

Jennifer Weller
Bioinformatics & Genomics
College of Computing and Informatics
University of North Carolina at Charlotte
9201 University City Blvd
Charlotte, NC, 28223
JenniferWeller@uncc.edu

Education

Bachelor of Science Chemistry, University of Montana, Missoula, MT,	1979
Master of Science Biochemistry and Molecular Genetics, Oregon State University, Corvallis, OR,	1986
Doctor of Philosophy Biochemistry, University of Montana, Missoula, MT,	1990

Experience

Associate Professor in the Department of Bioinformatics and Genomics, University of North Carolina at Charlotte, Charlotte, NC	01/2007 - present
Scientific Advisor and Director of Bioinformatics for the Epidemic Outbreak Surveillance project funded by the USAF/SGX., George Mason University, Manassas, VA	01/2002 - 01/2003
Associate Professor in the Bioinformatics Department, School of Computational Science, George Mason University, Prince William campus, Manassas, VA	01/2002 - 01/2007
Research Assistant Professor, Virginia Bioinformatics Institute at Virginia Tech (VPISU), Blacksburg, VA	01/2001 - 01/2002
Senior Research Scientist, NCGR, the National Center for Genome Resources, Santa Fe, NM	01/1999 - 01/2000
Senior Research Scientist, PerkinElmer GenScope, a Center of Excellence of PE Biosystems, ,	01/1997 - 01/1999
Research Scientist, Perkin-Elmer/Applied Biosystems, ,	01/1994 - 01/1997
Postdoctoral Training, DOE-Plant Research Laboratories and the Carnegie Institute for Plant Biology at Stanford., ,	01/1990 - 01/1993

Honors and Awards

NCGR Sustained Achievement Award ()	01/2000
--------------------------------------	---------

PE SPOT Award for technical contributions in high-throughput expression profiling and user testing on associated analysis software ()	01/1998
Touchstone Award for the Northern California Technical Communication Competition ()	01/1997
Bertha Morton Scholar for a woman achieving high academic excellence in graduate school ()	01/1988
ACS Divisional Award for outstanding student presentation at a meeting on my dissertation research ()	01/1988
Fuson Award for outstanding progress on a PhD dissertation ()	01/1988
Bertha Morton Scholar for a woman achieving high academic excellence in graduate school ()	01/1987
ASM Presidents Fellowship ()	01/1981
MBL Physiology Training Grant ()	01/1979
Watkins-Morton Scholar for a woman achieving high academic excellence. ()	01/1978
Hetler Memorial Award for high achievement in Chemistry ()	01/1978
UM Honors Scholarship for high academic achievement. ()	01/1977
UM Regents Scholarship ()	01/1976

Professional Memberships

Member American Society for Microbiology,	present
Member International Society of Computational Biologists,	present

Courses Taught

Grants

Completed Grants

A10-0186-001
Accelerated Technology Labs Inc
Beta-test of GPU enabled bioinformatics algorithms
\$8,518.00

A16-0099-001
NSF Biological Science (BIO)
IPA- Program Manager for the Advances in Biological Informatics Program in the BIO Division of the National Science Foundation.
\$165,395.00

A16-0099-002
NSF Biological Science (BIO)
IPA- Program Manager for the Advances in Biological Informatics Program in the BIO Division of the National Science Foundation.
\$165,395.00

A16-0099-003
NSF Biological Science (BIO)
IPA- Program Manager for the Advances in Biological Informatics Program in the BIO Division of the National Science Foundation.
\$170,669.00

A16-0099-004
NSF Biological Science (BIO)
IPA- Program Manager for the Advances in Biological Informatics Program in the BIO Division of the National Science Foundation.
\$167,332.00

Contributions

Presentation

Kevin Thompson and Weller, Jennifer. 2010. Biologically applied filter level interpretation of lung cancer data reveals markers for onset and progression. ISMB. July 01

Kevin J Thompson, Weller, Jennifer, Zahra Bahrani-Mostafavi, Taghi Mostafavi, and David L Tait. 2010. Expression Profiling of Combined Microarray Datasets. American Association for Cancer Research (AACR). April 01

D Andrew Carr, Weller, Jennifer, Saeed Khoshnevis, and Donald Kolva. 2011. Flanking sequence effects on oligonucleotide hybridization. ISMB. July 01

Other

Weller, Jennifer. "Various ." (January 01, 2014).

Committee

Department Committees

Other. Biosafety Committee/BSL3 supervisor duties 2014 - 2016

Member. Undergraduate Curriculum Committee 2013 - 2015

Co-Chair. Seminar 2013 - 2014

Member. Peer Teaching Evaluations 2013 - 2016

Member. RPT 2012 - 2015

Chair. Laboratory Infrastructure 2010 - 2015

Co-Chair. PhD advising 2007 - 2016

College Committees

Other. FAPSC 2014 - 2016

Member. Review of Chairs 2014 - 2015

University Committees

Member. Dissertation Committee - grad school rep 2019 - 2019

Member. Faculty Research Grants 2014 - 2016

Member. University Hearings 2014 - 2016

Other Committees

Vice Chair. Functional Genomics Data Society 2014 - 2015

Member. The American Chestnut Foundation 2014 - 2017

Member. NSF grant review panels 2014 - 2015

Services

Department Services

1. Interdisciplinary Nanoscience Program faculty. I became faculty in the interdisciplinary Nanosciences Program and am currently the research advisor for one of the programs PhD students; he is looking at the accessibility of aptamers to protein binding, both for sequencing and other assays, on the Ion Torrent chip series. This project was started in collaboration with scientists at Wake Forest University with

2. BiAS Faculty Advisor. I am the faculty advisor for our graduate student organization, BiAS. One of the activities they are organizing with my help is a series of hackathons using data from department projects and taking a group look at designing an appropriate analysis pipeline, carrying out the implementation of that pipeline with documentation and testing, and then carrying out the data analysis. I am working to bring a former department colleague from GMU who now works at Illumina in as a speaker. Overall, a combination of social and professional training and networking activities are being planned., 2014 - 2016

3. Committee Chair. chair this committee, which is gathering contact information for bioinformaticians in the SE, with a goal of writing for funding to have a meeting at UNCC in spring of 2012., 2012 - 2012

4. Laboratory Infrastructure and Personnel management. The original Ion Torrent DNA sequencer was purchased using a Dean's grant by the College to our department, in 2011. It comes under the heading of 'teaching and training' as the money was from Education and Training funds for setting up a Genomic Biotechnology Laboratory. As such there is no 'PI' but I fulfilled the role as I was responsible for writing the proposal, placing and receiving the orders and setting up the laboratory. Publications include deposition of the datasets in the SRA and the lab protocols I have developed and revised each year for class use (both undergraduate and graduate courses) along with lecture material that is posted - all of this is made available on my Webpages but has not been packaged into a publication for a journal (I don't know how one would do that, it is a better candidate for a text book). As part of overseeing department laboratory infrastructure and serving as daily supervisor for both of the department's Research Specialists (informally in one case, Dr. Fodor asked me to take over that role with Timm Hamp in Spring of 2014 because he had become increasingly less involved in wet lab work), I ensured that complete documentation of the duties and records (communication with instrument vendors and maintenance people, for example) for Timm Hamp, who formerly held the position, was obtained. With Dr. Cathy Moore who was promoted to that position I have instituted a set of policies and procedures to maintain equipment lists, service contract information as well as reports of problems, equipment chemical, materials and training inventories for the labs and lab classes using Quartzly. This is a work in progress but will eventually allow better assessment of departmental resources. This is particularly important as several labs (Fodor and Gibas) asked that we mothball their labs and at the same time the department is engaged in hiring new faculty, some of whom have an interest in wet-lab space for carrying out research. By providing them with well-maintained if used equipment from the mothballed labs the start-up funds required for them to be effective will be less, and in fact they will be able to start research activities much more quickly. The Illumina MiSeq platform and the Sequencing Lab Suite has generated quite a bit of interest in the Fodor, Brouwer, Steck and Wikstrom labs. I have been requested to produce protocols for the specific sample types and experiment needs, timelines and budget approximations. I believe that part of the reason for the interest is the training we have been providing for the Ion Torrent is perceived as effective; we are trusted to take the same care enabling users of this facility to produce data in a cost-effective way. We always emphasize that the computational steps are as important and require as much expertise as the data-generation steps and that there are consultants as well as collaborators in the department. , 2010 - 2016

5. Committee Co-Chair. 2010-2011 - I coordinate biosafety, inventory, maintenance and training with the two department technicians. I was responsible for having large properly equipment moved and re-certified when we moved from Cameron to the new Bioinformatics building in August 2009., 2010 - 2010

6. Committee Member. 2010-2011, 2010 - 2010

7. Committee Chair. chair 2009, member 2010 when the proposal was forwarded to the college., 2009 - 2009

8. Committee Member. , 2009 - 2009

9. Other Institutional Service Activities. 2008-2011 (I advise approximately half the students, Dr. Livesay advises the other half)., 2008 - 2008

10. Committee Member. 2008-2011. I was asked by the Chair to repeat my appointment because I actually gathered responses about questions of interest from my college, and helped to define student projects., 2008 - 2008

11. Other Institutional Service Activities. 2007-2009, 2007 - 2007

12. Other Institutional Service Activities. 2007-2008, 2007 - 2007

13. Committee Member. (various positions) 2007-2009, 2007 - 2007

14. Other Institutional Service Activities. 2007-2008, 2007 - 2007

15. Committee Member. 2007-2009. I was specifically asked to serve a second 2-year term by Ms. Dixie Airey because she values the attention and detailed comments I provide in reviews. I work with the departmental lab technicians and lab faculty to make sure that we are in compliance with safety and reporting standards., 2007 - 2007

College Services

1. CEI faculty interest group. I consistently serve on a range of committees for the college. In addition to Undergraduate curriculum and Awards activities, I am a member of the Center for Education Innovation group led by Dr. Maher of SIS, and have participated in several of the activities and discussions, although in the last semester the time overlapped with our departmental seminar and I was not as involved as I would like to have been., 2014 - 2015

2. Committee Member. 2010-2011, 2010 - 2010

3. Other Institutional Service Activities. 2009-2011, 2009 - 2009

4. Other Institutional Service Activities. , 2009 - 2009

5. Committee Member. 2008-2009, 2008 - 2008

6. Other Institutional Service Activities. 2008-2011, 2008 - 2008

7. Committee Member. 2008-2011, 2008 - 2008

University Services

1. University Service. In addition to the standing committees on which I have served, I also contribute to less rigorously organized activities. I have served as judge for both undergraduate research fair (2014) and graduate research fair (2014 and 2015). In Nov 2013 I was on the Open Access Panel as moderator of the panel discussion, as I had served for many years as my college's FALC representative and they knew of my interest in the issue. I continue to be asked to serve as an ADVANCE program mentor to recently recruited faculty. This year my mentee is Dr. Lixia Yao of the SIS department. I have served as a judge for both the Undergraduate and Graduate university-wide research competitions., 2013 - 2015

2. Advisor. 2010-2011, 2010 - 2010

3. Committee Member. 2008 - 2009, 2008 - 2008

Professional Services

1. Reviewer for the NIH. Reviewer for the Genomic Resources proposals, 2019 - 2019

2. Program Officer. Served as a program officer at the NSF in the Division of Biological Infrastructure., 2019 - 2019

3. Professional activities. As a research professional I serve on a number of review panels for federal agencies including the DOE and the NSF, as an ad-hoc reviewer for journals when my expertise is required (mostly PLoS and BMC as my commitment to Open Access publishing mandates), on the Board of societies whose interests align with my own, including the Functional Genomics Data Society and The American Chestnut Foundation. I am also contacted fairly often by former graduate students and post-docs for career advice as well as by companies asking whether we have graduates with particular skills that I can recommend. I am adjunct graduate faculty at both George Mason University and at Wake Forest University, as part of which I am serving on PhD dissertation research committees in the Biology departments. I am a member of a planning committee for an iGEM project with scientists at the Pacific Northwest National Labs (Dr.s Overall, Taylor, Hess). The PNNL would like to host some of our students (at all levels, undergraduate to PhD) for summer internships. I was requested by our Intellectual Property group to work with a group of students at NCSU who had picked up a project for which a patent was granted to UNC Charlotte and InSitu Tech several years ago, for which I was the University inventor. I have been working with these students, meeting with them and providing them working materials and answers to questions. Their advisor at NCSU is Dr. Paul Hamilton., 2014 - 2015

4. Community Outreach and Service. For the local community to feel that the University is an integral part of the community, whose resources are accessible to them, there must be a person they can relate to, one they know how to approach. Our role is properly one of education, but that incorporates modeling ones values through actively engaging on issues that concern us. I have chosen several venues through which to act. Every year I participate in the April Science Festival activities, volunteering for both individual outreach, with lectures and lab activities at either a middle or high school, and UNCC-affiliated activities organized by Jim Hathaway. I teach the B3 Summer Science Camp at Olympic High School for 12 days in June, to 22 juniors and seniors. We recently expanded those experiences to include monthly Science Saturday experiences, bringing in several colleagues at UNC Charlotte, including Adam Reitzel, Baohua Song and Mindy Shi. I also bring graduate students to Career Fair presentations, as the high school students are more likely to ask them about personal choices and family backgrounds that led to taking that educational path. My interaction with the local American Chestnut Foundation chapter has led to being available for a number of interactions with local orchard owners. We have collected material for genetic testing and are providing some tested protocols that yield high-quality DNA for genotyping. My work with Olympic High School students in carrying out research on genetic markers in Chestnut integrated these outreach activities and was featured in both the Charlotte Observer and the Chestnut Foundation quarterly Magazine (Fall 2014). I am also a consultant with a small North Carolina business, Accelerated Technology Laboratories, to translate the biosafety processes for BSL2 and BSL3 labs into interpretable workflows as well as next-generation sequencing wet-lab and computational processing workflows for their system. They contribute a copy of the software and developer time, and have paid several of our PhD and PSM students to test the resulting modules., 2014 - 2015

5. Other Community Service Activities. Biotechnology High School Program development. NC Biotech grant (\$30,000) to Olympic High School for Biotechnology materials to support a semester-long lab class and summer camp. I co-wrote the proposal with the teacher, providing most of the planning for labs, equipment and materials. The biotechnology teacher, Ms. Jeanne Smith, and I will be co-directing the summer camp in 2011 and 2012. This was mentioned by Peter Gorman on NPR as an innovative project taking place in the CMS school district., 2011 - 2011

6. Other Community Service Activities. Summer 2011 I taught a 3-week summer science camp for 18 high school students at Olympic High School, for which I helped obtain funding. I have set up a Web site off of my faculty page for the camp so that the teachers, parents and students can follow our activities

7. Other Community Service Activities. Summer 2010 I provided two weeks of research experience in my lab to three high school students and their Biotechnology course teacher (MS. Jeanne Smith) and set up a Web site so that their friends and family could follow their activities., 2010 - 2010

8. Other Community Service Activities. Experimental research experience for Rowan County high school student (5 days, one-day notice) -2010. He did write a nice thank-you letter but confessed somewhere in the middle that he wants to be a model. I don't think we changed his mind., 2010 - 2010

9. Other Community Service Activities. Training session for local AP Biology teachers, April 14th, 2009. Several Bioinformatics lesson plans appropriate to high school teachers were provided; various ways to facilitate research experiences for teachers and students were suggested., 2009 - 2009

10. Other Community Service Activities. 2009-2011: Scientific Advisory Board member for Olympic High School Biotechnology, Health and Public Administration concentration., 2009 - 2009

11. Other Community Service Activities. Lectured and provided real lab experience in "Dreamcatchers", a three-evening mini-course in science (molecular genetics of corn, with hands-on sample prep and PCR) in June 2000, for Native American middle-school age children, an enrichment program sponsored by the AISES and Sandia National Labs., 2000 - 2000