

CURRICULUM VITAE

PERSONAL DATA

Luis Fermin Cava Prado, MD
Citizenship: U.S.A.



11/19/2019

ADDRESS

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Clinical Licensure and Specialty Board Certifications

2006-2011 Medical Licensure, Alabama
2011- Medical Licensure, Colorado
2010- Board Certified – Neurology, American Board of Psychiatry and Neurology
2011- Board Eligible – Vascular Neurology, American Board of Psychiatry and Neurology
2013- Board Certified – Neuro-critical Care, United Council of Neurological Subspecialties

EDUCATION

1995-2003 Universidad Peruana Cayetano Heredia, School of Medicine, Lima-Peru (medicine)
MD
2007 University of Alabama, Birmingham, AL (medicine) Internship
2010 University of Alabama, Birmingham, AL (neurology) Residency
2011 University of Alabama, Birmingham, AL (vascular neurology) Fellowship
2013 University of Colorado, Aurora, CO (neuro-critical care) Fellowship

ACADEMIC APPOINTMENTS

2013 Assistant Professor, Department of Neurosurgery, University of Colorado

2011-2013 Neurological Critical Care Fellowship rank, Instructor
Department of Neurosurgery and Neurology
University of Colorado School of Medicine
Denver, CO

CLINICAL/HOSPITAL APPOINTMENTS

- 2013- Co-Director Neuro-Critical Care Unit, University of Colorado Hospital
Colorado, Anschutz Medical Campus
- 2013- University of Colorado School of Medicine, Attending Medical Physician
Aurora, CO

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

- 2013 Neuro-critical Care Society
2015 – Society of Critical Care Medicine

HONORS

- 1993 Graduated First in High School Class
2003 Graduated 5th in class of 100, Universidad Peruana Cayetano Heredia,
School of Medicine, Lima-Peru
- 2008,
2010 90th Percentile in the RITE-Neurology In-service Exam
2010 Neurology Resident Vascular Neurology Excellence Award

INVITED LECTURES AND EXTRAMURAL PRESENTATIONS:

- 2013-present **Management of Intra and Extracranial Complications in the NICU Patient**
Neurosurgery Grand Rounds
University of Colorado School of Medicine

TEACHING AND MENTORING ACTIVITIES:

- 2013-present Daily Multi-Disciplinary Director's Teaching Rounds
ICU Fellow
Neurosurgery & Neurology Residents
Nursing Leadership
Pharm-D and Pharmacology Fellows
Respiratory Therapy Team
Nutrition Team
Clinical Research Team
Physical and Occupational Therapy Teams
Social Work Services
Applicable Consultants
- 2007 Instructor
First Annual Department of Neurosurgery Skull Base Dissection Course
University of Colorado School of Medicine
Course Director: Steven Ojemann

MENTEES:

2019-present Ryan Williamsn, PA-C, MPAS
Neurocritical care physician's assistant
University of Colorado School of Medicine

2016-present Atsuhiro Saisho, PA-S, PA-C
Neurocritical care physician's assistant
University of Colorado School of Medicine

2016-present Steven Mikesell, PA-S, PA-C
Neurocritical care physician's assistant
University of Colorado School of Medicine

2013-2015 David Case, MD
Fellow, Department of Neurology
University of Colorado School of Medicine

SCIENTIFIC ACTIVITIES

ONGOING RESEARCH SUPPORT

Lungpacer Medical, inc Pending
The purpose of this study is to test the Lungpacer Diaphragm Pacing Therapy System (LDPTS) in patients who have failed to wean from mechanical ventilation by stimulating the phrenic nerves to help strengthen the diaphragm in order to allow patients to wean from mechanical ventilation sooner.
Role: Site Co-I (PI: Neumann)

Investigator-Initiated, OT/Delirium Pending
The purpose of this study is to answer the question: can increased Occupational Therapy (OT) interventions play a role in preventing delirium in patients diagnosed with subarachnoid hemorrhage admitted to the NeuroICU?
Role: Site Co-I (PI: Neumann)

Investigator-Initiated, Cefazolin/CSF 09/16/2019-present
The purpose of this study is to assess the pharmacokinetics of cefazolin in neurosurgical intensive care unit (NICU) patients determine if cefazolin achieves therapeutic concentrations in the CSF when administered parenterally.
Role: Site Co-I (PI: Krask)

Biogen 09/24/2019-present
Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Phase 3 Study to Evaluate the Efficacy and Safety of Intravenous BIIB093 (Glibenclamide) for Severe Cerebral Edema following Large Hemispheric Infarction
Role: Site Co-Investigator

CR Bard, Inc. 02/22/2019-Present
The goal of this study is to determine if fever prevention, using the Arctic Sun Temperature Management System, improves outcomes in brain injured patients.
Role: Site PI: Luis Cava

Investigator-Initiated, TEG 01/03/2018-Present
The purpose of this study is to better characterize coagulopathies present in patients with central nervous system (CNS) pathologies. The primary objective of this study is to evaluate how thrombelastography (TEG) compares to conventional coagulation assays (CCA) and platelet function assays (such as P2Y12 reaction units, PRU) in predicting platelet inhibition and venous thromboembolic events (VTE).
Role: Site Co-I (PI: Coleman)

Shionogi 10/01/2018-present
The study is being performed in patients with bacterial pneumonia to determine how safe the experimental drug, cefiderocol, is and also to evaluate the pharmacokinetics of the drug in blood and lung secretions.
Role: Site PI: Luis Cava

Investigator-Initiated, IV Nicardipine 04/17/2015-present
In this project, we plan to report the outcomes, experience, and safety profile of two of our patients treated with intraventricular nicardipine every six hours for refractory cerebral vasospasm. Currently available data supports the use of nicardipine administered directly into the ventricles in the brain to treat blood vessel spasm in the brain only every 12 to 8 hours.
Role: Site Co-Investigator

Investigator-Initiated, Waveform 08/23/2013-present
The goal of this project is to collect physiological waveform and numeric trend data from patient vital signs monitors and combine it with clinical data in order to apply Machine Learning techniques that could be used to predict common clinical conditions, which include: post-op cardiac dysrhythmias and tamponade; tension pneumothorax; optimal post-op and post-resuscitation fluid needs; and intracranial hypertension and cerebral perfusion pressure.
Role: Site Co-Investigator

Investigator-Initiated, TBI/Exosome 04/29/2014-present

This study is designed to learn more about the presence of exosomes in blood, urine, and CSF from patients with a traumatic brain injury. Biospecimens are collected from patients with mild, moderate and severe TBI at 24 hours-, 7 days- and 30 days-post injury.

Role: Site Co-Investigator

Completed Research Support

Investigator-Initiated, SE

06/17/2016-09/04/2019

The University of Colorado Status Epilepticus Outcomes Study is a prospective, observational, multi-year, clinical investigation of outcome in adult patients consecutively admitted to the hospital with a diagnosis of status epilepticus (SE), or who develop SE during hospitalization. The primary goal of the study is to identify factors that lead to improved cognitive and functional outcomes in survivors of status epilepticus. The study also will provide valuable information on longer-term mortality and outcomes that could help guide SE treatment regimens and assist in the design of future SE clinical trials.

Role: Site Co-Investigator

Arsanis, Inc. ASN100

11/29/2016-08/23/2018

The purpose of this phase 2, randomized, double-blind, and placebo-controlled study is to determine the safety and efficacy of a single dose of ASN100 for the prevention of Staphylococcus aureus pneumonia in heavily colonized and mechanically ventilated subjects admitted to the neuro-ICU.

Role: Site Co-Investigator

Investigator-Initiated, Arginine

06/24/2014-09/26/2016

In this prospective study blood samples were collected from participants at precise intervals following admission to the neuro-ICU with a stroke or traumatic brain injury. The samples were evaluated for the presence and levels of Arginase I with the intent of evaluating the role of arginine deficiency and immune dysfunction following neurologic injury.

Role: Site Co-Investigator

Advanced Circulatory Systems, Inc. CirQlator™

01/21/2014-4/21/2017

This prospective, interventional study was designed to evaluate the effects of a device called the CirQlator™ Intrathoracic Pressure Regulatory (ITPR). Eligible and consented patients who had a brain injury or brain surgery were treated with the ITPR. The primary endpoint was the change from baseline cerebral perfusion pressure (CPP) compared with the CPP during use of the ITPR.

Role: Site Co-Investigator

Meiji Seika Pharma Co., Ltd. ME1100

12/2/2015-05/26/2017

In this randomized, open-label phase 1b study neuro-ICU patients who were both mechanically ventilated and had a confirmed bacterial pneumonia received treatment with ME1100 inhalation solution plus best available therapy for the treatment of their ventilator-associated bacterial pneumonia.

Role: Site Co-Investigator

ANNOTATED BIBLIOGRAPHY

Mueller SW, Baumgartner LJ, MacLaren R, Neumann R, Wiktor AJ, Kiser TH, Lindberg G, **Cava L**, Fish DN, Janoff EN. Divergent humoral responses to 23-valent pneumococcal polysaccharide vaccine in critically-ill burn and neurosurgical patients. *PLoS One*. 2018 May 14;13(5):e 0197037. doi: 10.1371/journal.pone.0197037. eCollection 2018. PMID: 29758059

Harland TA, Seinfeld J, **Cava LF**, Neumann RT, Roark C, Kumpe D, Case D. Anti-neutrophil cytoplasmic antibody associated central nervous system vasculitis with brain and spinal cord subarachnoid hemorrhage: A rare case report and review of the literature. *J Clin Neurosci*. 2018 Dec 26. pii: S0967-5868(18)31795-8. doi: 10.1016/j.jocn.2018.12.001. [Epub ahead of print] PMID: 30594448 DOI: 10.1016/j.jocn.2018.12.001

Case D, Kumpe D, **Cava L**, Neumann R, White A, Roark C, Seinfeld J. Ruptured Distal Posterior Inferior Cerebellar Artery (PICA) Aneurysms Associated with Cerebellar Arterial Venous Malformations (AVMs): A Case Series and Review of the Literature Demonstrating the Need for Angiographic Evaluation and Feasibility of Endovascular Treatment. *World Neurosurg*. 2017 Jan;97:751.e7-751.e13. DOI: 10.1016/j.wneu.2016.10.081. PMID: 27793767

Van Matre ET, Mueller SW, Fish DN, MacLaren R, **Cava LF**, Neumann RT, Kiser TH. Levetiracetam Pharmacokinetics in a Patient with Intracranial Hemorrhage Undergoing Continuous Venovenous Hemofiltration. *Am J of Case Rep*. Apr 2017;18:458-462 DOI: 10.12659/AJCR.902709 PMID: 28446744

Hong LT, Goolsby TA, Sherman DS, Mueller SW, Reynolds P, **Cava L**, Neumann R, Kiser TH. Continuous infusion vs intermittent vancomycin in neurosurgical intensive care unit patients. *J Crit Care*. 2015 Oct;30(5):1153.e1-6. DOI: 10.1016/j.jcrc.2015.06.012 PMID: 26239323

Boehme AK, Rawal PV, Lyerly MJ, Albright KC, Bavarsad Shahripour R, Palazzo P, Kapoor N, Alvi M, Houston JT, Harrigan MR, **Cava L**, Sisson A, Alexandrov AW, Alexandrov AV. Investigating the utility of previously developed prediction scores in acute ischemic stroke patients in the stroke belt. *J Stroke Cerebrovasc Dis*. 2014 Sep;23(8):2001-6. DOI: 10.1016/j.jstrokecerebrovasdis.2014.02.003. PMID: 25113079

Griessenauer CJ, Fleming JB, Richards BF, **Cava LP**, Curé JK, Younan DS, Zhao L, Alexandrov AV, Barlinn K, Taylor T, Harrigan MR. Timing and mechanism of ischemic stroke due to extracranial blunt traumatic cerebrovascular injury. *J Neurosurg*. 2013 Feb;118(2):397-404. doi: 10.3171/2012.11.JNS121038. Epub 2012 Dec 7. PMID: 23216467

Barlinn K, Barreto AD, Sisson A, Liebeskind DS, Schafer ME, Alleman J, Zhao L, Shen L, **Cava LF**, Rahbar MH, Grotta JC, Alexandrov AV. CLOTBUST-hands free: initial safety testing of a novel

operator-independent ultrasound device in stroke-free volunteers. *Stroke*. 2013 Jun;44(6):1641-6. DOI: 10.1161/STROKEAHA.113.001122. PMID: 23598523

Tsivgoulis G, Zhang Y, Alexandrov AW, Harrigan MR, Sisson A, Zhao L, Brethour M, **Cava L**, Balucani C, Barlinn K, Patterson DE, Giannopoulos S, DeWolfe J, Alexandrov AV. Safety and tolerability of early noninvasive ventilatory correction using bilevel positive airway pressure in acute ischemic stroke. *Stroke*. 2011 Apr;42(4):1030-4. Doi: 10.1161/STROKEAHA.110.600221 PMID: 21372308

Harrigan MR, Weinberg JA, Peaks YS, Taylor SM, **Cava LP**, Richman J, Walters BC. Management of blunt extracranial traumatic cerebrovascular injury: a multidisciplinary survey of current practice. *World J Emerg Surg*. 2011 Apr 8;6:11. doi: 10.1186/1749-7922-6-11. PMID: 21477304

Zhao L, Barlinn K, Sharma VK, Tsivgoulis G, **Cava LF**, Vasdekis SN, Teoh HL, Triantafyllou N, Chan BP, Sharma A, Voumvourakis K, Stamboulis E, Saqqur M, Harrigan MR, Albright KC, Alexandrov AV. Velocity criteria for intracranial stenosis revisited: an international multicenter study of transcranial Doppler and digital subtraction angiography. *Stroke*. 2011 Dec;42(12):3429-34. DOI: 10.1161/STROKEAHA.111.621235. PMID: 21960567

Zhao L, Barlinn K, Bag AK, Kesani M, **Cava LF**, Balucani C, Alexandrov AW, Horton JA, Patterson DE, Harrigan MR, Albright KC, Alexandrov AV. Computed tomography perfusion prognostic maps do not predict reversible and irreversible neurological dysfunction following reperfusion therapies. *Int J Stroke*. 2011 Dec;6(6):544-6. doi: 10.1111/j.1747-4949.2011.00681.x. PMID: 22111800

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