

Luke Hebert

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EDUCATION

- **BS in Bioinformatics, Summa Cum Laude** (GPA 3.822)
May 2016, University of St. Thomas, Houston, TX
- **High School Diploma, Magna Cum Laude**
May 2012, Bridge City High School, Bridge City, TX

RESEARCH EXPERIENCE

<i>Myelomeningocele, Python</i>	May, 2017—July 2017
<i>UTHSC Division of Pediatric Genetics under Drs. Hope Northrup and Kit-Sing Au</i>	July 2018—Present
▪ filter, analyze, and visualize Whole Exome Sequencing data with Python	
▪ read literature and write manuscripts summarizing my research	
▪ regularly collaborate with P.I. and lab members to create a bioinformatics pipeline	
▪ present to DSHS Newborn Screening Unit members and UTHSC pediatric genetics grand rounds	
 <i>Radiation Oncology</i>	Jun, 2015—Aug 2015
<i>Baylor College of Medicine under Smith Clinic Radiation Oncologist Michelle Ludwig, MD., PhD.</i>	
▪ statistically describe patient population's risk for heart disease using 200 patient charts	
▪ help write grant proposal	
▪ part of Baylor College of Medicine's Summer Medical and Research Training (SMART) program	
 <i>Drosophila melanogaster</i>	May, 2013—May, 2016
<i>University of St. Thomas under biology department-chair Rosemarie Rosell, PhD.</i>	
▪ delegate tasks and help design experiment	
▪ write experiment literature	
▪ present poster at symposiums (see "Presentations" section below)	
▪ fly and system maintenance	

CODING LANGUAGES & PROGRAMS

Python

- versions: 2.7, 3.6, 3.7
- packages/modules: pandas, matplotlib, numpy, PyVCF (among others)
- associated software: PyMOL

PRESENTATIONS (10)

Luke Hebert, Hope Northrup, MD, Kit-Sing Au, PhD. High Planar Cell Polarity Gene Variant Allele Frequency in Patients with Myelomeningocele. **UTHSC Division of Pediatric Genetics Grand Rounds**, Houston, TX. July 19th, 2017.

Luke Hebert

Luke Hebert, Hope Northrup, MD, Kit-Sing Au, PhD. High Planar Cell Polarity Gene Variant Allele Frequency in Patients with Myelomeningocele. **DSHS Newborn Screening Unit Presentation**, Austin, TX. July 19th, 2017.

Luke Hebert, Gina Duong, Cecilia Dao, Katie Fisher, Heidi Reinhardt, Quy Lam, Vanessa Trivino, Elmer B. Ledesma, and Rosemarie C. Rosell. Determining the Correlation between Toluene Exposure on *Drosophila melanogaster* and the Resulting Toxicity Effects of Toluene on Fly Offspring Morphology. **UST Annual Research Symposium**, Houston, TX. April 9th-10th, 2015.

Duong G, Dao C, Hebert L, Fisher K, Reinhardt H, Lam Q, Trivino V, LeDesma E and Rosell RC. Determining the Correlation between Toluene Exposure on *Drosophila melanogaster* and the Resulting Toxicity Effects of Toluene on Fly Offspring Morphology. **Entomological Society of America National Meeting**, Portland, OR. Nov 11th-15th, 2014. **Second place winner in President's prize competition, Undergraduate Physiology Section.**

Duong G, Dao C, Hebert L, Fisher K, Reinhardt H, Lam Q, Trivino V, LeDesma E and Rosell RC. Determining the Lethal Concentration of Toluene on *Drosophila melanogaster* and the Resulting Morphological Effects of Toluene Exposure on Fly Offspring. **Baylor's 5th Annual REACH IRACDA Symposium**, Houston, TX. May 19th, 2014.

Duong G, Dao C, Hebert L, Fisher K, Reinhardt H, Lam Q, Trivino V, LeDesma E and Rosell RC. Determining the Lethal Concentration of Toluene on *Drosophila melanogaster* and the Resulting Morphological Effects of Toluene Exposure on Fly Offspring. **UST Annual Research Symposium**, Houston, TX. Apr 10th-11th, 2014.

Duong G, Dao C, Hebert L, Fisher K, Ton M, Reinhardt H, Lam Q, LeDesma E and Rosell RC. Determining the Lethal Concentration of Toluene on *Drosophila melanogaster* and the Resulting Morphological Effects of Toluene Exposure on Fly Offspring. **Beta Beta Beta Regional Convention**, University of Oklahoma Biological Field, OK. Apr 5th, 2014.

Duong G, Knippa Z, Skeen-Esterheld H, Dao C, Hebert L, Fisher K, Ton M, LeDesma E and Rosell RC. Determining the Lethal Concentration (LC_{50}) of toluene on *Drosophila melanogaster* and the morphological effects on its offspring. **Entomological Society of America National Meeting**, Austin, TX. Nov 10-13, 2013. **First place winner in President's prize competition, Undergraduate Physiology Section.**

Duong G, Reynolds R, Knippa Z, Skeen-Esterheld H, Dao C, Karagozian P, Hebert L, Fisher K, LeDesma E and Rosell RC. Determining the Lethal Concentration (LC_{50}) of toluene on *Drosophila melanogaster* and the morphological effects on its offspring. **Baylor's 4th Annual REACH IRACDA Symposium**, Houston, TX. May 22nd 2013.

Duong G, Reynolds R, Knippa Z, Skeen-Esterheld H, Dao C, Karagozian P, Hebert L, Fisher K, LeDesma E

Luke Hebert

and Rosell RC. Determining the Lethal Concentration (LC₅₀) of toluene on *Drosophila melanogaster* and the morphological effects on its offspring. **UST Annual Research Symposium**, Houston, TX. Apr 11th-13th, 2013.

WORK EXPERIENCE

Biology Department Student Worker Part Time

Jul 23rd 2014—Feb 13th 2015

University of St. Thomas Biology Department

- clean/stock lab supplies
- prepare for biology lab course experiments
- help take inventory and manage chemical waste

“Summer Scholar” Position Seasonal

Jun 1st—Aug 10th, 2012

Shangri La Botanical Gardens and Nature Center, Orange, TX

- research local flora/fauna
- dissect and analyze local flora/fauna
- present personal and collaborative research to classes open to public
- organize lessons and hands-on activities for students (grades 3rd through 8th)
- cultivate various flowering plants in the production greenhouses

Student Support Advisor Part Time

Oct 25th 2012—Jul 23rd, 2014

University of St. Thomas, Advising Office of Crooker Center, Houston, TX

- assist students when scheduling classes
- present/teach UST information technology services
- general clerical duties
- maintain office (clean, keep printers filled, etc.)

EXTRA-CURRICULAR ACTIVITIES

Biological Honor Society Officer-Elect

Beta Beta Beta: Nu Chapter, UST

- Events Coordinator 2013-2014
- Secretary 2014-2015

American Chemical Society Member

2012-2014

UST Chapter

HONORS AND AWARDS

- Outstanding Student in Bioinformatics, 2016
Awarded by biology department at UST to one student
- Summa Cum Laude (similarly: Dean’s List from 2012 fall-2016 spring)
- 1st Place in 2013 Presidents Prize Competition at Entomological Society of America Conference
Presented research poster in Austin, TX
- 2nd Place in 2014 Presidents Prize Competition at Entomological Society of America Conference
Presented research poster in Portland, OR
- Service Learning Panelist for ’14 UST Freshman Symposium

Luke Hebert

Link to video: <http://flashmedia.stthom.edu/videos/fys-panel-servicelearningFA14.html>

VOLUNTEER WORK (143.5 total hours; \$700 raised)

Houston Hospice General Volunteering

(35 hours)

Houston Hospice, Houston TX

-Nov 1st, 25th 2014

BP MS 150 Ride (24 hours; \$400 raised)

Houston to Austin, April 12th-13th 2014

-Mar 2nd 2013, Mar 29th 2014

“Camp Cardiac” Volunteer Counselor (16 hours)

University of St. Thomas, Houston TX, Jul 29th-30th 2013

Children’s Museum Volunteer (10.5 hours)
Children’s Museum of Houston, Houston TX,
-Mar 14th 2013, Oct 13th 2013, Mar 13th 2015

Children’s Alopecia Project Fundraising

(16 hours; \$300 raised)

University of St. Thomas, Houston TX, April 2013

Campus Recycling (5 hours)

University of St. Thomas, Houston TX

-Oct 1st, Oct 8th, Oct 11th, Nov 21st 2013

“Zoo Boo” Volunteer (13 hours)

Houston Zoo, Houston TX,

-Oct 21st 2012, Oct 11th 2014, Oct 25th 2014

ESA Conference (6 hours)

*2013 Entomological Society of America Conference,
Austin TX, Nov 12th 2013*

“Education Rainbow Challenge” Project

(10 hours)

Black Middle School, Houston TX

-Nov 3rd 2012

Davis High School, Houston TX

-Jan 26th 2013

UST STEM Alumni Event (6 hours)

University of St. Thomas, Houston TX, Oct 25th 2014

Harmony Science Fair (4 hours)

Harmony Public School, Houston TX, Jan 24th 2014

Front-Desk Clerk (4 hours)

Houston Food Bank, Houston TX, Aug 18th 2012

Nursing Home Card-making/Delivery (5 hours)

ManorCare Nursing Home, Houston TX