS) Annual Conference, San Antonio, TX. February 20-24th.
37. ***CJ Picard**, JD Wells (2006) *Preservation of necrophagous larvae for morphological and DNA analysis*. North American Forensic Entomology Association (NAFEA) 4th Annual Conference, Purdue University, IN July 12-15th.
38. ***CJ Picard**, JD Wells (2006) *The use of DNA for species identification in entomology*. West Virginia Entomological Society Winter Meeting, North Bend, WV January 5th.
39. **CJ Picard**, D Clark (2000) *Deletional Analysis of the ade5 gene in Drosophila melanogaster*. Maritime Undergraduate Biology Conference, Mount Allison University, Sackville, New Brunswick March 4-5th.

Invited Departmental Seminars

1. Use of genomics in bridging basic and applied research areas of forensic entomology. Purdue University, Department of Entomology, February 2014.
2. Use of genomics in bridging basic and applied research areas of forensic entomology. Indiana University, Center for Computational Biology and Bioinformatics, November 2013.
3. Population Genomics in non-model organisms: RAD sequencing of a large sample of a forensically important blow fly. University of Dayton, Department of Biology, September 2013.
4. Molecular approaches to forensic entomology. Texas A&M University, Department of Entomology, March 2011.

TEACHING AND CURRICULUM DEVELOPMENT

Indiana University Purdue University Indianapolis

Courses Taught

Forensic Biology I, FIS 402, Fall 2012, 2013, 2014
Forensic Biology II, FIS 403, Spring 2012, 2013, 2014
Forensic Capstone, FIS 490, Fall 2012, 2013, 2014

Guest Lectures

Concepts of Forensic Science I, FIS 205, Fall 2012, 2013, 2014
Concepts of Forensic Science II, FIS 206, Spring 2012, 2013, 2014

Texas A&M University

Guest Lectures

Genetics I, GENE 481, Spring 2011
Introduction to Forensic and Investigative Sciences, FIVS 205, Spring 2011
The Science of Forensic Entomology, FIVS 431, Fall 2010
Population and Ecological Genetics, GENE 412, Fall 2010

West Virginia University

Laboratory Courses Taught

The Living Cell, BIOL 219, Fall 2007-2009)
Forensic Biology Laboratory, FIS 401, Spring 2009-2010

Guest Lectures

Forensic Entomology, ENTO 401, Fall 2008

ADVISING AND MENTORING

IUPUI

Graduate Students Mentored

Anne Andere, PhD, Fall 2014-present
Charity Owings, PhD, Fall 2014-present

Gina Dembinski, PhD, Fall 2013-present
John Whale, MS, Spring 2013-present
Kevin Smolar, MS, Fall 2012-2014
Anne Andere, MS, Fall 2012-2014
Lisa Beach, MS, 2010-2014
Gina Dembinski, MS, 2011-2013
Megan Carter, MS, 2010-2012

Graduate Student Committees

Elizabeth Osadczuk, MS, 2011-2013
Danika Tumbleson, MS, 2012-present
Dana Bors, PhD, 2013-present
William Kranz, PhD, 2013-present
Vishal Reddy, MS, 2013-present

Undergraduate Research

Whitney Walker 2012
Ashley Price 2012
Misty Day 2012
Olga Vitvitskaya 2012
Kelsie Faulds 2012
Jessica Espino 2012
Alyssa Badgley 2013
Whitney Reed 2013
Kelly Biro 2013
Dana Alhaffar (high school student) 2012-2014
Angela Salamone 2014
Carolina Alvrin 2014

SERVICE AND OUTREACH

Professional Service

Ad hoc Journal Reviewer
Journal of Insect Science · Journal of Forensic Science · Forensic Science
International · Forensic Science International: Genetics · Medical and Veterinary
Entomology · Journal of Medical Entomology

Ad hoc Grant Reviewer
National Institute of Justice

Other Service

Student competition judging: Entomological Society of America, North American
Forensic Entomology Association

Service to University/School/Department

Forensic Science Graduate Program Coordinator (2011-present)
School of Science Library Committee (2011-present)
Graduate Recruitment Committee (2012-present)
New Technology Committee (2012-present)
Faculty Search Committee – Chemistry (2011-12, 2012-13)

Faculty Search Committee, Chair – Biology (2013-14)
Wrongful Conviction Advisory Board, 2012-present

Public Lectures

1. Fishers Public Library, Fishers, IN
2. Harshman Middle School, Indianapolis, IN
3. DNA Day at the Indianapolis Children's Museum
4. Science on Tap!
5. Science Alumni Annual Luncheon