Ian Elliott Brown, M.D., Ph.D.

Philosophy of Care

In trauma, often the injuries are much more than the cuts and bruises and fractures. Treating the whole patient requires true empathy and a kind of humility and willingness to consider that it is difficult to completely understand the complexity of another person's lived experience but essential to try. I like to think that we do much more than procedures and operations and that the impact of our care should extend well beyond when the patient leaves our door.

Clinical Interests

Ian Brown has a broad interest in trauma with a particular focus on acute coagulopathy and endotheliopathy in trauma. Additionally, he has a strong interest in curbing violence-related trauma recidivism and is a co-founder of the UC Davis Wraparound Hospital-based Violence Intervention Program.

Research/Academic Interests

In Dr. Brown's role as a surgeon and researcher, he has two primary interests. The first is in understanding the intersection between coagulation and inflammation in the setting of acute severe trauma and how this interplay impacts outcomes through consequences of coagulopathy and endotheliopathy. His second focus is on social determinants health that contribute to violence-related trauma recidivism and how hospital-based violence intervention programs (HVIP) such as the UC Davis Wraparound HVIP can disrupt cycles of violence through trauma-informed, culturally competent interventions.

Our lab investigates the role of cell-adhesion molecules such as P-selectin in inflammatory processes and intravascular thromboembolic injury in the setting of trauma. We previously developed a model of blunt thoracic trauma and found that in situ pulmonary arterial thrombosis (PAT) in the model was dependent on the presence of the cell adhesion molecule P-selectin. By understanding the natural history of PAT and the role and regulation of P-selectin in this history, we seek to help determine the necessity of intervention and to investigate the efficacy of P-selectin blockade as an alternative to anti-coagulation for intervention. More broadly, cell adhesion molecules such as P-selectin likely play a role in thrombosis in the setting of vascular injury, vascular repair, injuries of ischemia and reperfusion, and potentially in the setting of infection and sepsis. Understanding the biology of cell adhesion molecules such as P-selectin may therefore contribute to the continuing evolution of resuscitation paradigms that improve trauma-associated outcomes.

With the Wraparound HVIP, we incorporate trauma-informed, relationship-based mentoring, culturally affirming case management, and partnerships with natural and community supports to facilitate holistic recovery from violent injury and reduce the risk for future violence involvement. Our Violence Intervention Specialists are trained to use a foundation of cultural competency and lived experience to provide crisis intervention, case management, mentoring, and connection to community resources. We use a mixed methods approach with quantitative and qualitative data

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	analysis to understand the social determinants that contribute to violence-related trauma and to evaluate the impact and efficacy of interventions.
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Internships	General Surgery, UC San Francisco Medical Center, San Francisco CA 2007-2008
Residency	General Surgery, UC San Francisco Medical Center, San Francisco CA 2007-2014
Fellowships	Trauma and Surgical Critical Care, UC Davis Medical Center, Sacramento CA 2014-2015
Professional Memberships	Shock Society Society of Critical Care Medicine UC Davis Surgical Association UC San Francisco Naffziger Surgical Society University of Chicago, Pritzker School of Medicine Bowman Society
Honors and Awards	American Surgical Association Foundation Fellowship Research Award, 2020 American Association for the Surgery of Trauma, Acute Care Surgery Research Scholarship, 2019 UCSF Azakie-Chesson Award for Compassion in Surgery, 2014
Select Recent Publications	Brown IE. Comment on 'The Long-term Risk of Venous Thromboembolism After Blunt Splenic Injury Managed by Embolization'. Ann Surg. 2020 Mar;271(3):e101. doi:10.1097/SLA.

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