UW Medicine SUMMER 2019



THE MONTLAKE CUT A PUBLICATION OF THE DEPARTMENT OF NEUROLOGICAL SURGERY



We welcomed four new residents to our department July 1st: Maggie McGrath, Scott Boop, Sananthan Sivakanthan, and Evgeniya Tyrtova. As R-2 Jessica Eaton said last year, "the future is female." In addition, we have added two new spine fellows: Katie Krause and Vaibhav Patel. Ryan Kellogg is the new endovascular fellow and Laura Prolo is the pediatric neurosurgical fellow. Ananth Vellimana joins us as the HMC/UWMC skull base fellow, and just graduated Rob Bonow will be our first neurosurgeon at UW to become the neurocritical care fellow. Qazi Zeeshan stays on as the cerebrovascular research fellow.

Chiba Ene's work in the lab has won him the AANS Ronald L. Bittner Award on brain tumor research for his work on immunotherapy in the treatment of GBM. In the first ever report concerning the genetics of fusiform aneurysm formation, neurosurgeons Manny Ferreira, Louis Kim, and former resident Josh Osbun joined lead author Yigit Karasozen in an article published in the American Journal of Human Genetics. Mike Williams published a paper in the Journal of Neurosurgery about pediatric and young adult patients with hydrocephalus

transitioning to adult care, a very important and evolving concept. In a non-scientific but engaging book, Richard Rapport's *Seattle's Medic One: How We Don't Die* (The History Press) was published on August 5th. Dr. Rapport read to a crowd of 120 at Elliott Bay Books on August 13th.

Randy Chesnut, still active on a variety of fronts, supported the Seattle Seawolves in their first ever US Major League Rugby title. And has a ring to prove it.

Michael Levitt has been promoted to Associate Professor, Sharon Durfy, PhD has joined the department as an editor to help manage the science writing for our residents, and Sylvia Zavatchen, from Cleveland Clinic occupies the new role of department Administrator of Education.

We hosted the 110th meeting of the Society of Neurological Surgeons here in Seattle, which showcased our fantastic department. It was an enormous success with compelling speakers, and, typical of our department, replete with a novel format. In addition, we hosted Mark Souweidane, Vice Chair at Weill Cornell Medical College in NYC who discussed his work in direct drug delivery in neuro-oncology. In March, Professor Aviva Abosch spoke at Grand Rounds about her work on sleep in the Parkinson's disease cohort. This year's Goodkin Lecture was delivered brilliantly by Linda Liau, MD, PhD, Professor and Chair at UCLA on the scientific and clinical challenges of GBM and her attempt to find immunotherapeutic solutions. Robert Dempsey, Chair from the University of Wisconsin spoke at Grand Rounds on the subject of his enduring passion for neurosurgery.

Richard G. Ellenbogen, M.D., F.A.C.S. Professor & Chairman Department of Neurological Surgery



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Welcome New Residents



Scott Boop grew up in Arkansas and Tennessee, eventually moving to San Antonio, Texas for his undergraduate studies at Trinity University. There he majored in Neuroscience and spent his summers back home involved in basic science research with the departments of Surgery and Developmental Neurobiology at St. Jude Children's Research Hospital. During this time, he worked on various projects, including research into the pathogenesis of rhabdomyosarcoma, as well as searching for biomarkers and exploring the vascular patterns of medulloblastoma subgroups.

Growing up hearing clinical discussions from his father and grandfather, both neurosurgeons themselves, he was interested in neurosurgery from childhood. He became increasingly interested in global health, partially through the influence of his sister who had

made several trips to Haiti before and after the 2010 earthquake. This resulted in a gap year to do an accelerated Masters in Public Health at the University of Memphis where he worked to build a neurotrauma database at Le Bonheur Children's Hospital.

In his spare time, Scott enjoys the outdoors, cycling, and cooking. He and his wife Sara, whom he met in undergrad, are both avid hikers and looking forward to the opportunity to explore the Pacific Northwest's outdoor offerings. As a resident, he hopes to marry his interests in neurosurgery and global health and find ways that neurosurgeons can improve the healthcare systems of developing nations.

Maggie McGrath was an outstanding sub-I here last year when she was known as Maggie Jeakins-Cooley and had just decided she wanted to be a neurosurgeon after a spontaneous and accidental meeting with Dr. Ellenbogen in his Missoula clinic. She was born and raised in Missoula, MT, and attended the University of Montana as an undergraduate majoring in biochemistry and chemistry. She entered the University of Washington School of Medicine where she discovered a passion for neurosurgery early in her 4th year (better late than never!). Outside of school, Maggie is a runner and loves to ski and spend as much time outdoors as possible. Maggie and her new husband are excited to be spending the next 7 years in Seattle. She is thrilled to be joining the team at UW Neurological Surgery.



(continued on page 2)

Welcome New Residents

(continued from page 1)



To fill an unexpected residency opening, the already accomplished **Sananthan Sivakanthan** has joined us by way of transfer from the University of New Mexico where he was a neurological surgery resident for two years. After a BS in neuroscience at the University of Pittsburgh in 2012 where his undergraduate honors thesis concerned awake craniotomy and mapping, Sanan finished medical school at the University of South Florida in 2016. While there, he won the Steven Specter Award for Outstanding Contributions in Scholarly Achievement and Advancement of Medicine as well as the senior student award for best research in neurology and neurosurgery. He already has 16 peer-reviewed publications, 5 as first author. He also wrote a chapter on the jugular

foramen in Greenburg's 2016 Handbook of neurosurgery. Outside of Neurosurgery, he played ice hockey often in competitive leagues at various levels through medical school. He likes traveling, camping, hiking, soccer, tennis and skiing. He also exercises daily with his Shiba Inu named Naga. We welcome Sanan to the Department.

Evgeniya Tyrtova was born and raised in post-Soviet Russia. Until her early teens, she was involved with the figure skating School of Olympic Reserve. At 16 years old, she came to Wisconsin as an exchange student for a year though FLEX, a merit-based scholarship program that aims to bridge a cultural gap between the United States and former Soviet countries. Subsequently, she decided to continue her education in the United States and pursue a career in medicine. Her journey started unconventionally with nursing, as she wanted to gain first-hand patient care experience. As she came to the United States on her own, with no financial support and no family here, she had to work part-time throughout college to support herself.

At the same time, Evgeniya was competing with the NCAA Division I Women's Fencing team and volunteering as an EMT at the local



ambulance corps in Teaneck, NJ. After graduating from Fairleigh Dickinson University with a BSN degree in 2012, she worked for a home-care nursing agency, mostly with complex and critically ill patients in an effort to safeguard them from repeated hospitalizations.

Evgeniya was accepted into the Yale School of Medicine in 2014, and found neurosurgery within a few weeks of starting there. Her major early research interest revolved around understanding epilepsy and malformations of cortical development as network disorders. While on clerkship service, she was deeply moved by her encounters with neuro-oncological patients, which motivated her to pursue brain tumor genomics research.

neurosurgery.uw.edu

Welcome New Residents

(continued from page 2)

She spent a dedicated year in Dr. Murat Gunel's lab investigating novel molecular drivers, clinicpathological correlations of genomic subgroups, and intra-tumor mutational heterogeneity of meningioma. In her free time, Evgeniya enjoys ice skating, fencing, watching soccer, and playing the guitar.

Welcome New Fellows

On July 1, we welcomed six new Fellows the department. There are two new Spine Fellows: Katie Krause, MD, PhD who comes to us from OHSU and Vaibhav Patel, MD who comes to us from the Medical College of Virginia. Ryan Kellogg moved from the Medical College of South Carolina to be the endovascular Fellow. Laura Prolo, MD, PhD from Stanford is our new pediatric Fellow. Ananth Vellimana, MBBS who is joining us from Washington University in St. Louis is the new skull base Fellow. Our own newly graduated Neurological Surgery Resident Rob Bonow is our first UW critical care Fellow.



Katie Krause, MD, PhD Spine Fellow



Vaibhav Patel, MD Spine Fellow



Laura Prolo, MD, PhD Pediatric Fellow



Robert Bonow, MD Neurocritical Care Fellow



Ryan Kellogg, MD Endovascular Fellow



Ananth Vellimana, MBBS CV Skull Base Fellow

Chiba Ene Wins Abstract Prize

More than 1,700 abstracts were submitted this year for presentation at the American Association of Neurological Surgeons Annual Scientific Meeting. Dr. Ene won the Ronald L. Bittner Award on Brain Tumor Research with his submission "Anti-PD-L1 immunotherapy enhances radiation-induced abscopal response in glioblastoma" co-authored by Shannon Kreuser, Miyeon Jung, Huajia Zhang, Ian Parney, Courtney Crane, and Eric Holland.

"Immunotherapy for glioblastoma has been largely unsuccessful, in part, because molecular heterogeneity drives selective elimination of only a subset of tumor cells. Therefore, therapeutic success in patients will require achieving an 'abscopal effect' where following focused radiation therapy, non-targeted tumor cells are attacked by the immune system. It remains unclear how glioblastoma respond to focused radiation in terms of failure location and whether immunotherapy could amplify the immune response to tumor outside the radiation field."

Ene and colleagues evaluated patterns of treatment failure and outcomes in glioblastoma patients receiving stereotactic radiosurgery, and developed a genetically-engineered mouse model of bilateral glioblastoma. One side of the mouse brain was treated by focal radiation and the contralateral untreated tumor used as an evaluation of abscopal therapeutic efficacy following anti-PD-L1 immunotherapy. The authors conclude that focal radiation combined with anti-PD-L1 therapy induces an immunological response to un-irradiated glioblastoma. They currently seek other treatment combinations that could also be readily assessed in phase I human clinical trials.

Somatic PDGFRB Activating Variants in Fusiform Cerebral Aneurysms Suggest Possible Novel Treatment

In the first-ever published paper concerning the genetics of sporadic fusiform aneurysms, lead author Yigit Karasozen along with neurological surgeons Manny Ferreira, Louis Kim, and former resident Josh Osbun have described the role of somatic genetic variants in the pathogenesis of fusiform aneurysm formation. Published in the American Journal of Human Genetics, the authors identified a 23-year-old man with progressive, right-sided intracranial aneurysms. He underwent a series of unrevealing genetic evaluations for known connective-tissue disorders. Paired-sample exome sequencing between blood and fibroblasts derived from the diseased areas detected a single novel variant predicted to cause a p.Tyr562Cys (g.149505130T>C [GRCh37/hg19]; c.1685A>G) change within the platelet-derived growth factor receptor b gene (PDGFRB), a juxtamembrane-coding region. Variant-allele fractions ranged from 18.75% to 53.33% within histologically abnormal tissue, suggesting post-zygotic or somatic mosaicism. In an independent cohort of aneurysm specimens, we detected somatic-activating PDGFRB variants in the juxtamembrane domain or the kinase activation loop in 4/6 fusiform aneurysms (and 0/38 saccular aneurysms; Fisher's exact test, p < 0.001). PDGFRB-variant, but not wild-type, patient cells were found to have overactive auto-phosphorylation with downstream activation of ERK, SRC, and AKT. The expression of discovered variants demonstrated non-ligand-dependent autophosphorylation, responsive to the kinase inhibitor sunitinib. Somatic gain-of-function variants in PDGFRB are a novel mechanism in the pathophysiology of fusiform cerebral aneurysms and suggest a potential role for targeted therapy with kinase inhibitors.

MLR Championship Ring

There's only one Randy Chesnut



Rugby is a contact sport. Players run into each other for fun. Sometimes, fun results in concussion. The new US professional rugby association, Major League Rugby, takes concussion very seriously. Taking it seriously can have secondary gain.

Major league professional rugby is entering its second season in the US. Last year, seven teams competed for the championship. At the finish of a difficult but successful season, the Seattle Seawolves stood in second place. In the final match, they met the one team that had had the better of them twice during seasonal play. The Seawolves

won 23 to 19, taking the first major league rugby championship shield.

University of Washington trained Physiatrist and Clinical Assistant Professor of Physical Medicine and Rehabilitation, Dr. Virtaj Singh, had been asked to assemble a medical team for the Seawolves last season. Ironically, his information about experts was uncovered during a legal deposition when the involved attorneys discovered one of the witnesses had been a rugby player. When Dr. Singh asked who that was, they told him it was Dr. Randall Chesnut, who also happened to be the Chief of Neurotrauma for the Department of Neurological Surgery at Harborview. Dr. Singh replied, "I could use that guy," and thus Dr. Chesnut was asked to serve as a match day physician for the Seattle Seawolves' home games.

His charge last year was to watch for concussions during play, pull the suspected player, perform a standardized neurologic evaluation on the pitchside (SCAT-5), and participate in continued evaluations aimed at returning the player to the game. The league policy is "Recognize and Replace," wherein anyone suspected of concussion is not returned to play during that game. Dr. Chesnut is now working with Major League Rugby to reconcile with the World Rugby practice that allows a player deemed not to have suffered concussion to return to play after passing a physical examination and being out for 10 minutes.





Randy talks about rugby a lot.

Strange bedfellows though they may be, he thinks his passion for improving the management of neurotrauma and rugby are compatible. "Life is a contact sport," he notes, "and managed correctly it can be enjoyed with gusto". Go Seawolves!

Improving healthcare transition and longitudinal care for adolescents and young adults with hydrocephalus: report from the Hydrocephalus Association Transition Summit: (Michael Williams et al, J Neurosurg November 23, 2018)

In a recent JNS article, Professor Mike Williams and collaborators addressed the continuing needs of children with hydrocephalus as they age. While their problems continue beyond childhood, pediatric hospitals and pediatric neurosurgeons are often unable to continue to care for this population. An estimated 5000–6000 adolescents and young adults with hydrocephalus must be taken care of as adult patients, a process known as health care transition (HCT). Some can't find neurosurgeons to care for them, and they can no longer be seen in pediatric hospitals and clinics. To address these issues, the Hydrocephalus Association convened a Transition Summit in Seattle, Washington, February 17–18, 2017.

The Hydrocephalus Association held focus groups to identify common transition problems then used to identify topics for the summit plenary presentations. Breakout groups then identified priorities and recommended actions to prepare and engage these patients, educate health care professionals, and address payment issues.

Barriers to effective HCT included difficulty finding adult neurosurgeons to accept young adults with hydrocephalus; unfamiliarity of neurologists, primary care providers, and other health care professionals with the principles of care for patients with hydrocephalus; insufficient infrastructure and processes to provide effective HCT this population, and longitudinal care for adults with hydrocephalus; plus inadequate compensation for health care services.

To address these gaps, "the Hydrocephalus Association Transition Summit recommends that adult and pediatric neurosurgeons, and adult and pediatric neurologists, and their respective professional societies enact the consensus recommendations in Table 2, which are summarized here: 1) To meet the local needs of their communities, hospitals, health systems, and practices should undertake actions to improve processes and infrastructure for HCT services and longitudinal care. 2) To meet national needs, professional societies in adult and pediatric neurosurgery and neurology should undertake actions a) to improve processes and infrastructure for HCT services; b) to improve training in medical and surgical management of hydrocephalus and in HCT and longitudinal care; and c) to demonstrate the outcomes and effectiveness of HCT and longitudinal care by promoting research funding."

Neurosurgery Service at the Seattle VA Hospital

By Ali Ravanpay

The first campus of our current VA system was built in 1923 at American Lake and in 1949, the Puget Sound Veterans Hospital was built in its current Seattle location. Its first research wing was added in 1967.

Since its inception, the Puget Sound VA has distinguished itself as a regional leader in patient care, research and teaching. Today, this hospital serves more than 100,000 veterans living in 14 regional counties including those living as far away as Alaska, northern Oregon, Idaho and Montana.

Neurological Surgery at the Puget Sound VA was built on the shoulders of giants in the field such as Dr. Robert Goodkin who served as the chief of service for decades. The academic tradition he started and maintained has produced excellent clinicians, scientists and leaders in field. Following Dr. Goodkin's death, the service owes its survival to Associate Professor Misha Gelfenbeyn, who was essentially the sole neurosurgeon at the Seattle VA from 2009 to 2016.

Today, our department cares for 2600 Pacific Northwest veterans through a cadre of two attending general neurosurgeons, a rotating resident, three physician assistants and a complement of dedicated administrators and nurses. We annually perform 250 operative cases in a mix of cranial, spine and peripheral nerve procedures. We also serve as a referral base to our UWMC and HMC allied hospitals for vascular and more complex spine and skull bases cases.

This year, our team won VA funding for spinal cord injury research. Our team is part of several multi-disciplinary research projects involving neuro-anesthesiology, neuro-radiology, and the spinal cord injury unit. Our current projects include immuno-cytochemical identification of zones of cellular regeneration in normal human cervical spinal cord, investigation of radiographic cervical spine volumetric tissue loss and delayed neurological decline after spinal cord injury, and analysis of the impact of pre-operative planning using 3-D printed spine models on speed and clinical outcomes of cervical micro-foraminotomies. Over the past year, two of the rotating residents have become co-authors on published and in-press manuscripts.

We proudly serve the acute needs of our veterans and strive to improve their long-term health through research and training.



110th meeting of the Society of Neurological Surgeons



The Society of Neurological Surgeons (SNS) is the oldest neurological surgery society in the world. So, it was especially notable when the 110th Meeting of the SNS was hosted by the University of Washington in Seattle May 18-21, 2019. The SNS had not been hosted in Seattle since 1983. The return was exciting for both those that were there in 1983 (George A. Ojemann and John Loeser) as well as all the rest of the faculty who welcomed the SNS back for the first time in this millennium.

The faculty and residents responded with a dynamism that showcased our departmental assets, arguably one of the most elite, and disruptive academic programs in the country. The highlights are too numerous to enumerate, but suffice it to say the best aspects of the University of Washington and our Neurological Surgery Program received much attention for the compelling talks and interactive discussions. The venues were

spectacular from the Fairmont Olympic Hotel, to the Seattle Art Museum and Benaroya Hall, home of the Seattle Symphony.



The Grossman Award Lecture was brilliantly delivered by Lee Hartwell, PhD, the 2001 Nobel Laureate and President and Director Emeritus of the Fred Hutchinson Cancer Research Center. Ed Lein, PhD delivered the Sunday Keynote address on the cutting edge, cellular and molecular techniques pioneered at The Allen Brain Institute used to understand human brain function. Paul Ramsey, UW Medicine CEO and Dean of UW School of Medicine encouraged us to see why this is perhaps the most exciting time ever for the medical field due to the explosive research advances. The talk that received rave reviews by all was the one given by our 2019 National



Championship UW Women's Rowing Coach, Yasmin Farooq, who regaled us with inspirational insights on how to train this generation of students and athletes to win in the 21st Century.

As is typical of our creative department, we took a new and unique approach to the Host Program on Sunday. Instead of busing 310+ attendees, (the largest SNS meeting to date!) to a hospital conference room, as has been done for decades, we brought the UW Program to the audience in the comfort of the Fairmont Hotel. A homemade video starring Seattle, our neurological surgery residents and faculty was unveiled with much audience enjoyment. Thanks to the artistic editing of Bob Zat at UW Video, the narration of Ann Fillingham (academic assistant), and the tongue in cheek writing style of John Williams R-5, the story of our city, our university, our department and our residency was delivered with color, humor and factual relevance. The talks were executed in a SWOT analysis format and the subjects ranged from our residency program to each hospital's unique clinical expertise, to our teaching style, to our research programs and our entrepreneurial DNA. At the end, a lot of fun, a huge success and very unique! Again, "true" to the UW and Seattle's innovative character.



Fairmont Olympic Hotel

Benaroya Hall

Seattle Art Museum

Grand Rounds Visiting Professors



February 27, 2019, the Department welcomed Mark M. Souweidane, MD, Chairman, Neurological Surgery; Director, Pediatric Neurological Weill Cornell Medical College and Memorial Sloan-Kettering Cancer New York, NY) as a visiting professor. He presented on the topic of 'Direct Delivery as a Therapeutic Platform in Neurooncology.'



On March 6, 2019, the Department welcomed Aviva Abosch, MD, PhD, (Vice Chair for Research, Department of Neurosurgery; Director of Epilepsy, Functional & Stereotactic Neurosurgery; Professor of Neurosurgery and Neurology; University of Colorado School of Medicine; Aurora, CO) as a visiting professor. She presented on the topic of 'Sleep in Parkinson's Disease.'



On March 20, 2019, the Department welcomed Robert J. Dempsey, MD, FAANS, FACS, (Manucher J. Javid Professor and Chairman, Department of Neurological Surgery, University of Wisconsin School of Medicine and Public Health Madison, WI) as a visiting professor. He presented on the topic of 'Passion in Cerebrovascular Neurosurgery: Preserving What Is Noble In Our Profession.'

Robert Goodkin, MD Endowed Lectureship



On April 24, 2019, the Department welcomed Linda M. Liau, MD, PhD, MBA (Chair, Department of Neurosurgery; Professor, Department of Neurosurgery, UCLA David Geffen School of Medicine; Director, Brain Tumor Program, UCLA David Geffen School of Medicine) as the Robert Goodkin, MD Endowed Lectureship's guest speaker. She presented on the topic of 'Perspectives on Glioblastoma (1994-2019).'

Welcome New Staff



Sylvia Zavatchen has joined our admin team in the newly created position of Administrator of Education. In this role, Sylvia will manage the residency, clerkship, and fellowship programs, Grand Rounds, and the summer student program. Sylvia spent the past 15 years at the Cleveland Clinic and 12 of those years as the Residency Program Manager for Radiology. She is a published author, has spoken at national conferences and is the immediate past president of the Association for Program Coordinators in Radiology. Sylvia will be located on the 14th floor of NJB in office 1421. Her email is szavatch@neurosurgery.washington.edu and phone is 206-744-7077.



Sharon Durfy, PhD, has joined our team in the newly created position of Scientific Writer/Editorial Staff, and will lead the resident writing and publication process. Sharon is delighted to be returning to the University of Washington, where she was previously an Assistant Professor in the (then) Department of Medical History and Ethics. After owning two successful businesses, Sharon joins us most recently from Virginia Mason Medical Center where she managed the Urology Research Program and worked closely with residents, fellows and PIs on research processes and publications. Sharon is located on the 14th floor of NJB in office 1429, and welcomes you to drop in. Her email is sjdurfy@neurosurgery.washington.edu and phone is 206-616-1098.

Faculty Promotions

As of July 1, the Department of Neurological Surgery is pleased to announce the following promotion:

> Michael Levitt to Associate Professor

Monitoring, Treating Traumatic Brain Injury

Dr. Chesnut was featured in the May 22, 2019 issue of UW TODAY.

Every 15 seconds, someone in the United States sustains a traumatic brain injury resulting from external forces such as a car crash or a fall. Every five minutes, a person is disabled as a result. Dr. Randall Chesnut, a neurosurgeon at Harborview Medical Center, is UW Medicine's lead investigator in a national study of two standard-care approaches to monitoring and treating TBI. In one approach, care is focused on preventing high intracranial pressure caused by a swollen brain. The other approach aims to prevent both intracranial pressure and low brain oxygen levels. The study intends to generate data-based evidence about whether one approach is safer and more effective. Check out the *UW Medicine* article here: Studying how to monitor and treat TBI



Press on NSSSP Graduates

Brandon Carlson-Clarke and Chuc Le, students at Tacoma Community College and graduates of the 2018 Neurological Surgery Summer Student Program (NSSSP), were recently featured in the media:

https://thesubtimes.com/2019/02/19/brandon-carlson-clarke-named-jack-kent-cooke-scholarship-semi-finalist/

https://www.tacomacc.edu/tcc-life/stories/brandoncarlson-clarke-chucle

Save the Date

HMC Research and Training (R&T) Auditorium (Date TBD)

On August 5, a new book titled **SEATTLE'S MEDIC ONE: How We Don't Die,** by Clinical Professor Richard Rapport was published by The History Press. This is an account of the first really successful manufacture of a pre-hospital care system in the United States, and features a well-known and dearly loved cast of Seattle and Harborview heroic figures who made it happen. It can be argued (and the author will) that Medic One became the blueprint for paramedicine in America. Dr. Rapport read to a crowd of 120 at Elliott Bay Books on August 13th. Due to the closure of the R&T Building, Dr. Rapport's scheduled reading on September 17 has been postponed and will be rescheduled when the auditorium reopens.



PUZZLER

Dr. Minku Chowdhary

Director, Neurosurgery

Overlake Hospital

WINTER EDITION ANSWER

Donald Knuth: Knuth-Morris-Pratt algorithm for "Control F" searches of texts to efficiently find the words you are seeking. <u>NY Times</u> <u>Wikipedia</u>

SUMMER EDITION QUESTION

Question: Every year, Pantone recognizes a "Color of the Year." This year's color along with his death by the same substance that killed the man who shouted, "Vancouver! Vancouver! This is it!" will lead you to his name.

Bonus Clue: A famous Californian product from the heart of the fifth most populous area around San Francisco shares the same name.

We remain eager to publish stories and photos about all aspects and activities of the Department. Please share your memories, ideas and suggestions for stories and news items that expand our common ground. Please contact us at these email addresses:

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