
Mariana Duran

410 Memorial Drive
Cambridge MA, 02139

mduran@mit.edu
(619)204-8749

Education

Massachusetts Institute of Technology (MIT)	GPA: 3.9 / 5.0	Cambridge, MA
<ul style="list-style-type: none"><i>Candidate for Bachelor of Science in Biological Engineering</i>Relevant Coursework: Fields, Forces, and Flows in Biological Systems; Molecular, Cellular, and Tissue Biomechanics; Laboratory Fundamentals in Biological Engineering, Analysis of Biomolecular and Cellular Systems, Biochemistry, Genetics, Thermodynamics, Intro to Computer Science and Programming		
Eastlake High School	GPA: 4.6 / 4.0	Chula Vista, CA
<ul style="list-style-type: none"><i>Awards: Salutatorian, AP Scholar with Distinction</i>		

Research Experience

MIT Department of Biological Engineering	Cambridge, MA
<i>Undergraduate Researcher</i>	<i>September – December 2011</i>
<ul style="list-style-type: none">Modified gene for EGFP (Enhanced Green Fluorescent Protein) and created plasmid to measure frequency of homologous recombinationAltered two-component system by screening for mutations in order to increase contrast in bacterial photography systemCreated biologically improved, dye-sensitized solar cell by assembling networks of single-walled carbon nanotubes and titanium dioxide nanoparticles using the bacteriophage M13Designed and presented research proposal on use of targeted nanoparticles in Alzheimer's patients to ~25 people	
MIT Undergraduate Research Opportunities Program	Cambridge, MA
<i>Undergraduate Researcher</i>	<i>June – August 2010</i>
<ul style="list-style-type: none">Collaborated with graduate student and post-doc on cancer therapy research to analyze use of targeted nanoparticles, essentially combining chemotherapy and siRNA in treatment of cancer, due to their ability to target tumor tissue effectively and minimize undesirable side effects of chemotherapyCultured and maintained cancer cell lines, encapsulated siRNA into nano-sized delivery system, and characterized delivery system (i.e. size, stability loading efficiency etc.)Tested activity of siRNA on expression of genes in cancer cells in order to assess therapeutic efficacy of the treatment	

Leadership and Activities

Massachusetts Institute of Technology	Cambridge, MA
<i>Undergraduate Campus Tour Guide</i>	<i>July 2011 - Present</i>
<ul style="list-style-type: none">Lead tour groups of up to 35 people consisting of prospective students, families, and visitors from all over the worldAssist with planning and running of special events on campus consisting of up to 200 people	
MIT Dance Troupe	Cambridge, MA
<i>Choreographer</i>	<i>September 2009 – Present</i>
<ul style="list-style-type: none">Choreograph and dance in 5 regularly sold-out performances each semester. Dance Troupe consists of ~200 students	
Eastlake High School Dance Company	Chula Vista, CA
<i>Treasurer</i>	<i>September 2006 – June 2009</i>
<ul style="list-style-type: none">Managed finances of company including planning the biannual dance show. Allocated funds raised (~ \$5,000 per semester)	

Other Activities: Tutoring Plus Volunteer, In Motion Dance Company (Co-Captain), Chula Vista Public Library Volunteer

Skills

Language: Fluent in Spanish	Lab: PCR and primer design, tissue culture, Agarose gel electrophoresis, SDS-PAGE, western blots, spectrophotometry
Computer: Python, Matlab, Microsoft Office	