

**Shawn D. Mustain**  
[shawn.mustain@hccs.edu](mailto:shawn.mustain@hccs.edu)

## **E d u c a t i o n**

Clemson University Clemson, South Carolina <i>MS Biological Sciences</i>	2014-2016
Sam Houston State University Huntsville, Texas <i>MBA with minor in finance</i>	1994-2000
Texas A & M University College Station, Texas <i>B.S. degree in biomedical science</i>	1984-1988

## **P r o f e s s i o n a l   T e a c h i n g   E x p e r i e n c e**

<i>Science Department Chair</i> Spring Woods High School Spring Branch ISD 2045 Gessner Houston, TX 77080	2012-Present
<i>Science Teacher</i> Spring Woods High School Spring Branch ISD 2045 Gessner Houston, TX 77080	2003-Present

## **1 5   Y e a r s   T e a c h i n g   E x p e r i e n c e**

- Houston Community College Dual-Credit Instructor
- AP/Dual-credit Biology (11<sup>th</sup> and 12<sup>th</sup> grade students)
- Forensic Science (11<sup>th</sup> and 12<sup>th</sup> grade students)
- Medical Microbiology and Pathophysiology (11th, and 12th grade students)
- Advanced Biotechnology (11<sup>th</sup> and 12<sup>th</sup> grade students)
- Biology (9<sup>th</sup> and 10<sup>th</sup> grade students)
- Pre-AP Chemistry and Academic Chemistry (10th, 11th, and 12th grade students)
- Environmental science (10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grade students)
- Integrated Physics and Chemistry (9<sup>th</sup> grade students)

## **M e m b e r s h i p s   i n   P r o f e s s i o n a l   O r g a n i z a t i o n s**

- Association of Texas Professional Educators (ATPE)
- National Science Teachers Association (NSTA)
- Science Teachers Association of Texas (STAT)
- National Association of Biology Teachers (NABT)

**E d u c a t i o n   L e a d e r s h i p   E x p e r i e n c e**

- Science Department Chair and Budget Manager
- Spring Branch ATPE President
- Region IV ATPE Secretary
- District strategic planning committee member
- Biotechnology curriculum writer
- Medical microbiology curriculum writer
- UT Health Science Center H.E.A.D.S. UP program facilitator and workshop presenter
- District End of Course Exam task force member
- District chemistry team curriculum writer
- Campus Improvement Team Member
- Chemistry Team Leader
- Student Teacher Supervisor
- First Year Teacher Mentor

**G r a n t s   R e c e i v e d**

- SBISD J. Landon Short Mini-Grant - \$1500 to date
- Donor's Choose Award Recipient - \$10,500 to date
- Power to Learn Team Grant - \$25,000
- BP Educational Grant Award - \$10,000
- Physics Teacher Quality Grant - \$1,500

**E d u c a t i o n   P r o f e s s i o n a l   D e v e l o p m e n t**

- AP Biology Summer Institute
- Michael J. Ahearn summer workshop for science educators
- Conference for the Advancement of Science Teaching (CAST) member and conference attendee
- TEA Biotechnology online course
- TEA Forensic Science online course
- ATPE Leadership Summit
- Austin Community College Biotechnology Workshop
- Promethean ActivEducator Symposium
- Gifted and Talented Training
- Pre-AP Chemistry Training
- TX Virtual School Network Training
- Designing and Delivering Instruction
- Faculty Leadership Conference
- TEA – Teacher Induction and Mentoring
- HCDE - Texas Mentor Program

## **Research Experience**

*Quality Control Supervisor* 1996-2003  
Introgen Therapeutics, Inc  
Houston, TX

*Lab Supervisor/Research* 1992-1996  
Aronex Pharmaceutical Corp.  
The Woodlands TX

*Research Assistant* 1990-1992  
UTMD Anderson  
Houston TX

*Research Technician* 1988-1990  
Baylor College of Medicine  
Houston TX

## **Pharmaceutical Research and Development Experience**

- Developed and implemented standards and procedures for inspecting, testing, and labeling company products.
- Designed testing protocols and timeframes for company products.
- Completed clinical lot-release testing, and coordinated outside contract testing, including shipping and tracking of samples sent for analysis.
- Improved quality systems by developing written Standard Operating Procedures and document control.
- Designed and developed immunoassay techniques to assist in product identification.
- Represented company at national science conferences, at contract labs for auditing, and with vendors.
- Trained and monitored student technicians in all aspects of biological testing.
- Hired, trained, and managed other scientific analysts to ensure completion of biological testing within defined deadlines.

## **Conference Presentations**

- "Adenoviral Vector Plaque Assay: Infancy to Validation", presented at the NMHCC Conference entitled Analytical Technologies for Characterization of Drug Candidates, September 1997, Washington DC
- "Regulation of Human Colon Cancer Cell Adhesion to Extracellular Matrix by Transforming Growth Factor b1" presented at the 1992 American Association for Cancer Research national convention.
- "Induction of CarcinoembryonicAntigen and its Crossreactive Gene Products in Human Colonic Adenomas and Carcinomas by Transforming Growth Factor- Beta" presented at the 1990 American Association for Cancer Research national convention.

- "Induction of Carcinoembryonic Antigen and its Crossreactive Gene Products in Human Colonic Adenomas and Carcinomas by Transforming Growth Factor- Beta" presented at the 1989 American Society of Cell Biology national convention.

## Research Publications

- Revankar GR, Ojwang JO, **Mustain SD**, Rando RF, De Clercq E, Huffman JF, Drach JC, Sommadossi J-P, Lewis AF, (1998), " Thioazolo[4,5-d] pyrimidines. Part II. Synthesis and Anti-human Cytomegalovirus Activity *In Vitro* of Certain Acyclonucleosides and Acyclonucleotides Derived from the Guanine Analogue 5-amino-thiazolo[4,5-d]pyrimidine-2,7(3H,6H)-dione", Antiviral Chemistry and Chemotherapy, 9:53-63.
- Ojwang JO., Rao TS., Marshall HB., **Mustain SD.**, Chaudhary N., Walker DA., Peyman A., Uhlmann E. Revankar GR., Rando RF., (1997), "Inhibition of Tumor Necrosis Factor Alpha (TNF- $\alpha$ ) Expression and Function *In Vitro* by Modified Antisense Oligonucleotides", Nucleosides & Nucleotides, 16:1703-1707
- Uhlmann E., Hornung L., Hein S., Augustin S., Peyman A., Will D.W., Helsberg M., Sagi J., Otvos L., Ojwang JO., **Mustain S.**, Rando RF., (1997), "Enhanced Biological Activity of Antisense Oligonucleotides Containing 5-(1-Hexynyl)-Substituted Pyrimidine Nucleotides", Nucleosides & Nucleotides. 16(7-9): 1717-1720.
- Ojwang, J., **Mustain, S.**, Marshall, **H.**, et.al. (1997), "Modified Antisense Oligonucleotides Directed against Tumor Necrosis Factor Receptor Type I Inhibit Tumor Necrosis Factor  $\alpha$  -Mediated Functions", Biochemistry, 36:6033-6045.
- Fennewald, S.M., **Mustain, S.**, Ojwang, J., and Rando, R.F., (1995), "Inhibition of Herpes Simplex Virus in Culture by Oligonucleotides Composed entirely of Deoxyguanosine and Thymidine", Antiviral Research, 26: 37-54
- Chakrabarty, S., **Mustain, S.**, and Wilson, J.K.V., (1990), "Induction of Carcinoembryonic Antigen and its Crossreactive Gene Products in Human Colonic Adenomas and Carcinomas by Transforming Growth Factor-Beta", Molecular Biotherapy, 2: 27-31.