



## 2018 IN REVIEW & WHAT TO LOOK FORWARD TO IN 2019

2018 flew by and was another amazing year of growth and transformation for **Pacific Neuroscience Institute**. Already in the first quarter of 2019 our multiple clinical and research projects are moving full steam ahead, and we look forward to further expanding our offerings, bringing world-class care to more patients. We are excited to be a cohesive, collaborative group of physicians and researchers with tremendous support from Saint John's Health Center Foundation, Saint John's Health Center and Providence Saint Joseph's Health, allowing us to serve more people in need and to advance clinical care with active participation in the development of new diagnostics and therapeutics, both surgically and medically.

**Here are HIGHLIGHTS of our accomplishments in 2018 and a look at what we have planned for 2019.**

Sincerely,

*Daniel F. Kelly, MD, Chester F. Griffiths, MD, FACS,  
Santosh Kesari, MD, PhD, and Howard R. Krauss, MD  
Pacific Neuroscience Institute Founders*

### **Our PNI Mission**

- ▶ Provide personalized, precision multidisciplinary patient care
- ▶ Advance the neurosciences and promote brain health through novel research and innovative clinical trials
- ▶ Train the next generation of clinician and research neuroscientists
- ▶ Educate patients and the community at large on vital neuroscience issues





## NEUROSCIENCE CLINICAL CARE

**2018** heralded our move into the new PNI-Santa Monica Outpatient Clinic at 2125 Arizona Boulevard, across from the Saint John's Emergency Room. We saw our first patient at this location on March 19th. We continued providing services for treating patients with benign and malignant brain tumors, pituitary tumors and related hormonal disorders, adult hydrocephalus syndromes, vision, throat and hearing disorders, facial pain syndromes, and movement disorders such as Parkinson's disease. We delivered care for stroke and other neurovascular diseases across several Southern California affiliates, and helped Providence achieve Thrombectomy-Capable Stroke Center status at Saint John's and Comprehensive Stroke Center status at Little Company of Mary and Providence Saint Joseph's Medical Center in Burbank. The PNI Medical Group added more neuro-oncological, neuro-interventional, and ENT faculty. We further deepened our collaborations with Hoag Health Network in Orange County.

On August 9th, we opened the brand new **Pacific Brain Health Center** at 1301 20th Street, Suite 145. The multidisciplinary practice spans specialized geriatric family medicine and psychiatry, clinical psychology, adult neurology, and cancer psychiatry. The experienced brain health team was immediately busy seeing

patients with Alzheimer's disease and other dementias, as well as memory loss, neurocognitive disorders and conditions directly impacted by brain health such as neuromuscular disorders and balance issues. With our specialized multimodal approach, patients can see multiple experts often in a single visit, and can be referred to our unique in-house physical and cognitive exercise program, which works to enhance brain health. The new comprehensive brain health website [PacificBrainHealth.org](http://PacificBrainHealth.org) launched in October.

**2019** sees further expansion on the horizon. The Brain Health Center will be filling out more of the Saint John's Medical Plaza building with additional consultation rooms on the first floor and a high tech cognitive fitness (CogFit) gym on the third floor to be completed in September. We are planning a new Pacific Spine Center at PNI-South Bay and expanding our location with a new state-of-the-art-clinic in Torrance. We will be expanding neuro-ophthalmic, audiology and pituitary hormonal testing into the Brain Health Center, advancing the clinical utility of retinal, hearing and endocrine evaluations in the optimal management of patients with memory, cognitive and balance issues. We will also further expand services in the realm of neuroinflammatory diseases, including multiple sclerosis.



# CLINICAL TRIALS

## AT PACIFIC NEUROSCIENCE INSTITUTE

### CLINICAL TRIALS & RESEARCH

**2018's** roster of novel surgical and neuro-oncological **clinical trials** as well as numerous peer-reviewed publications continued to rapidly expand encompassing benign and malignant brain tumors, pituitary tumors, stroke, and movement disorders. In total, PNI and the John Wayne Cancer Institute had over 30 neuro-oncology clinical trials open for enrollment, including a surgical vagal nerve stimulation device for stroke rehabilitation, stem cells for traumatic brain injury, and immunotherapy for brain cancer. In addition, we were the lead enrolling center for the Nativis study of the Voyager System that uses electromagnetic oscillating fields in patients with newly diagnosed glioblastoma. Our new trials for essential tremor and Parkinson's disease opened in late 2018. Several investigators have also been awarded research support from the Dana Foundation, Uncle Kory Foundation, and Matthew Larson Foundation. Our PNI faculty has published over 50 peer-reviewed neuroscience papers.

**2019** will see numerous new PNI clinical trials opening for our patients with primary brain cancers, metastatic brain tumors, pituitary tumors, movement disorders and Alzheimer's disease. The highly innovative **PIN trial** (Precision Immunotherapy in a Neoadjuvant setting) is underway. A recent donation allowed us to add three new arms to the study (six arms in all) and

we expect to enroll patients into these arms in 2019. With additional funding we can open additional arms based on what we learn from current participants. This year will see the commencement of our newly funded clinical research trials in Brain Health. Our largest project, which will have extensive clinical applicability, is the **PREVENTION trial** (Precision Recommendations for Environmental Variables, Exercise, Nutrition and Training Interventions to Optimize Neurocognition) for older adults with cognitive impairment and underlying Alzheimer's disease pathology. In collaboration with Institute for Systems Biology, this study will strive to develop a comprehensive biomarker dataset for Alzheimer's disease to aid in early risk detection, and institute a comprehensive approach for slowing or halting progressive cognitive decline. We will also collect data from our new Ball and Fall Prevention Program to reduce falls in older adults. Additionally, we will test the efficacy of novel digital therapeutics to improve quality of life in those suffering with cognitive and behavioral disturbances. We will grow our novel therapeutics program for cancer-related psychological care and addiction by submitting pilot grant proposals. We are also poised to publish multiple manuscripts that are currently in progress. Finally, several new grant applications will also be submitted.



## TRAINING & CONTINUING MEDICAL EDUCATION

**2018** continued to be filled with **training and education opportunities** for our 2018-19 clinical neurosurgical fellow, as well as ten visiting international fellows including those from China, Spain, Chile, England and Armenia learning under the direction of PNI faculty. We were host to two interns through the PNI Neuroscience Internship Program with Pomona College and two undergrad volunteer observers from UCLA. The Neuroanatomical Surgical Skills Laboratory has continued to be a platform for innovation and fellowship training in minimally invasive skull base surgery, neuroanatomical dissections, and technology and approach advancements in keyhole surgery. PNI was the local host for both the International Society of Pituitary Surgeons meeting in San Diego and the 9th Annual Neuroscience Nursing Symposium in Santa Monica. Throughout the year, PNI professors presented at multiple national and international conferences

across the neurosciences including Egypt, China, India, Spain, Colombia, and many cities throughout the United States. Our Medical-Assistants-In-Training (MA-T) program had another successful year.

**2019's** PNI fellowships will extend into neuro-oncology and ENT/otolaryngology, and we will continue bringing in participants through our PNI Neuroscience Internship and Observation Programs. In January, we co-hosted the **Pacific Rim Hands-on Master Class** in Endoscopic Endonasal and Keyhole Surgery in collaboration with Ohio State University. Later this year in the Fall, we will present our annual PNI Neuroscience Nursing Symposium, now in its 10th year. Finally, the new and expanded PNI multidisciplinary **Neuroanatomical Surgical Skills Laboratory**, which has been under construction at the John Wayne Cancer Institute, is scheduled to open in April.



## PATIENT & COMMUNITY EDUCATION

**2018** was a year of continued support for our patients both in person through our **support groups** and on the web with numerous educational and informative **PNI blogs**. Through our new relationship with the Santa Monica Star we have begun a regular monthly community education column primarily focused on brain health issues. Our pituitary patient support group continued its bi-annual meetings at Saint John's Health Center. Our movement disorders and stroke teams also had multiple patient and community events at Saint John's and Little Company of Mary Torrance. Our brain health team initiated an Alzheimer's disease support group for caregivers. Experts from our centers of excellence have participated in Saint John's Community Education series presenting important prevention and

care information to our local populations. The stoke team continues to nurture community relationships with many education events and multiple outreach and training events for EMS of SMFD and LAFD.

**2019** will be another year with ongoing focus on patient support and education for those with brain tumors, pituitary tumors, stroke, movement disorders, and neurodegenerative conditions. We will expand our brain health initiative exploring and recommending ways for people to maximize their cognitive fitness including high performance optimization and executive health. We anticipate an expansion in our **international patient program** through broader outreach efforts.



## FOUNDATIONS SUPPORT PROGRESS & INNOVATION

**2018** continued building the philanthropic partnership between our two foundations with Saint John's Health Center Foundation taking the fundraising lead in partnership with the PNI physicians to support and ensure critical funding to propel PNI forward. Saint John's Foundation committed funding that helped establish the Pacific Brain Health Center and many additional donors stepped up to provide much needed funding for our research initiatives including our innovative immunotherapy PIN trial, stroke stem cell study, simultaneous cognitive training and physical fitness study, and many more. We kicked off a multi-year fundraising initiative in which we received donations that helped launch key PNI research programs and initiatives focused on prevention, quality of life, and finding cures. Our first big event of 2018 was the very well attended PNI Clinic Opening in May 2018.

We are grateful to our PNIF Board of Directors: Jae Goodman, Blaine Lourd, Carole Schwartz, Donna Tuttle and Carla Mann Woods, as well as Rusty Doms, Mary Flaherty, Bob Klein and Donna Schweers who serve as PNIF Special Advisors.

**2019** will continue to focus on fundraising to meet our mission and expand the availability of innovative life-altering and life-sustaining treatments for our current and future patients with all types of neurological disorders. This will be a truly collaborative effort with Saint John's Foundation and the John Wayne Cancer Institute aimed at fueling innovative, translational and clinical research projects, clinical trials support, peer-reviewed publications, database infrastructure, neuroanatomical surgical skills laboratory, fellowship training, faculty recruitment, patient education and community outreach. In partnership with the Venice Family Clinic, PNIF will launch a hearing aid recycling program that will help patients who cannot afford them on their own.

For more information about how to support the Pacific Neuroscience Institute, please contact **PNIF Foundation** at 310-829-8424.

*In memoriam: We fondly remember Rusty Doms (1940 - 2019) who was a longstanding supporter of Pacific Neuroscience Institute and Saint John's Health Center Foundations.*

# 2018 BY THE NUMBERS

## NEUROSCIENCE CLINICAL CARE



- 9 Centers of Excellence
- 26 Medical Group Faculty
- 21 Associate Medical Group Faculty
- 9 Nurse Practitioners and Physician Assistants
- 4 Medical Group Outpatient Clinics
- 6 Providence Hospitals Affiliated with PNI Medical Group Physicians
- 8087** Medical Group Surgical Procedures  
(Neurosurgical 636 / Neurointerventional (Stroke) 757 / ENT & Ophtho 5444)

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## RESEARCH & CLINICAL TRIALS



- 51 Peer-Reviewed Publications and In Press
- 6 Grants
- 21 Clinical Trials & Expanded Patient Protocols
- 436** Clinical Trial Patients Enrolled and Consented

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## TRAINING & CONTINUING MEDICAL EDUCATION



- 63 CME Conferences (Weekly, Monthly and Annual)
- 1 Neuroscience Nursing Symposium
- 4 Neuro-Anatomy Brain-Cutting Sessions
- 12 Neuro-Anatomy Formal Dissections
- 10 Neurosurgical Fellows in Training (Clinical and International)
- 1 Movement Disorders PT Fellow in Training
- 6 Medical Assistants In Training
- 4 Neuroscience Interns (Undergraduate and Graduate)

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## PATIENT & COMMUNITY EDUCATION



- 27 Patient Support Group Sessions
- 17 Community Events
- 55 Blogs

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## FOUNDATIONS SUPPORT NEUROSCIENCE PROGRESS & INNOVATION



- 9 PNIF Board Members
- 4 Special Advisors
- 5 Fundraising Events
- \$10,321,618** Funds Raised in Partnership with Saint John's Foundation