Qing Yan

Phone: (732)325-4956 Email: qingyan15@yahoo.com

WORK AUTHORIZATION

Permanent Resident

EDUCATION

**M.S. Department of Statistics and Biostatistics**, **Rutgers University,** May 2015

Thesis: *Sales of Orthopedic Equipment*

GPA:3.95/4

**Ph.D. Department of Plant Biology,** **Rutgers University,** October 2013

Dissertation: *Intracellular Trafficking of Ricin A Chain in Relation to Its Cytotoxicity and*

*Depurination Activity in Saccharomyces Cerevisiae*

GPA:3.7/4

**B.E. Department of Biotechnology, China Agricultural University,** June 2006

EXPERIENCE

**2013-2015 Graduate Student,** Department of Statistics and Biostatistics, Rutgers University, New Brunswick, NJ

* Course work in Statistical Inference, Applied Multivariate Analysis, Interpretation of Data I & II, Regression Analysis, Theory of Probability, Design of Experiment, Data Mining, Categorical Data Analysis, Biostatistics I

**2007-2013 Graduate Assistant,** Department of Plant Biology, Rutgers University, New Brunswick, NJ.

* Led and conducted two different molecular biological projects, analyzed quantitative research data and converted data into meaningful conclusions, presented research ideas and results in significant conferences in the field, first author in two research papers and a review paper.

**2006-2007 Graduate Fellow,** Department of Plant Biology, Rutgers University, New Brunswick, NJ.

* Rotation in Department of Plant Biology, conducted experiments and authored in one research paper

AWARDS

2012 Poster Award from 2012 Symposium: Microbiology at Rutgers University

2011 Plant Biology Travel Award from the C. Reed Funk Student Award Fund

2006 Cook Excellence Fellowship by Rutgers University

CERTIFICATIONS

**SAS Certified Base Programmer for SAS 9,** May 2015

SAS Global Certification, Certificate Serial Number: BP049380v9

**SAS Certified Advanced Programmer for SAS 9**, June 2015

SAS Global Certification, Certificate Serial Number: AP014313v9

QUALIFICATIONS

**Software skills:** SAS, R, Microsoft Word, Excel, PowerPoint

**Statistical techniques:** descriptive statistics, regression analysis (linear, logistic), general linear models, mixed models, regression trees, classification, ANOVA/ MANOVA, data transformation, dimension reduction, cluster analysis, principal component analysis, factor analysis, generating accurate statistical reports, tables and graphs

**Biological techniques:** years of experience in molecular biology, knowledge and techniques at DNA, RNA and protein levels, including flow cytometry, live cell imaging, western blot, RNA biology, sequencing, qRT-PCR, primer design, cell culture, sterile procedures

**Others:** Excellent analytical and critical thinking skills, Strong communication and presentation skills, Detail oriented, Capability of performing multiple tasks

STATISTICAL PROJECTS

1. **Classification of Internet Advertisements (using R)-**data collected from HTML pages containing a set of features of images (1559 attributes and 3279 instances). Conducted supervised learning implementing both linear and nonlinear models (OLS, ridge, lasso, logistic regression, LDA, Naïve Bayes, SVM, k-NN) to learn classifiers that maps instances into either advertisements or non-advertisements. Explored feature extraction methods (PCA, FDA) as well as feature selection methods (SVM, random forest) for efficient dimension reduction. The data mining process found that random forest method can achieve classification accuracy at 99%. SVM feature selection method came up with a subset of 28 variables, which largely reduced the work on future data collection.
2. **Analysis of the Residential Real Estate Value Among Three Age Groups (using R)-**Data from 2013 Survey of Consumer Finance were analyzed. Housing value with two ordinal scales was the response variable. Univariate analysis and bivariate analysis were conducted to help generating the multivariate analysis. The logistic regression and LDA were compared. The factors that had the highest predictive power for housing value were determined.
3. **Analysis of Purchase Orders from Johnson & Johnson for its Support of Woman/Minority-Owned and Small Businesses (using R)-**Obtained the dataset of the purchase orders from the pharmaceutical sector of Johnson and Johnson (2010 to 2012). Implemented PAM in R for cluster analysis, which grouped purchase orders into meaningful segments and studied their time trend. Built trees to find out the interactions of variables. Conducted Bayesian network to reveal the conditional dependence of the variables. Generated regression models predicting future purchase from woman/minority-owned and small businesses.
4. **Sales of Orthopedic Equipment (using SAS and R)-**Used demographic and operational characteristics of the hospitals as independent variables. Conducted data transformation to get a near linear relationship of the response variables against predictors. Performed the factor analysis to categorize the independent variables into three groups. Applied the cluster analysis to partition the hospitals with similar characteristics. Generated summary statistics for each cluster and selected the cluster whose average sales were the highest. Produced a regression model to predict the sales gain. Performed PAM and RPART in R for Robust cluster analysis. Identified hospitals that would be prospective clients for an orthopedic equipment company to maximize the market growth and predicted the amount of sales gain.
5. **Comparison of Housing Affordability in New Jersey, California and New Mexico (using SAS)-**Obtained data from the 2000 Census of Population and Housing for NJ, CA and NM by US Census Bureau. Applied variables that focused on the characteristics of the households and the demographic characteristics of the individuals in the households. Generated descriptive statistics of the income, rent and property values for the three states. Selected subset variables and produced a logistic regression model for each state. Predicted housing affordability based on the selected variables.
6. **The Potential Demand for Wine Education in China and Hong Kong (using SAS)-**Created dataset containing several categorical variables extracted from survey data. Conducted Wilcoxon tests for the comparisons between the respondents in China and Hong Kong, and the comparisons between the two categories of respondents (i.e. decision makers and implementers) in each location. Provided insights into the potential for developing wine education in China and Hong Kong.
7. **Solid Waste Generation and Land Use (using SAS)-**Generated scatter plots. Identified influential data points. Performed Model selection. Conducted Testing for multicollinearity and model adequacy. Built a multiple linear regression model on solid waste generation based on various land use.

PUBLICATIONS

1. **Qing Yan**, Xiaoping Li and Nilgun E. Tumer (2014) **Wild Type RTA and less toxic variants have distinct requirements for Png1 for their depurination activity and toxicity in Saccharomyces cerevisiae.** PLoS ONE 9(12): e113719.
2. Kerrie L. May, **Qing Yan** and Nilgun E. Tumer (2013) **Targeting ricin to the ribosome.** Toxicon. 69(2013):143-51.
3. **Qing Yan**,Xiaoping Li and Nilgun E. Tumer (2012) ***N*-glycosylation does not affect the catalytic activity of ricin A chain but stimulates cytotoxicity by promoting its transport out of the endoplasmic reticulum.** Traffic. 13(11):1508-21.
4. [Thomas Widiez](http://www.springerlink.com/content/?Author=Thomas+Widiez), [Thomas G. Hartman](http://www.springerlink.com/content/?Author=Thomas+G.+Hartman), [Nativ Dudai](http://www.springerlink.com/content/?Author=Nativ+Dudai),[**Qing Yan**](http://www.springerlink.com/content/?Author=Qing+Yan)**,** [Michael Lawton](http://www.springerlink.com/content/?Author=Michael+Lawton), [Daphna Havkin-Frenkel](http://www.springerlink.com/content/?Author=Daphna+Havkin-Frenkel) and [Faith C. Belanger](http://www.springerlink.com/content/?Author=Faith+C.+Belanger) (2011) **Functional characterization of two new members of the caffeoyl CoA O-methyltransferase-like gene family from Vanilla planifolia reveals a new class of plastid-localized O-methyltransferases.** Plant Molecular Biology. 76(6):475-88.

PRESENTATIONS

1. Poster Title: ***N*-glycosylation contributes to the toxicity of ricin A chain by promoting its transport out of the endoplasmic reticulum**

Date: September 4-8, 2012

Event: 13th Translational Control meeting, Cold Spring Harbor, NY.

1. Oral Presentation Title: **Trafficking of Ricin A chain to the vacuole affects its cytotoxicity and depurination**

Date: October 13, 2011

Event: 71st American Phytopathological Society- Northeastern Division (APS-NED) annual meeting, New

Brunswick, NJ.

1. Poster Title: **Intracellular trafficking of Ricin A chain and its relation to cytotoxicity and depurination**

Date: March 6-10, 2011

Event: 50th annual Society of Toxicology meeting, Washington, D.C.