

Daniel J. Kats

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EDUCATION

Case Western Reserve University, Cleveland, OH
Doctor of Medicine Expected May 2020

Brandeis University, Waltham, MA
Bachelor of Science in Biochemistry May 2016

- Summa cum laude with high honors, GPA 3.85
- Thesis: “Inosine 5'-monophosphate dehydrogenase: A collection of mysterious binding sites and regulation”

TRAINING

American Thoracic Society International Conference
American Thoracic Society, Dallas, TX May 17 – 22, 2019

2018 Annual Meeting
Family Medicine Education Consortium, Rye Brook, NY November 9 – 11, 2018

The North Coast Conference on Precision Medicine
The Institute for Computational Biology
Case Western Reserve University, Cleveland, OH September 13, 2018

**Accelerating Change in Medical Education Consortium
Student-Led Conference on Health Systems Science**
American Medical Association, Hershey, PA August 3 – 4, 2018

American Thoracic Society International Conference
American Thoracic Society, San Diego, CA May 18 – 23, 2018

Family Planning Conference
Medical Students for Choice, Philadelphia, PA December 2 – 3, 2017

Bleeding Control Basic Course
Stop the Bleed, Cleveland, OH November 27, 2017

2017 Inclusion Summit
Ruderman Family Foundation, Boston, MA November 19 – 20, 2017

2017 Annual Meeting
Family Medicine Education Consortium, Cleveland, OH November 10 – 12, 2017

UltraSound Fest
The Ohio State University, Columbus, OH October 8, 2017

State-of-the-Art Reviews in Neonatal-Perinatal Medicine
The MetroHealth System, Cleveland, OH October 7, 2017

The Telluride Experience:**Transforming Mindsets II – Patient Safety Summer School**

The Academy of Emerging Leaders in Patient Safety, Telluride, CO

June 11 – 15, 2017

Summer Institute for Medical Students

Hazelden Betty Ford, Rancho Mirage, CA

June 5 – 9, 2017

Abortion Training Institute

Medical Students for Choice, Philadelphia, PA

February 24 – 26, 2017

Global Health Workshop 2017

Cleveland Clinic, Cleveland, OH

February 11, 2017

Implementation Science Conference

Case Western Reserve University, Cleveland, OH

December 2, 2016

The North Coast Conference on Precision Medicine

The Institute for Computational Biology

Case Western Reserve University, Cleveland, OH

September 29, 2016

HONORS AND AWARDS

- American Thoracic Society Abstract Scholarship May 2019
(see BIBLIOGRAPHY #4, 6, 7, 8)
- Lepow Day oral presentation September 28, 2017
(see BIBLIOGRAPHY #5)
 - One of 11 students chosen to give a 10 minute oral presentation (the highest level of achievement) out of over 190 submitted abstracts
- Phi Beta Kappa honor society May 2016
- NIH Computational Neuroscience Training Fellowship (R90DA033463) May 2014 – May 2016
- Attendance scholarships (see TRAINING)
 - FMEC 2018 Annual Meeting November 9 – 11, 2018
 - Family Planning Conference December 2 – 3, 2017
 - FMEC 2017 Annual Meeting November 10 – 12, 2017
 - Transforming Mindsets II – Patient Safety Summer School June 11 – 15, 2017
 - Summer Institute for Medical Students June 5 – 9, 2017
 - Abortion Training Institute February 24 – 26, 2017
 - The North Coast Conference on Precision Medicine September 29, 2016

RESEARCH EXPERIENCE**Down Syndrome Program**, Massachusetts General Hospital for Children, Boston, MA

Researcher (PI: Brian Skotko, MD, MPP)

October 2018 – Present

- Project: Literature review of infantile spasms in Down syndrome
- Project: Interviews with parents of children with Down syndrome and infantile spasms
- Project: World map of quality of life for people with Down syndrome (projected completion of first edition in 2021)
 - Designed and administered surveys to determine appropriate quality of life indicators
 - Presented findings during international conference calls with Down syndrome experts

Clinical Informatics, The MetroHealth System, Cleveland, OH

Researcher (PI: Yasir Tarabichi, MD, MSCR)

May 2017 – Present

- Project: The effects of smoking history variability in electronic health records (EHRs) on the ordering of lung cancer screening tests
 - Publication: see BIBLIOGRAPHY #2
 - Presentations: see BIBLIOGRAPHY #4, 5, 6, 7, 8, 9
- Project: Determining the optimal duration of benzodiazepine treatment for alcohol withdrawal to avoid benzodiazepine-related delirium

Hedstrom Laboratory, Brandeis University, Waltham, MA

Undergraduate Researcher (PI: Lizbeth Hedstrom, PhD)

September 2013 – May 2016

Computational Neuroscience Fellow

May 2014 – May 2016

- Project: Determining the significance of interactions among inosine 5'-monophosphate dehydrogenase (IMPDH), RNA polymerase, and ribosomes in *Escherichia coli*
- Designed and implemented method of *in situ* chromosomal mutations without using biomarkers or scars (in collaboration with Lovett Laboratory)
- Designed and wrote Python scripts to analyze IC₅₀ data of hundreds of inhibitors used with IMPDH from different organisms
 - Goal: Find quick, easy, and cheap way to functionally categorize previously unused strains of IMPDH by using a small set of inhibitors
 - Developed method to reduce entire set of inhibitors to a small representative subset
 - Found drug outliers
 - Visualized data to find patterns, drugs/enzymes of interest

BIBLIOGRAPHYPeer-Reviewed

1. Adie, Y., **Kats, D.J.**, Tlimat, A., Perzynski, A., Dalton, J., Gunzler, D., Tarabichi, Y. Neighborhood Disadvantage and Lung Cancer Incidence in Ever-Smokers at a Safety-Net Healthcare System: A Retrospective Study. *CHEST*. 2020, 157(4).
2. Tarabichi, Y., **Kats, D.J.**, Kaelber, D.C., Thornton, J.D. The Impact of Fluctuations in Pack-Year Smoking History in the Electronic Health Record on Lung Cancer Screening Practices. *CHEST*. 2018, 153(2): 575 – 578.

Lectures/Workshops

3. [National] **Kats, D.J.**, Mieso, B., Singh, M., Gullett, H., Koopman Gonzalez, S. Patient Navigation: Pre-Clinical Medical Students Experiencing Longitudinal Patient Relationships. Accelerating Change in Medical Education Consortium Student-Led Conference on Health Systems Science; Hershey, PA. 2018.

Oral Presentations

4. [International] **Kats, D.J.**, Adie, Y., Tlimat, A., Tarabichi, Y. Providers at an Academic Safety-Net Hospital System Tend to Refer Patients for Lung Cancer Screening Based on Patient Risk, but Demographic Disparities Persist. American Thoracic Society International Conference; Dallas, TX. 2019.

5. [Local] **Kats, D.J.**, Tarabichi, Y., Kaelber, D.C., Thornton, J.D. The Impact of Smoking History EHR Fluctuations on Lung Cancer Screening Practices. Lepow Day; Cleveland, OH. 2017.

Poster Presentations

6. [International] **Kats, D.J.**, Tlimat, A., Adie, Y., Tarabichi, Y. Can Historical Electronic Health Record Smoking Data Be Leveraged to Improve the Selection of Patients for Lung Cancer Screening? American Thoracic Society International Conference; Dallas, TX. 2019.
7. [International] Adie, Y., Tlimat, A., **Kats, D.J.**, Perzynski, A., Tarabichi, Y. Neighborhood Disadvantage and Lung Cancer Incidence in an Electronic Health Record Cohort. American Thoracic Society International Conference; Dallas, TX. 2019.
8. [International] Tlimat, A., **Kats, D.J.**, Perzynski, A., Tarabichi, Y. A Temporal Analysis of Variation in Smoking Intensity in the Cleveland Area by Strata of Neighborhood Socioeconomic Deprivation. American Thoracic Society International Conference; Dallas, TX. 2019.
9. [International] **Kats, D.J.**, Thornton, J.D., Kaelber, D.C., Tarabichi, Y. Structured Smoking Exposure Variability in the Electronic Health Record Hurts Lung Cancer Screening Practices. American Thoracic Society International Conference; San Diego, CA. 2018.
10. [Local] **Kats, D.J.**, Gollapalli, D., Dang, Y., Hedstrom, L. Moonlighting Interactions of IMPDH Affect *Escherichia coli* Growth. SciFest V; Waltham, MA. 2015. (Poster #2015.421)
11. [Local] **Kats, D.J.**, Gollapalli, D., Dang, Y., Hedstrom, L. Moonlighting Interactions of *Escherichia coli* IMPDH. SciFest IV; Waltham, MA. 2014. (Poster #2014.311)

Non-Peer-Reviewed

12. **Kats, D.J.** Inosine 5'-monophosphate dehydrogenase: A collection of mysterious binding sites and regulation [BS honors thesis]. Waltham, MA: Brandeis University. 2016.

PRE-CLINICAL ELECTIVES AND TRAININGS

Opioid Epidemic Elective

Fall 2018

- Attended weekly discussions and panels with physicians and members of the community
- Observed a autopsy of an individual who died of suspected opioid overdose
- Observed drug court in Cleveland, OH

Longitudinal Patient Navigator Elective

January 2017 – February 2018

- Helped a newly arrived family of refugees navigate through their healthcare by accompanying them to as many appointments as possible
 - Logged all patient interactions in the health record, facilitating a flow of information from specialists to the primary care physician
- Assigned to a family physician preceptor at an FQHC in Cleveland, OH
- Led a workshop at a national conference: see BIBLIOGRAPHY #3

Introduction to Emergency Medicine, Critical Care, and Trauma

Spring 2018

- EMS ride-along (4 hours)

- LifeFlight fly-along (8 hours)
- ED shadowing (4 hours)
- Burn ICU Teaching Rounds, Multidisciplinary Rounds, Burn Survival Meeting

Queer Health Advocacy Project December 2017

- A twelve-hour long LGBTQ+ didactic curriculum that developed cultural humility and comfort with LGBTQ+ healthcare topics

Cancer Care Elective Fall 2017

- Three half-days of shadowing Head and Neck Surgical Oncology
- Attended medical oncology rounds

Cancer Survivorship Elective Fall 2016

- Traveled weekly to a community-based cancer support center to meet cancer survivors, their caretakers, and the support center's staff to learn about various aspects of cancer survivorship

Applied Medical Spanish – Intermediate Fall 2016, 2017

WORK EXPERIENCE

S.M.Art School, Newton Centre, MA

Math and Chess Teacher

November 2009 – June 2016

- Developed personalized curricula for each class, based on students' needs
- Required students to teach each other to demonstrate complete understanding, while practicing public speaking
- Built student self-confidence by teaching material several years ahead of grade level

INSTITUTIONAL SERVICE

Student Committee on Admissions, Case Western Reserve University School of Medicine
Co-Chair January 2017 – January 2018

- Coordinated admissions interviews, tours, and lunches
- Attended Admissions Committee Meetings as a non-voting participant

Peer Handoff, Case Western Reserve University School of Medicine

Volunteer

July 2017

- Led small and large group sessions during new student orientation

Diversity Planning Committee, Case Western Reserve University School of Medicine

Member

June – July 2017

- Helped plan diversity training for new student orientation
- Focused on making all aspects of training engaging for all students, regardless of background

LEADERSHIP AND COMMUNITY SERVICE

Prison Book Program, Quincy, MA

Volunteer

October 2019

- Selected and packaged books for prisoners around the U.S., according to their requests

Southwest Corridor Park Conservancy, Boston, MA

Volunteer

October 2019

- Cleaned Claremont Park

Youth Build Boston, Roxbury, MA

Volunteer

April 2019

- Tutored out-of-school youth studying for a high school equivalency exam

American Red Cross of Eastern Massachusetts Food Pantry, Boston, MA

Volunteer

December 2018

X-Cel Education, Dorchester, MA

Volunteer

December 2018

- Tutored math to adults studying for a high school equivalency exam

Greater Boston Food Bank, Boston, MA

Volunteer

December 2018

Tech Goes Home, Dorchester and Roxbury, MA

Volunteer

December 2018 – January 2019

- Assisted adults learning fundamental computer skills

Fairfax Four Corner Program, Cuyahoga County Juvenile Detention Center

Coordinator

September 2018 – October 2018

- Helped develop a community service program in which medical students run weekly lessons for children in the Juvenile Detention Center as a formal class through the Cleveland Metropolitan School District
- Based on Maslow's Hierarchy of Needs, the curriculum first guides students through understanding how they entered the juvenile justice system; then, how they can examine and modify their behaviors to prevent future negative encounters with the justice system

Sex Education, Cuyahoga County Juvenile Detention Center

Volunteer

October 2017 – February 2018

- Taught a three-day sex education curriculum to children in a juvenile detention center
- Topics covered: reproductive anatomy, hygiene, sexually transmitted infections, contraception, consent, and healthy relationships

Anatomy Camp, Case Western Reserve University School of Medicine

Volunteer

October – November 2017

- Taught Cleveland middle and high school students general principles of biology related to the healthcare field

Student Run Health Clinic, Case Western Reserve University School of Medicine

Volunteer

June 2017 – February 2018

- Junior Clinician: worked with a fourth year medical student to perform the initial history and physical on patients, followed by presenting to the attending
- Case Manager: worked with a social work student to assess patients' social needs prior to handing off to the Junior and Senior Clinicians

- Front Desk: registered patients for appointments

Doc Opera (Fundraiser), Case Western Reserve University School of Medicine

Dancer (1 performance)

August – December 2017

Dancer (3 performances)

August – December 2016

- Doc Opera is a fundraiser for the Student Run Health Clinic and consists of dances and skits entirely performed by medical students
- Danced in three performances during 2016: cha-cha, Bollywood fusion, and hip-hop
- Danced in one performance during 2017: fusion dance consisting of Bhangra, Bharatanatyam, and Kathak

Sex Education, American Medical Women's Association

Volunteer

November 2016 – December 2017

- Taught a three-day sex education curriculum to underserved Cleveland middle school students
- Topics covered: reproductive anatomy, sexually transmitted infections, contraception, and consent
- Helped incorporate education on consent into the curriculum

SPECTRUM, Waltham Group, Brandeis University, Waltham, MA

Coordinator

November 2014 – May 2016

Volunteer

September 2012 – November 2014

- Ran weekly tutoring, mentoring, and playgroup (with parent social group) programs
- Received [Waltham Special Education Parent Advisory Council's Rising Star](#) (2015) and Kelly Beaumont-Mazzarini Inclusion (2016) awards
- Received [Greater Waltham Arc's "Rags" LaCava Community Service Award](#) (2015)
- Planned and hosted annual educational events about developmental disabilities
- Managed nonprofit budget (over \$6,000)
- Grew volunteer base from thirty to sixty members

SKILLS

- Programming in Python, Java, MATLAB, and R
- Basic web development: HTML, CSS, and JavaScript (self-taught)
- Document typesetting: \LaTeX (self-taught)

LANGUAGES

- Russian: fluent (non-medical)
- Spanish: intermediate conversational and medical
- American Sign Language: brief exposure, limited vocabulary

INTERESTS

Bollywood films and dance, ballroom dancing, computer programming, baseball, cycling, hiking, skiing, and writing (www.dankats.com/thoughts)