



# Jaye C. Gardiner, Ph.D.

Scientist Educator Science Communicator

Let's Connect!

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## Education

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<b>University of Wisconsin-Madison</b> <i>Madison, WI</i> Doctor of Philosophy in the Department of Oncology and the Institute for Molecular Virology Cancer Biology Graduate Program	Graduated: May 2017
<b>Macalester College</b> <i>Saint Paul, MN</i> Bachelor of Arts in Biology Minors: Chemistry, Japanese and Linguistics	Graduated: May 2011
<b>Northside College Preparatory High School</b> <i>Chicago, IL</i>	Graduated: June 2007

## Honors & Awards (Abbreviated)

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American Cancer Society Postdoctoral Fellowship	2019 - 2022
AAAS IF/THEN Ambassador	2019 - 2021
NIH T32 Cancer Biology Postdoctoral Training Grant, <i>Fox Chase Cancer Center</i>	2017- 2019
HHMI Hanna H. Gray Fellows Finalist	2018
Art Business Competition First Place, <i>JKX Comics, University of Wisconsin-Madison</i>	2018
Science Communication Prize, <i>Mindlin Foundation</i>	2018
Denice D. Denton Emerging Leaders Student Participant	2016
Ford Foundation Dissertation Fellowship, <i>Honorable Mention</i>	2016
UW-Madison Graduate Peer Mentor Award, <i>Honorable Mention</i>	2016
Best Poster Award, "Wisc-e-Sota" <i>UMN-UW Virology Training Grant Symposium</i>	2014
Dr. J. Abiodun Elegbede Cancer Research Award, <i>University of Wisconsin-Madison</i>	2014
HHMI Teaching Fellows Program	2013 - 2014
NSF Graduate Research Fellowship	2013 - 2016
Cream City Medical Society Legacy Scholarship	2012
Best Poster Award, Science and Medicine Graduate Research Scholars (SciMed GRS) Research Symposium, <i>University of Wisconsin-Madison</i>	2012
Biological Sciences Scholar Award, <i>University of Wisconsin-Madison</i>	2011
Advanced Opportunity Fellowship, <i>University of Wisconsin-Madison</i>	2011
Macalester College Grant, <i>Macalester College</i>	2007 - 2011
Catherine Lealtad Scholarship, <i>Macalester College</i>	2007 - 2011

## Research Experience

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<b>Fox Chase Cancer Center _ West Building</b> Philadelphia, PA <i>Postdoctoral Research Trainee in Edna Cukierman's Lab</i> Goal: Elucidate the signal transduction initiated by NetrinG1/NGL1 Ligand interaction in homotypic cancer-associated fibroblast cell-cell interactions	Aug 2017 - Present
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<b>University of Wisconsin – R.M. Bock Laboratories</b> Madison, WI <i>Graduate Research Assistant in Nathan Sherer's Lab</i> Goal: Determine how human immunodeficiency virus (HIV-1) promotes, maintains, and resolves tight cell-cell contacts for viral transmission	Dec 2011 – July 2017
<b>University of Minnesota – Masonic Cancer Center</b> Minneapolis, MN <i>Undergraduate Research Assistant in Lisa Peterson's Lab</i> Goal: Determination of O <sub>6</sub> -alkylguanine DNA alkyltransferase (AGT) variants ability to repair O <sub>6</sub> -[4oxo-4-(3-pyridyl)butyl]guanine (O <sub>6</sub> -pobG) adducts relative to O <sub>6</sub> -methylguanine (O <sub>6</sub> -meG) adducts	Jun 2009 – Aug 2010
<b>Macalester College</b> Saint Paul, MN <i>Research in Biochemistry Course – Professor Kathryn Splan</i> Goal: Determine amino acid residues that provide metal ion specificity in the GolS metal binding protein in <i>Salmonella</i>	Jan – May 2010
<b>Macalester College</b> Saint Paul, MN <i>Human Physiology Laboratory Course – Professor Lin Aanonsen</i> Goal: Determine neurochemical changes of L1 Cell Adhesion Molecule (L1CAM) in a chronic inflammatory mouse model	Jan – May 2010

## Publications & Presentations

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### Publications

- Gardiner, J.C.**, Raghavan, K., Alexander, J.I., Franco-Barraza, J., Cukierman, E. 2019. 'Fibroblastic Cell-Derived Extracellular Matrices: A Cell Culturing System to Model Key Aspects of the Tumor Microenvironment' in *Decellularized Extracellular Matrix: Characterization, Fabrication, and Applications*. Royal Society for Chemistry. Pages 305-327.
- Jarvis, C.M., Zwick, D.B., Grim, J.C., Murshid Alam, M., Prost, L.R., **Gardiner, J.C.**, Park, S., Zimdars, L.L., Sherer, N.M., Kiessling, L.L. 2019. Antigen structure affects cellular routing through DC-SIGN. PNAS. doi: 10.1073/pnas.1820165116
- Watters, K.E., Inankur, B., **Gardiner, J.C.**, Warrick, J., Sherer, N.M., Yin, J., Palmenberg, A.C. 2017. "Differential Disruption of Nucleoplasmic Trafficking by Rhinovirus 2A Proteases". doi: 10.1128/JVI.02472-16.
- Gardiner, J. C.**, Mauer, E. J., and Sherer, N. M. 2016. "HIV-1 Gag, Envelope, and Extracellular Determinants Cooperate to Regulate the Stability and Turnover of Virological Synapses" *J Virol* 90:14 6583-97. doi: 10.1128/JVI.00600-16.

### Selected Oral Presentations

- San Diego Convention Center – San Diego, CA* 9 Dec 2018  
*American Society for Cell Biology Conference*, "Art and science collide!: Engaging students with STEM-based comics"
- Pennsylvania Convention Center – Philadelphia, PA* 13 Jul 2018  
*National Science Teacher Association Conference*, "Art and science collide!: Engaging students with STEM-based comics"
- University of Wisconsin – Madison, Wisconsin* 24 Jun 2017  
*American Society for Virology Conference* "Non-Specific Interactions Between HIV-1 Gag and Envelope Proteins Regulate the Formation and Stability of Virological Synapses"
- University of Western Ontario – London, Ontario, Canada* 11 Jul 2015  
*American Society for Virology Conference* "Retroviral Infection Modulates Cell-Cell and Cell-Extracellular Matrix Interactions"
- Cold Spring Harbor Laboratories – Long Island, NY* 22 May 2015  
*Cold Spring Harbor Retroviruses Meeting* "Viral and Extracellular Determinants Regulate HIV-1 Virological Synapse Formation, Stabilization, and Turnover"
- University of Wisconsin – Madison, WI* 4 Dec 2014  
*Institute for Molecular Virology Seminar* "Pushing the Envelope: Multiple Roles for the Env Cytoplasmic Tail Domain in Regulating HIV-1 Cell-to-Cell Transmission"
- University of Colorado – Fort Collins, CO* 23 Jun 2014  
*American Society for Virology Conference* "Role of Env Cytoplasmic Tail Domain in HIV-1 Cell-to-Cell Transmission"

<i>University of Wisconsin – Madison, WI</i> <i>Laboratory of Optical Computation and Instrumentation Collaborator Seminar “HIV-1 Envelope Glycoprotein Signaling at the Virological Synapse”</i>	3 Apr 2014
<b><u>Selected Poster Presentations (primary presenter in boldface)</u></b>	
<i>Washington Convention Center – Washington D.C.</i> “Neuronal synaptic proteins regulate cancer-associated fibroblast pro-tumor features in pancreatic cancer”, American Society for Cell Biology Conference	7 & 9 Dec 2019
<i>San Diego Convention Center – San Diego, CA</i> “Art and science collide!: Engaging students with STEM-based comics”, American Society for Cell Biology Conference	9 Dec 2018
<i>San Diego Convention Center – San Diego, CA</i> “Meaningful Connections: CAF-mediated cell-cell interactions in pancreatic cancer”, American Society for Cell Biology Conference	8 & 10 Dec 2018
<i>Pennsylvania Convention Center – Philadelphia, PA</i> “Meaningful Connections: CAF-mediated cell-cell interactions in pancreatic cancer”, American Society for Cell Biology Conference	2 & 4 Dec 2017
<i>Cold Spring Harbor Laboratories – Long Island, NY</i> “Meaningful Connections: CAF-mediated cell-cell interactions in pancreatic cancer”, <i>Biology of Cancer: Microenvironment and Metastasis Meeting</i>	11 Oct 2017
<i>Harvard University – Cambridge, MA</i> “JKX Comics: Increasing scientific literacy, access, and exposure, through comics”, Communicating Science Conference (ComSciCon) Flagship Meeting	June 2017
<i>Moscone Center – San Francisco, CA</i> “Roles for HIV-1 Matrix, Rho Family GTPases, and Extracellular Viscosity in regulating Envelope-induced cell-cell fusion”, American Society for Cell Biology Conference	3 & 5 Dec 2016
<i>University of Wisconsin – Lacrosse, WI</i> “HIV-1 Env’s cytoplasmic tail domain regulates multiple aspects of viral cell-to-cell transmission at the virological synapse”, “Wisc-e-Sota” UMN-UW Virology Training Grant Symposium <b>BEST POSTER AWARD</b>	10 Oct 2014
<i>University of Wisconsin – Madison, WI</i> “Roles for the extracellular matrix in retroviral cell-to-cell spread”, SciMed GRS Research Symposium <b>BEST POSTER AWARD</b>	26 Apr 2012
<i>University of Minnesota – Minneapolis, MN</i> “Determination of O <sub>6</sub> -alkylguanine-DNA alkyltransferase variants ability to repair O <sub>6</sub> -[4-Oxo-4-(3-pyridyl)butyl]guanine adducts relative to O <sub>6</sub> -methylguanine adducts”, Life Sciences Summer Undergraduate Research Program (LSSURP) Research Symposium	14 Aug 2010
<i>University of Minnesota – Minneapolis, MN</i> “Determining difference in Alkylguanine-DNA alkyltransferase variants’ ability to repair the O <sub>6</sub> -alkylguanine adducts, O <sub>6</sub> -methylguanine and O <sub>6</sub> -pyridyloxobutylguanine”, North Star STEM Alliance Student Research Symposium	30 Mar 2010
<i>Macalester College – Saint Paul, MN</i> “Determining difference in Alkylguanine-DNA alkyltransferase variants’ ability to repair the O <sub>6</sub> -alkylguanine adducts, O <sub>6</sub> -methylguanine and O <sub>6</sub> -pyridyloxobutylguanine”, Macalester College Undergraduate Research Symposium	8 Oct 2009

## **Teaching & Mentoring Experience**

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<b>Teen Research Internship Program (TRIP) Initiative Instructor, Fox Chase Cancer Center</b>	Feb 2018 - Present
<ul style="list-style-type: none"> <li>Helped guide 50 stellar high school students from the Philadelphia area in designing and executing experiments to answer original questions of their own choosing, as well as learn how to analyze, interpret, and communicate their data.</li> <li>Developed and taught a science communication mini course within the program teaching students to create effective graphical representations of their independent research.</li> <li>Designed and produced symposium program booklets to highlight the each student in the program and display the graphical abstracts they produced.</li> </ul>	
<b>Life Science Communication (LSC) 640 Internship Mentor, University of Wisconsin-Madison</b>	Spring 2019
<b>Gaining STEAM!: Illuminating Science through Art Workshop Instructor, University of Wisconsin-Madison</b>	Oct 2018
<ul style="list-style-type: none"> <li>Facilitated programming to guide scientists at the University of Wisconsin-Madison to convert stories about their academic research into a comic storyboard.</li> </ul>	
<b>Science and Medicine Graduate Research Scholars (SciMed GRS) Peer Mentor, University of Wisconsin-Madison</b>	Aug 2012 – Dec 2016
<ul style="list-style-type: none"> <li>Mentored first year graduate students from underrepresented background to facilitate their acclimation to Madison and graduate student life.</li> </ul>	
<b>PEER Program Workshop Instructor, University of Tennessee-Knoxville</b>	12-13 Aug 2015
<ul style="list-style-type: none"> <li>Co-led a workshop for matriculating underrepresented graduate students at the University of Tennessee on effective methods of dissecting primary and popular press STEM articles. Workshop was based on course taught at UW-Madison.</li> </ul>	
<b>Undergraduate Research Mentor, University of Wisconsin-Madison</b>	Jan 2014 – Dec 2015 Jun 2012 – May 2013
<ul style="list-style-type: none"> <li>Elijah A. Gomez</li> <li>Eric J. Mauer</li> </ul>	
<b>Instructor of Record, University of Wisconsin-Madison</b>	Fall 2014
<ul style="list-style-type: none"> <li>Developed curricula for a new course teaching matriculating undergraduate students at the University of Wisconsin-Madison called “Secrets of Science: From the Lab to Popular Press”. The course targeted students with an interest in STEM to equip them with critical thinking, experimental design, and grant writing skill sets necessary for a career in STEM earlier in their educational careers.</li> <li>Independently taught, mentored, and managed the participating 17 students and 1 undergraduate peer mentor for the entire semester.</li> <li>Designed and graded all coursework and exams.</li> </ul>	
<b>Louis Stokes Alliance for Minority Students Participation (LSAMP) Program Student Mentor, Macalester College</b>	Sep 2010 – May 2011
<b>Lab Preceptor for General Chemistry I and General Chemistry II, Macalester College</b>	Sep 2008 – May 2011

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## Science Communication & Outreach Leadership Positions

<b>ComSciCon Leadership Team</b>	Nov 2019 - Present
<ul style="list-style-type: none"> <li>Work as part of a team to decide structure and execution of Communicating Science Conference (ComSciCon) organization.</li> <li>Lead social media strategist</li> </ul>	
<b>#UniqueScientists Team member</b>	July 2019 - Present
<ul style="list-style-type: none"> <li>Curate twitter account (@Also_AScientist) highlighting diverse scientists daily.</li> <li>Develop and construct trading cards for throwback Thursday (#UniqueTBT) events and for school use.</li> <li>Design media for social media (Instagram) use.</li> </ul>	
<b>ComSciCon 2020 Flagship Meeting Program Organizing Committee Vice-Chair</b>	Sept 2019 - Present
<ul style="list-style-type: none"> <li>Help lead the development of programming for the flagship ComSciCon meeting which targets graduate students and recent graduates from the US and Canada to explore careers and skills in science communication.</li> </ul>	

<b>JKX Comics, co-founder and contributor</b>	Nov 2015 – <i>Present</i>
<ul style="list-style-type: none"> <li>• Create educational comics on scientists and scientific topics to increase public science exposure, access, and literacy.</li> <li>• Manage a 4-7 person team and mentor them in the comic making process.</li> <li>• Identify funding sources and opportunities and develop application material.</li> <li>• Curate our social media (@jkxcomics) presence on Twitter.</li> </ul>	
<b>ComSciCon 2019 Flagship Meeting Program Organizing Committee</b>	Sep 2018 – July 2019
<ul style="list-style-type: none"> <li>• Help develop programming for the flagship <u>Communicating Science Conference</u> (ComSciCon) meeting which targets graduate students and recent graduates from the US and Canada to explore careers and skills in science communication.</li> <li>• Responsible for co-organizing and -moderating the “Creative Storytelling” panel and the science comedy workshop (led by Science Riot).</li> </ul>	
<b>Gaining STEAM!: Illuminating Science through Art Program Organizer</b>	Apr 2018 –May 2019
<ul style="list-style-type: none"> <li>• Organized workshops for JKX Comics Gaining STEAM! Project.</li> <li>• Developed material for the second workshop focused on using images in science and translating scientific stories about academic research into a comic storyboard.</li> </ul>	
<b>ComSciCon 2018 Flagship Meeting Program Organizing Committee</b>	Sep 2017 – Jun 2018
<ul style="list-style-type: none"> <li>• Responsible for co-organizing the “Creative Storytelling” panel and Write-a-thon workshop (an opportunity for participants to receive peer and expert feedback on science communication pieces).</li> </ul>	
<b>ComSciCon 2017 Flagship Meeting Participant (50/1071 spots available)</b>	Jun 2017
<b>SciMed GRS Peer Mentoring Committee</b>	Aug 2014 – Dec 2016
<ul style="list-style-type: none"> <li>• Helped develop programming for SciMed GRS for the academic year to ensure the needs of participating first year underrepresented graduate students were met.</li> <li>• Selected future committee members and mentors.</li> </ul>	
<b>Morgridge Institute for Research Outreach Experience Volunteer</b>	Jan 2012 – Jul 2014
<b>Wisconsin Institute for Discovery – Town Center Saturday Science Assistant</b>	Jan 2012 – Jul 2014
<b>Macalester Biology Club, co-founder and co-chair</b>	Sep 2009 – May 2011
<b>Orientation Leader for incoming undergraduates</b>	Aug 2009