



## BIOGRAPHICAL SKETCH: TRACY K. TEAL

### A. PROFESSIONAL PREPARATION

University of California, Los Angeles	Cybernetics	B.S.	1997
California Institute of Technology	Computation & Neural Systems	Ph.D.	2007
National Science Foundation	Postdoctoral Fellow (MSU)	Postdoc	2008-2010
Michigan State University	Microbiology & Molecular Genetics	Postdoc	2010-2012

### B. APPOINTMENTS

January 2013-Present Assistant Professor, Microbiology and Molecular Genetics, MSU

### C. PRODUCTS

#### PRODUCTS MOST CLOSELY RELATED TO THE PROJECT

1. Teal TK, Schmidt TM. Identifying and removing artificial replicates from 454 pyrosequencing data. *Cold Spring Harbor Protocols* Apr. 2010. (2010)
2. Gomez-Alvarez V\*, Teal TK\*, Schmidt TM. Systematic artifacts in metagenomes from complex microbial communities. *The ISME Journal*. 3(11): 1314-17 (2009)
3. Müller HM, Rangarajan A, Teal TK, Sternberg PW. Textpresso for neuroscience: searching the full text of thousands of neuroscience research papers. *Neuroinformatics*. 6(3): 195-204 (2008)
4. Dietrich LEP, Teal TK, Price-Whelan A, Newman DK. Redox-active antibiotics control gene expression and community behavior in divergent bacteria. *Science*. Vol 321. no. 5893, pp. 1203 – 1206 (2008)
5. Teal TK, Lies DP, Wold BJ, Newman DK. Spatiometabolic stratification in *Shewanella oneidensis* biofilms. *Applied and Environmental Microbiology*. 72(11):7324-30 (2006)

#### OTHER SIGNIFICANT PRODUCTS

1. Werling BP, Dickson TL, Isaacs RI, Gaines H, Gratton C, Gross KL, Liere H, Malmstrom CM, Meehan TD, Ruan L, Robertson BA, Robertson GP, Schmidt TM, Schrotenboer AC, Teal TK, Tuell J, Landis DA. Perennial grasslands increase multiple ecosystem services in bioenergy landscapes. *Proceedings of the National Academy of Science*. doi:10.1073/pnas.1309492111 (2014)
2. Levine UY, Teal TK, Robertson GP, Schmidt TM. Agriculture's impact on microbial diversity and associated fluxes of methane and carbon dioxide. *ISME J*. 2011 Oct;5(10):1683-91 (2011)
3. Gorlenko V, Tsapin A, Zorigto N, Teal TK, Tourova T, Engler D, Mielke R, Nealson, K. *Anaerobranca californiensis* sp. nov., an anaerobic, alkalithermophilic, fermentative bacterium isolated from a hot spring on Mono Lake. *International Journal of Systematic and Evolutionary Microbiology*. Vol 54 pp. 739-743 (2004)
4. Teal TK and Taylor CE., Effects of compression on language evolution, *Artificial Life* Vol 6 no 2 (pp. 129-143). MIT Press. (2000)
5. Teal T, Albro D, Stabler E and Taylor CE., Compression and adaptation, In *Fifth European Conference on Artificial Life* (pp. 709-19). Springer-Verlag. (1999)

#### **D. SYNERGISTIC ACTIVITIES**

Lead instructor, Software Carpentry (teaching computational skills to biologists), including a Women in Science and Engineering Workshop for 100 women. 2012 - present

Coordinate and teach in bioinformatics workshops on genome assembly, RNASeq, amplicon analysis, metagenomic analysis and multivariate statistics. 2011 - present

Developed and contributed to several bioinformatics programs, including Replicate Filter (quality filtering of 454 data), Texpresso (an information extracting and processing package for biological literature) and OligoSelect (a tool to create oligos from sets of genes)

Contributed to Ribosomal Database FunGene repository

TA Marine Biological Laboratory Microbial Diversity course, summer 2007

#### **E. COLLABORATORS AND OTHER AFFILIATIONS**

##### **COLLABORATORS AND CO-EDITORS**

Caroline Baker (MSU), Timothy L. Dickson (UW-Madison), Rufus I. Isaacs (MSU), Hannah Gaines (UW-Madison), Vicente Gomez-Alvarez (EPA), Claudio Gratton (UW-Madison), Kay K. Gross (MSU), Doug Landis (MSU), Heidi Liere (UW-Madison), Caroline M. Malmstrom (MSU), Timothy D. Meehan (UW-Madison), Leilei Ruan, Bruce A. Robertson (MSU), G. Philip Robertson (MSU), Thomas M. Schmidt (MSU), Abbie C. Schrotenboer (MSU), Ben P. Werling (MSU), Julianna Wilson (MSU)

##### **GRADUATE ADVISORS AND POSTDOCTORAL SPONSORS**

**Graduate:** Barbara J. Wold & Dianne K. Newman (Caltech)

**Postdoctoral:** Thomas M. Schmidt (Michigan State University)

##### **THESIS ADVISOR AND POSTGRADUATE SPONSOR (Total of 1)**

Benjamin Johnson (MSU student, current).