

**Rachel Todd Noble**

Mary and Watts Hill Jr. Distinguished Professor  
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**(a) Professional Preparation**

Carnegie Mellon University, Pittsburgh      Biological Sciences    B. Sc. 1991  
University of So. California, Los Angeles      Biological Sciences    Ph. D.1998

**(b) Academic/Professional Appointments**

**2015- Present**

***Mary and Watts Hill Jr. Distinguished Professor***

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

**2012-2015**

***Full Professor***

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

**(c) Products (five recent relevant literature products, out of 100 total)**

Jesser, K. J., W. Valdiva-Granda, J. Jones, R.T. Noble. Clustering of *Vibrio* parahaemolyticus isolates using MLST and whole-genome phylogenetics and protein motif fingerprinting. *Frontiers in Public Health*.  
<https://doi.org/10.3389/fpubh.2019.00066>.

Froelich, B. A., Gonzalez, R., Blackwood, D., Lauer, K. and R. T. Noble decadal monitoring reveals an increase in *Vibrio* spp. concentrations in the Neuse River Estuary, NC, USA. *PLoS One*. <https://doi.org/10.1371/journal.pone.0215254>

Jesser, K. J. and **R. T. Noble**. 2018. Characterizing the ecology of *Vibrio* in the Neuse River Estuary, NC using heat shock protein 60 (*hsp60*) next-generation amplicon sequencing. *Appl. Environ. Microbiol.* 00333-18; DOI: 10.1128/AEM.00333-18

Steele, J., Blackwood, A. D., Griffith, J. F., **Noble, R. T.** and K. C. Schiff. 2018. Quantification of pathogens and markers of fecal contamination during storm events along popular surfing beaches in San Diego, California. *Water Research* 136:137-149.

Williams, T. Froelich, B. Phippen\*, B. Fowler, P., **Noble, R. T.** and J. D. Oliver. 2017. Different abundance and correlation patterns exist between total and presumed pathogenic *V. vulnificus* and *V. parahaemolyticus* in shellfish and waters along the North Carolina coast. *FEMS Microbiol Ecol.* 2017 Jun 1;93(6). doi: 10.1093/femsec/fix071.

**(c) Products (five additional literature products, out of 100 total)**

Froelich, B.A., B. Phippen\*, P. Fowler, **R.T. Noble**, and J.D. Oliver. 2016. Differences in total *Vibrio* spp. *V. vulnificus*, and *V. parahaemolyticus* abundance between clams and oysters in North Carolina. *Applied and Environmental Microbiology*. doi: 10.1128/AEM.02265-16

Raszl, S. M.\*, B. A. Froelich, C. R. W. Vieira, A. D. Blackwood and **R. T. Noble**. 2016. *Vibrio vulnificus* and *Vibrio parahaemolyticus* in South America: Water, Seafood, and Human Infections. *Journal of Applied Microbiology* ISSN 1364-5072. doi:10.1111/jam.13246

Froelich B.A.\*, and **R. T. Noble**. 2016. *Vibrio* bacteria in raw oysters: managing risks to human health. *Phil. Trans. R. Soc. B*. 371. 20150209. <http://dx.doi.org/10.1098/rstb.2015.0209>

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

Harwood, V. J., Boehm, A. B., Sassoubre, L. M., Kannappan, V., Stewart, J. R., Fong, T.-T., Caprais, M.-P., Converse, R. R., Diston, D., Ebdon, J., Fuhrman, J. A., Gourmelon, M., Gentry-Shields, J., Griffith, J. F., Kashian, D., **Noble, R. T.**, Taylor, H., and M. Wicki. 2013. Performance of Viruses and Bacteriophages for Fecal Source Determination in a Multi-Laboratory, Comparative Study. *Water Research*. DOI: 10.1016/j.watres.2013.04.064.

#### **(d) Synergistic and Collaborative Activities**

Recipient of US Patent **US Patent:** Methods and compositions for the detection and quantification of *E. coli* and *Enterococcus*. US2008/0233572. April 2012.

Director, UNC Chapel Hill Institute for the Environment Morehead City Field Site (2003-present), intense marine science experiential learning program for undergraduates that highlights computer, laboratory, and field-based learning as well as commercialization and technology transfer

Steering Committee, Water Microbiology Conference, Water Institute, 2014-present

ASTM, Section D19 Voting Representative in Regulatory Affairs for Water

Founder, UNC Chapel Hill Molecular Training Facility for Professionals and Students (2012-Present), a training facility for molecular techniques for water and seafood