

Monica K. Lieng, M.D. Ph.D.

CONTACT INFORMATION

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RESEARCH INTERESTS

Epidemiology, Telemedicine, Biomedical Informatics, Healthcare Inequities

EDUCATION

2023 – PRES **Residency in Ophthalmology**
Ophthalmology
Brown University

2022 – 2023 **Preliminary Year in Internal Medicine**
Brown University/Rhode Island Hospital

2013 – 2022 **Doctor of Medicine**
2020 **Doctor of Philosophy, Epidemiology**
DISSERTATION: “EVALUATION OF TELEMEDICINE TO FACILITATE CARE TRANSITIONS”
University of California (UC), Davis, Sacramento/Davis, CA USA

AUG2009 - DEC2012 **Bachelor of Science: Biology**
MAGNA CUM LAUDE

2012 **Minors: Visual Fine Arts and Spanish/Hispanic Cultures**
STUDY ABROAD - UNIVERSIDAD SAN FRANCISCO DE QUITO, ECUADOR
Juniata College, Huntingdon, PA USA

2009 **International Baccalaureate Diploma**
Mira Loma HS, Sacramento, CA

HONORS AND AWARDS

UC Davis: **Apr 2021**
Kohl 2021 Scholar in Ophthalmology & Vision Science

Gold Humanism Honors Society: **Mar 2021**
Honors senior medical students for excellence in clinical care, leadership, compassion, and dedication to service

University of California Office of the President: **Jul 2019 - Jun 2020**
Dissertation Year Fellowship (6 chosen per school)

Phi Kappa Phi: *Dissertation Fellowship (10 chosen nationally)* **Jul 2019 - Jun 2020**

Association for Clinical and Translation Science:
Golden Ribbon (Top 10% of Accepted Abstracts) Mar 2019
Burroughs Wellcome Fund Trainee Travel Award Mar 2019

NIH Clinical and Translational Science Center: **Jul 2018 - Jun 2019**
TL1 Predoctoral Clinical Research Training Program Scholar Award

American Physician Scientists Association: *Travel Award* **Apr 2018**

UC Davis:
Phi Kappa Phi Honor Society (Top 10% of Graduate Students) Jun 2018
Graduate Group in Epidemiology-Block Grant Fellowship Sep 2017 - Jun 2018
Medical Student Research Fellowship May - Jun 2014

Bioinformatics Institute: *Singapore International Pre-Graduate Award* **Mar - Jun 2013**

Pennsylvania Health Occupations Students Association: *Scholarship Recipient* **May 2013**

Juniata College:
Dr. Andrew B. and Maria F. Brumbaugh Science Prize Recipient May 2013

Quinter Scholarship Recipient, Leadership Scholarship Recipient Aug 2009 - Dec 2012
 Alleghany Branch of American Society for Microbiology: **Oct 2012**
1st Place Poster in Medical Category
 UCSF Summer Research Training Program: *Amgen Scholar* **Jun - Aug 2012**
 Air Force Association Chapter 116: *Scholarship for Students in STEM* **May 2012**

RESEARCH
EXPERIENCE

University of California, Davis

School of Medicine, Department of Ophthalmology **2021 - 2022**

- *Glenn Yiu, MD, PhD, Parisa Emami-Naeni, MD, MPH*: Studying the utilization and cost-effectiveness of tele-ophthalmology in the years 2011-2020 from large claims database (Optum Labs DataWarehouse). Two manuscripts.
- *Parisa Emami-Naeni, MD, MPH*: Gender and racial trends in academic Ophthalmology, trainees and faculty. Two manuscripts.
- *Michele Lim, MD*: Trabeculectomy Surgery Training with a Lime and a Chicken Breast. Manuscript under revision.

School of Medicine, Department of Pediatrics **2017 - 2022**

- Dissertation Committee: James Marcin, MD, MPH (Epidemiology), Patrick Romano, MD, MPH, Daniel Tancredi, PhD, Jennifer Rosenthal, MD, MAS; Dissertation Title "Evaluation of Telemedicine to Facilitate Care Transitions between Generalists and Specialists"
- *Telemedicine for Interfacility Transfer*: Found improved communication in nurse handoffs after implementation of prospective cross-sectional study comparing live videoconferencing to telephone handoffs (manuscript published in 2019). Also evaluated the use of telemedicine in rural EDs to prevent medication errors in a R01-funded randomized clinical trial. Manuscript published in 2019.
- *Outpatient Tele-Psychiatry*: Compared physician adherence to psychiatrist recommendations by live (synchronous) telemedicine to asynchronous telemedicine utilizing chart review from a R01-funded randomized clinical trial. One manuscript accepted.
- *Potentially Avoidable Transfers*: Utilized large administrative datasets from California to study the association between pediatric interfacility transfer/potentially avoidable transfers with emergency department pediatric readiness. Two manuscripts; both accepted.

School of Medicine, Division of Pulmonary, Critical Care, Sleep Medicine and Division of Public Health Sciences **2014 - 2017**

- Advisors: Nicholas Anderson, PhD. (Biomedical Informatics), Jason Adams, MD, MS (Critical Pulmonary Care), Jean-Pierre Delplanque, PhD(Mechanical/Aerospace Engineering), Patrick Romano, MD, MPH (Epidemiology)
- Developed visual analytic pipeline for processing and annotating flow and pressure data from the PB840 Ventilator.
- Developed algorithms for automated calculation of clinically relevant values, three types of patient ventilator interactions (PVI).
- Supervised undergraduate and medical students in developing analytical skills and technical writing skills.

Bioinformatics Institute of Agency for Science, Technology and Research, Singapore

Division Imaging Informatics **Mar - Jun 2013**

- Advisor: Yan Nei Law, Ph.D. (Computer Science)

- Developed algorithms for a classification system that uses second order statistical information for determining mammographic density, a strong breast cancer risk factor.

Juniata College

Department of Biology

Aug - Mar 2013

- Advisor: Regina Lamendella, Ph.D. (Microbial Ecology)
- Lab manager. Instructed new lab members on microbial ecology analytic techniques.
- Studied the effects of resistant starch on gut microbial communities through analysis of high-throughput sequencing data.

University of California, San Francisco

Department of Epidemiology and Biostatistics

May - Aug 2012

- Advisor: Sáunak Sen, Ph.D. (Biostatistics)
- Determined the quantitative trait loci for interhemispheric commissure development in a cross between I/LnJ and C57BL/6J mice strains. The Elliott Sherr neurology lab could then focus their genotyping efforts to find the specific genes that could be causing autism in mice and humans.

Universidad de San Francisco Quito, Ecuador

Colegio de Ciencias Biológicas y Ambientales/ College of Biological and Environmental Sciences
2011 - 2012

- Advisor: Verónica Barragan, M.S. (Microbiology)
- Studied Brucella and Leptospira in pigs in slaughterhouses in relation to human populations throughout Ecuador.

Empiristat

Mar -2011 Jun 2011

- Advisors: Devin Hunt and Nicole Close, Ph.D. (Epidemiology)
- Literature review on the effects of short messaging service use for subject compliance in clinical trials.

Juniata College

Department of Biology

2010 - 2011

- Advisor: Michael Boyle, Ph.D. (Immunology)
- Optimized albumin depletion from fetal bovine serum using binding proteins from bovine group G streptococcal isolates to facilitate proteomic analysis of tissue culture samples grown with fetal bovine serum as a nutrient supplement.
- Compared sensitivity of two *E. coli* probes.

Department of Biology

2010

- Advisor: Jill Keeney, Ph.D. (Immunology)
- Investigated if the genes RTT105 and GRH1 were involved in overlapping processes in regulating Ty1 transposition.
- Learned the basic lab techniques of the transposition assay in yeast and sterile technique.

1. **Lieng MK*** , Emami-Naeini P*, Lee SC, Alber S, Yiu G. Teleophthalmology provides earlier eye care access for patients with newly-diagnosed diabetes. *Heliyon*. 2024 Feb 10;10(4):e25845. DOI: 10.1016/j.heliyon.2024.e25845. PMID: 38384560. PMCID: PMC10878910.
2. Marcin JP, **Lieng MK** , Mouzoon J, Sauers-Ford HS, Tancredi D, Cabri A, Pandya VA, Park AS, Kuppermann N. Telemedicine vs Telephone Consultations and Medication Prescribing Errors Among Referring Physicians: A Cluster Randomized Crossover Trial. *JAMA Netw Open*. 2024 Feb 5;7(2):e240275. DOI: 10.1001/jamanetworkopen.2024.0275. PMID: 38421649. PMCID: PMC10905304.
3. Gallant TL, **Lieng MK** , Rizzo JL, Brandt JD, Lim MC. The Wholesome Foods Approach to Trabeculectomy Wet Lab Training. *J Acad Ophthalmol*. (2017). 2023 Jun 19;15(1):e126-e131. DOI: 10.1055/s-0043-1768919. PMID: 38737155. PMCID: PMC10804768.
4. Lee SC, Alber S, **Lieng MK** , Emami-Naeini P, Yiu G. Teleophthalmology Using Remote Retinal Imaging During the COVID-19 Pandemic. *Telemed J E Health*. 2023 Jan;29(1):81-86. DOI: 10.1089/tmj.2022.0048. Epub 2022 May 24 PMID: 35612464. PMCID: PMC9918349.
5. Marcin JP, Sauers-Ford HS, Mouzoon JL, Haynes SC, Dayal P, Sigal I, Tancredi D, Lieng MK, Kuppermann N. Impact of Tele-Emergency Consultations on Pediatric Interfacility Transfers: A Cluster-Randomized Crossover Trial. *JAMA Netw Open*. 2023 Feb 1;6(2):e2255770. DOI: 10.1001/jamanetworkopen.2022.55770. PMID: 36780158. PMCID: PMC9926323.
6. Atkuru A, **Lieng MK** , Emami-Naeini P. Trends in Racial Diversity among United States Ophthalmology Residents. *Ophthalmology*. 2022 Aug;129(8):957-959. DOI: 10.1016/j.ophtha.2022.03.021. Epub 2022 Mar 26. PMID: 35351473. .
7. Emami-Naeini P, **Lieng MK** , Chen J. Sex Differences in Salaries of Academic Ophthalmologists in the United States. *JAMA Ophthalmol*. 2022 May 1;140(5):519-522. DOI: 10.1001/jamaophthalmol.2022.0376. PMID: 35323861. PMCID: PMC8949729.
8. Lee SC*, **Lieng MK***, Alber S, Mehta N, Emami-Naeini P, Yiu G. Trends in Remote Retinal Imaging Utilization and Payments in the United States. *Ophthalmology*. 2022 Mar;129(3):354-357. DOI: 10.1016/j.ophtha.2021.10.010. Epub 2021 Oct 12. PMID: 34653417.
9. Haynes SC, Kamerman-Kretzmer R, Khan SS, Crossen S, **Lieng MK**, Marcin JP, Kenyon NJ, Kim CH. Telemedicine use for pediatric asthma care: a mixed methods study. *J Asthma*. 2022 Jan 3:1-10. DOI: 10.1080/02770903.2021.2019265. Epub ahead of print. PMID: 34913803.
10. **Lieng MK**, Marcin JP, Sigal IS, Haynes SC, Dayal P, Tancredi DJ, Gausche-Hill M, Mouzoon JL, Romano PS, Rosenthal JL. Association between emergency department pediatric readiness and transfer of noninjured children in small rural hospitals. *J Rural Health*. 2022 Jan;38(1):293-302. DOI: 10.1111/jrh.12566. Epub 2021 Mar 18. PMID: 33734494; PMCID: PMC8489899.
11. Spottiswoode N, Bloomstein JD, Caldera S, Sessolo A, McCauley K, Byanyima P, Zawedde J, Kalantar K, Kaswabuli S, Rutishauser RL, Lieng MK, Davis JL, Moore J, Jan A, Iwai S, Shenoy M, Sanyu I, DeRisi JL, Lynch SV, Wordria W, Huang L, Langelier CR Pneumonia surveillance with culture-independent metatranscriptomics in HIV-positive adults in Uganda: a cross-sectional study.. *Lancet Microbe*. 2022 May;3(5):e357-e365. DOI: 10.1016/S2666-5247(21)00357-8. Epub 2022 Mar 25. PMID: 35544096.
12. **Lieng MK**, Aurora MS, Kang Y, Kim JM, Marcin JP, Chan SR, Mouzoon JL, Tancredi DJ, Parish M, Gonzalez AD, Scher L, Xiong G, McCarron RM, Yellowlees P. Primary Care Physician Adherence to Telepsychiatry Recommendations: Intermediate Outcomes from a Randomized Clinical Trial. *Telemed J E Health*. 2021 Nov 2. DOI: 10.1089/tmj.2021.0389. Epub ahead of print. PMID: 34726542.

13. Rosenthal JL, **Lieng MK**, Marcin JP, Romano PS. Profiling Pediatric Potentially Avoidable Transfers Using Procedure and Diagnosis Codes. *Pediatr Emerg Care*. 2021 Nov 1;37(11):e750-e756. DOI: 10.1097/PEC.0000000000001777. Published online March 2019:1. PMID: 30893226; PMCID: PMC6752990.
14. **Lieng MK**, Marcin JP, Dayal P, Tancredi DJ, Swanson MB, Haynes SC, Romano PS, Sigal IS, Rosenthal JL. Emergency Department Pediatric Readiness and Potentially Avoidable Transfers. *J Pediatr*. 2021 Sep;236:229-237.e5. DOI: 10.1016/j.jpeds.2021.05.021. Epub 2021 May 14. PMID: 34000284; PMCID: PMC8830940.
15. Kim CH, **Lieng MK**, Rylee TL, Gee KA, Marcin JP, Melnikow JA. School-Based Telemedicine Interventions for Asthma: A Systematic Review. *Acad Pediatr*. 2020 Sep-Oct;20(7):893-901. DOI: 10.1016/j.acap.2020.05.008. Epub 2020 May 21. PMID: 32446856; PMCID: PMC7241375.
16. **Lieng MK**, Siefkes HM, Rosenthal JL, Sauers-Ford HS, Mouzoon JL, Sigal IS, Dayal P, Chen ST, McBeth CL, Dial S, Dizon G, Dannewitz HE, Kozycz K, Jennings-Hill TL, Martinson JM, Huerta JK, Pons EA, Vance N, Warnock BN, Marcin JP. Telemedicine for Interfacility Nurse Handoffs. *Pediatr Crit Care Med*. 2019 Sep;20(9):832-840. DOI: 10.1097/PCC.0000000000002011. PMID: 31232857; PMCID: PMC6726530.
17. Rehm GB, Kuhn BT, **Lieng MK**, Cortes-Puch I, Nguyen J, Guo EC, Delplanque J-P, Anderson NR, Adams JY. An Analytic Platform for the Rapid and Reproducible Annotation of Ventilator Waveform Data. bioRxiv. Published online March 6, 2019:568386. doi:10.1101/568386
18. Rehm GB, Kuhn BT, Delplanque JP, Guo EC, **Lieng MK**, Nguyen J, Anderson NR, Adams JY. Development of a research-oriented system for collecting mechanical ventilator waveform data.. *J Am Med Inform Assoc*. 2018 Mar 1;25(3):295-299. DOI: 10.1093/jamia/ocx116. PMID: 29092068. PMCID: PMC7651887.
19. Adams JY, **Lieng MK**, Kuhn BT, Rehm GB, Guo EC, Taylor SL, Delplanque JP, Anderson NR. Development and Validation of a Multi-Algorithm Analytic Platform to Detect Off-Target Mechanical Ventilation. *Sci Rep*. 2017. Nov 3;7(1):14980. DOI: 10.1038/s41598-017-15052-x. PMID: 29101346. PMCID: PMC5670237.
20. Law YN, **Lieng MK**, Li J, Khoo DA-A. Automated breast tissue density assessment using high order regional texture descriptors in mammography. In: Aylward S, Hadjiiski LM, eds.. *SPIE Medical Imaging*.. Vol 9035. SPIE; 2014:90351Q. DOI: 10.1117/12.2043332.

MANUSCRIPTS IN PROGRESS * Co-first authors.

1. Stull-Lane A*, Lau K*, **Lieng MK***, Selcer R, Hallare J, Maneval A, Talwar T, Harter K, Tang J, Asselin E, Lowery C, Bastea S, Jundi L, Sanghavi N, Matter K, Hill T, Adams E, Cushing C, Janardhan N, Kim D, De Leon F, Mamoor A, Henderson S, Wilkes M. COVID-19 Response and the Unhoused Communities in Sacramento: A Mixed Methods Study.

INVITED TALKS

1. Lieng, M.K. "Smile! You're on camera! The impact of telemedicine on psychiatry consults." Presented as part of the Clinical Informatics Lecture Series at University of California, San Diego. Dec 10th, 2019.

ORAL PRESENTATIONS

1. **Lieng MK**, Marcin JP, Chan S, Aurora MS, Kang Y, Kim JM, Mouzoon JL, Parish MB, Gonzalez AD, Yellowlees PM. The Impact of Telemedicine on Psychiatry Consultations. Presented at the Western Medical Research Conference, Jan 25th, 2020, Carmel, CA.
2. Yang S, **Lieng, MK**, Mouzoon J, Sigal I, Marcin JP, Pakyurek M, Restrepo B, Hoch JS, Yellowlees, PM. The Impact of Tele-behavioral Health in Rural American Indian Communities. Presented at the Western Medical Research Conference, Jan 25th, 2020, Carmel, CA.

3. **Lieng MK**, Marcin JP, Chan S, Aurora MS, Kang Y, Kim JM, Mouzoon JL, Parish MB, Gonzalez AD, Yellowlees PM. Characterization of Telepsychiatry Consultation Recommendations. Presented at the National Telehealth Research Symposium, Sept 12th, 2019, Chicago, IL.
4. **Lieng, MK**, Rosenthal JL, Sigal IS, Dayal P, Haynes S, Mouzoon JL, Favila A, Marcin JP. Association between Transfer of Children from the Emergency Department and Pediatric Readiness of the Hospital. Presented at the Association for Clinical and Translational Science Translational Science 2019 Meeting, Washington DC, March 8, 2019. Abstract Gold Ribbon (Top 10% of Accepted Abstracts)
5. **Lieng MK**, Kuhn, B., Rehm, G., Guo, E., Delplanque, J.P., Anderson, N., Adams, J. (2016). An Automatic, Multi-Algorithm Approach to Classify Ventilator Waveforms. AMIA Symposium.
6. Adams JY, **Lieng MK**, Kuhn BT, Rehm GB, Guo E, Taylor S, Delplanque JP, Anderson N. (2017). Development and Validation of a Multi-Algorithm Analytic Platform (ventMAP) for the Automated Detection of Off-Target Mechanical Ventilation. American Thoracic Society Meeting 2016.
7. **Lieng MK**, Delplanque JP, Kuhn B, Anderson N, Adams J. Development of a Pipeline for Automated Ventilator Waveform Analysis. AFMR Western Regional Meeting. January 31st, 2015.
8. **Sing, K.**, Apostolides, J.K., Hunt, D.J., Close, N.C. The Effect of Short Messaging Service (SMS) Use for Subject Compliance in Clinical Trials. Society for Clinical Trials Annual Meeting, Vancouver, BC Canada, May 16th, 2011. Podium Presentation. November 14th 2016.

POSTER
PRESENTATIONS

1. Sarah C. Haynes PhD, Rory Kamerman-Kretzmer MD, Shahabab S. Khan MPH, Stephanie Crossen MD, **Monica K. Lieng** PhD, James P. Marcin MD, Nicholas J. Kenyon MD, Christopher H. Kim MD. Society for Education and the Advancement of Research in Connected Health Abstracts. SEARCH 2021 – The National Telehealth Research Symposium. November 8–10, 2021.
2. **Lieng MK**, Lee SC, Mehta N, Alber S, Emami-Naeini P, Yiu G. Trends in Tele-Ophthalmology Utilization and Payments in the United States over the Past Decade. Presented at Women in Ophthalmology 2021 Summer Symposium, Amelia Island, FL. August 27th, 2021.
3. **Lieng MK**, Lee SC, Mehta N, Alber S, Emami-Naeini P, Yiu G. Characterization of Tele-Ophthalmology Use from 2011-2019. Presented at UC Davis School of Medicine Poster Day, Sacramento, CA. March 3rd, 2021.
4. Stull-Lane A, Lau KE, **Lieng MK**, The Encampment Med Research Team, Henderson S, Wilkes M. COVID-19 Response and the Unhoused Communities in Sacramento: A Mixed Methods Study. Presented at UC Davis School of Medicine Poster Day, Sacramento, CA. March 3rd, 2021.
5. **Lieng MK**, Marcin JP, Dayal, P, Tancredi DJ, Swanson MB, Romano PS, Rosenthal JL. Association between Emergency Department Pediatric Readiness and Potentially Avoidable Transfers. Accepted to PAS 2020. Conference canceled due to COVID-19 concerns.
6. Bares A, Davidson L, Favila A, Yoo BK, Mouzoon J, Sigal I, Haynes S, **Lieng M**, Marcin J. A Telerehabilitation Program to Reduce Inequities in Access to Care Among Children with Special Healthcare Needs. Abstract accepted for poster session at: Pediatric Academic Societies (PAS) 2020 Meeting, May 2-5, 2020, Philadelphia, PA. (Conference canceled due to COVID-19 Pandemic.)
7. Favila A, Davidson L, Bares A, Yoo BK, Mouzoon JL, Sigal IS, Haynes S, **Lieng MK**, Marcin JP. Supporting California’s Medical Therapy Program Serving Children with Disabilities through Telemedicine. Presented at the Western Medical Research Conference, Carmel, CA. Jan 23, 2020,

8. Favila A, Davidson L, Bares A, Yoo BK, Mouzoon JL, Sigal IS, Haynes S, **Lieng MK**, Marcin JP. Using Telehealth to Support California's Medical Therapy Program Serving Children with Disabilities. Presented at the National Telehealth Research Symposium, Sept 11th, 2019, Chicago, IL.
9. Kim CH, **Lieng MK**, Rylee TL. School-Based Telehealth Interventions for Asthma: A Systematic Review. Presented at the Pediatric Academic Societies (PAS) 2019 Meeting, Baltimore, MD, April 29, 2019. E-PAS2019:3805.53. (Poster presentation)
10. **Lieng MK**, Siefkes H, Rosenthal J, Sauers-Ford H, Kissee J, Sigal I, Dayal P, Chen S, McBeth C, Dial S, Dizon G, Dannewitz H, Kozycz K, Jennings-Hill T, Martinson J, Huerta J, Pons E, Vance N, Warnock B, Marcin JP: Handoffs Using Telemedicine to Improve Nurse Preparedness. Presented at the Society for Education and Use Advancement of Research in Connected Health (SEARCH) Conference. San Diego, CA, October 24th, 2018.
11. Dayal P, Chang CH, Benko WS, Ulmer AM, Sigal IS, Kissee JL, Sauers-Ford HS, **Lieng MK** and Marcin JP: Visit Completion and Hospital Utilization of Children Using Telemedicine in Remote and Underserved Communities of Northern California. Presented at the Society for Education and Use Advancement of Research in Connected Health (SEARCH) Conference. San Diego, CA, October 24th, 2018.
12. **Lieng MK**, Siefkes H, Sauers-Ford H, Kissee J, Rosenthal J, Sigal I, Dayal P, Chen S, McBeth C, Dial S, Dizon G, Dannewitz H, Kozycz K, Jennings-Hill T, Martinson J, Huerta J, Pons E, Vance N, Warnock B, Marcin JP: Association between Nurse Handoff Quality and Use of Telemedicine for Interfacility Transfers. Presented at the Pediatric Critical Care Colloquium. Baltimore, MD, October 6th, 2018.
13. Rosenthal, JL, Marcin JP, **Lieng M**, Romano, PS. Profile of Pediatric Potentially Avoidable Transfers. Association for Clinical and Translational Science Conference, Washington, DC, May 2018.
14. **Lieng MK**, Sauers-Ford H, Kissee J, Sigal I, Dayal P, Chen S, Marcin JP: Evaluating Use of Telemedicine for Interfacility Nurse Handoffs. Presented at the Association of American Physicians (AAP), American Society for Clinical Investigation (ASCI) and American Physician-Scientists Association (APSA) Joint Meeting. Chicago, IL, April 21st, 2018.
15. Dayal P, Sigal IS, Kissee JL, Sauers-Ford HS, **Lieng MK**, Marcin JP: Impact of a Pediatric Outpatient Tele-Neurology Program on Patients' Access to Care and Hospital Utilization. Presented at the American Telemedicine Association's (ATA) Annual Conference, May 1, 2018, Chicago, IL.
16. **Sing K**, Maul A, Jansson J, Knight, R., Krauss, R., Lamendella, R. Impact of Resistant Starch Diets on Gut Microbial Community Dynamics. Alleghany Branch of American Society for Microbiology. October 10th, 2012.
17. **Sing, M. Keiko**, Rider, E., Jones-Davis, D., Sherr, E., Sen, S. Is there a genetic basis for abnormal brain development in the I/LnJ mouse strain? UCSF Summer Research Training Program Poster Presentation Session, San Francisco, CA, July 30th, 2012.
18. **Sing, K.**, Boyle, M.D.. Depleting albumin from fetal bovine serum to facilitate proteomic analysis. Landmark Conference Summer Research Symposium, 2010.

SYMPOSIA
PRESENTATIONS

1. **Lieng, MK** Lieng MK, Rosenthal JL, Sigal IS, Dayal P, Haynes S, Mouzoon JL, Favila A, Marcin JP. The Association between Emergency Department Pediatric Readiness and Transfer of Children. Presented at the Clinical and Translational Science Center 2019 Scholar Symposium, Sacramento, CA. May 10th, 2019.
2. **Lieng, MK** Algorithm Development for Automated Ventilator Waveform Analysis. Monthly Scholars Presentation. UC Davis, January 14th, 2016.

3. **Sing, M. Keiko**, Rider, E., Jones-Davis, D., Sherr, E., Sen, S. Is there a genetic basis for abnormal brain development in the I/LnJ mouse strain? UCSF Summer Research Training Program Oral Presentation Session, San Francisco, CA, July 30th, 2012.

PROFESSIONAL ORGANIZATIONS

- Women in Ophthalmology (WIO)
- American Academy of Ophthalmology (AAO)
- American Medical Informatics Association (AMIA)
- Society for Education and the Advancement of Research in Connected Health (SEARCH)
- American Physician Scientists Association (APSA)

TEACHING

Teaching Assistant, UC Davis School of Medicine **2017-2019**

Professor: Patrick Romano, Class: MDS 415

- Developed problem-based learning curricula for first year medical students in foundational concepts in epidemiology and biostatistics

Employee, Teaching Learning Technology **2009 - 2012**

Organization dedicated to innovating and integrating mainstream applications of technology at Juniata College

- Taught students and staff how to use software for completing their projects.
- Assisted users with network-related problems.
- Assisted professors with audio/visual troubleshooting.

SERVICE

Web Master, Epidemiology Graduate Group Student Committee **2016 - 2018**

Student lead committee motivated to improve the quality of education and well being of students in the Epidemiology Graduate Group

- Currently building a repository of resources for students in the Epidemiology graduate group.
- Organize communications with Epidemiology graduate group.
- Attend monthly meetings for coordinating Epidemiology events.

Co-Director, Knights Landing One Health Center **Jan - Dec 2014**

Knights Landing One Health Center is a student run clinic that provides free primary care and translation services to medically uninsured and underinsured.

- Organized in-clinic information resources in cloud-accessible database and maintained resource and EMR access rights.
- Oversaw committee on women's health.

Co-Director, Flu Crew **2013 - 2014**

Partnership with UC Davis Department of Pharmacy and Sacramento County Division of Public Health to provide free flu vaccinations in the greater Sacramento Region.

- Developed multi-lingual advertisements and improved injection rates by 100% from previous year.
- Organized 5 community events and coordinated preceptors and volunteers.
- Taught new volunteers how to deliver intra-muscular injections.
- Designed buttons and banner for publicity.

Volunteer, Physicians for Humanity **2013 - 2014**

Non-profit organization dedicated to provide compassionate, socially and globally minded care in Duran, Ecuador. The majority of my efforts were concentrated at Fundación Padre Damián (FPD)

- Painted a mural for clinic beautification at FPD

- Assisted in miscellaneous tasks such as helping in the kitchen, making posters and organizing medications at FPD.
- Assisted in wellness presentations at women's diabetes club.

Volunteer, Health Occupations Students of America

Jan - Oct 2010

Juniata College Chapter.

- Patient advocate at free breast cancer screening clinic for uninsured Huntingdon residents.
- Won 1st place in HOSA state conference event for Nutrition.

STATISTICAL AND
COMPUTATIONAL
SKILLS

- Languages - R, Stata, Python, SAS, MatLab, HTML, CSS
- Statistics - Hierarchical Models, Causal Inference, Large Data Sets
- Applications - Adobe Creative Suite, Microsoft Office, L^AT_EX
- Operating Systems: Windows, MAC OS

LABORATORY
SKILLS

PCR Amplification, DNA Extraction by CTAB, Affinity Protein Purification, Western Blots, SELDI, SDS-PAGE, Yeast Transformation Assay, Medium Preparation, Sterile Technique

HOBBIES

Aerial Silks, Oil Painting, Drawing, Breakdancing, Strategy Board Games