

Biographical Sketch

Rachel Todd Noble

Mary and Watts Hill Jr. Distinguished Professor
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A. PROFESSIONAL PREPARATION

<u>College/University</u>	<u>Major</u>	<u>Degree & Year</u>
Carnegie Mellon University	Biological Sciences	B. Sc., 1991
University of Southern California	Biological Sciences	Ph. D., 1998
SCCWRP	Microbiology	1998-2001

B. ACADEMIC/PROFESSIONAL APPOINTMENTS

***Mary and Watts Hill Jr. Distinguished Professor* July 1, 2015-present**

University of North Carolina at Chapel Hill, Institute of Marine Sciences: Joint appointment between the Institute of Marine Sciences and the Institute for the Environment
***Associate and Full Professor* July 1, 2007-June 30, 2015**

University of North Carolina at Chapel Hill, Institute of Marine Sciences: Joint appointment between the Institute of Marine Sciences and the Institute for the Environment
***Assistant Professor* July 1, 2001-June 30, 2007**

University of North Carolina at Chapel Hill, Institute of Marine Sciences: Joint appointment between Institute of Marine Sciences and Carolina Environmental Program

C. PRODUCTS (recent)

- 1) Williams, H. N. Lyemperolopoulou, D. S., Athar, R., Chauhan, A., Dickerson, T., Chen, H., Laws, E., Berhane, T., Flowers, A., Bradley, N., Young, S., Blackwood, A. D., Murray, J., Mustapha, O., Blackwell, C., Tung, Y., and R. T. Noble. 2015. Halobacteriovorax, an underestimated predator on bacteria: potential impact relative to viruses on bacterial mortality. *International Society for Microbial Ecology*. <http://dx.doi.org/10.1038/ismej.2015.129>.
- 2) *Ghazaleh, M. N. *Froelich, B. A. and **R. T. Noble**. 2014. The effect of storage time on *Vibrio* spp. and fecal indicator bacteria in an Isco autosampler. *J. Microbiol. Methods*. 104:109-16. doi: 10.1016/j.mimet.2014.06.021. Epub 2014 Jul 6.
- 3) *Froelich, B. A. and **R. T. Noble**. 2014. Factors affecting the uptake and retention of *Vibrio vulnificus* bacteria in oysters. *Applied and Environmental Microbiology*. 80(24):7454-9. doi: 10.1128/AEM.02042-14. Epub 2014 Sep 26.
- 4) Gulbransen, D., *Gonzalez, R., *Froelich, B., Oliver, J., **Noble, R.**, and K. McGlathery. 2014. Association of *Gracilaria vermiculophylla*, a non-native, mat forming macroalga, with increased concentrations of *Vibrio* bacteria in sediment, water, and oysters on intertidal mudflats. *Marine Ecology Progress Series*. 505: 29–36, 2014. doi: 10.3354/meps10771.
- 5) Wetz, J. A., *Williams, Z. A., Blackwood, A. D., and R. T. Noble. 2013. Quantification

of *Vibrio vulnificus* in an estuarine environment: a multi-year analysis using qPCR. *Estuaries and Coasts*. DOI 10.1007/s12237-013-9682-4.

ii) other significant recent products

- 1) *Gonzalez, R. A. and **R. T. Noble**. 2014. Comparisons of statistical models to predict fecal indicator bacteria concentrations enumerated by qPCR- and culture-based methods. *Water Research*. 48:296-305
- 2) Wetz, J. J., A. D. Blackwood, J. S. Fries, Z. F. Williams, and R. T. Noble. 2008. Trends in total *Vibrio* spp. and *Vibrio vulnificus* concentrations in the eutrophic Neuse River Estuary, North Carolina, during storm events. *Aquatic Mic. Ecol.* 53:141-149.
- 3) Noble, R. T., Blackwood, A. D., Griffith, J. F., McGee, C. D., Weisberg, S. B. 2010. Comparison of rapid qPCR-based and conventional culture-based methods for enumeration of *Enterococcus* sp. and *Escherichia coli* in recreational waters. *Appl. Environ. Microbiol.* 2010:651-660
- 4) Danovaro, R., Dell'Anno, A., Corinaldesi, C., Magagnini, M., Noble, R., Tamburini, C., and M. Weinbauer. Major viral impact on the function of global deep-sea ecosystems. *Nature*, August 28, 2008: vol. 454, no. 7208, pp. 1029-1150
- 5) Converse, R. R., Piehler, M. F., and R. T. Noble. 2011. Contrasts in concentrations and loads of conventional and alternative indicators of fecal contamination in coastal stormwater. *Water Res.* 5(16): 5229-5240.

D. SYNERGISTIC ACTIVITIES

Director, UNC Chapel Hill Institute for the Environment Morehead City Field Site (2003-Present), intense marine science experiential learning program for Carolina undergraduates
Chair, Standard Methods for Enterococcus (SM 9230) and Rapid Detection (SM 9211)
ASTM, Section D19 Voting Representative in Regulatory Affairs for Water
Founder, Molecular Training Facility for Professionals and Students

E. COLLABORATORS AND OTHER AFFILIATIONS

Collaborators over the last 48 months:

V. Harwood (USF), N. White (UNC CSI), J. Griffith (SCCWRP), J. Bowen (UNC Charlotte), J. Oliver (UNC Charlotte), H. Williams (FAMU), J. Grimes (DIML), C. Hagedorn (VT), J. Kinzelman (City of Racine), R. Bushon (USGS), S. Dorevitch (UIC), O. Shanks (USEPA), C. Sinigalliano (NOAA), K. Goodwin (NOAA), A. Boehm (Stanford), J. Santo Domingo (USEPA), Y. Cao (SCCWRP), B. Layton (SCCWRP)

Graduate and Postdoctoral Advisors

Jed Fuhrman (Graduate advisor, USC); Stephen Weisberg (Postdoc advisor, SCCWRP)

Mentoring of Graduate Students and Postgraduate Scholars over the last 5 years:

L-A. Krometis (Ph.D.), B. Peierls (Ph.D.), R. Converse (Advisor, Ph.D.), E. Susick (Advisor, M. Sc.), R. Schwartz (Ph. D.), C. Stumpf (Advisor, Ph.D.), J. Shields (Ph.D.), T. Otten (Ph.D.), D. Lofton (Ph. D.), S. Mesquita (University of Algarve, PT, Co-Advisor, Ph. D.), A. Pflaumer (Committee Member, M. Sc.), T. O'Meara (Committee Member, Ph. D.), Y. Yuen (Committee Member, Ph. D.), K. Lauer (M. Sc., Advisor), C. Yung (Committee Member, Ph. D.), R. Gonzalez (Advisor, Ph. D.), Kelsey Jesser, Advisor, Ph. D.), Britney Phippen (Ph. D. UNC Charlotte), Emily Bailey (Committee member, Ph. D., Simone Raszl (Advisor, Ph. D.)