

Testimony of Captain Adam Marr. (US Army, Ret.)

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"Separating Fact from Fiction: Exploring Alternative Therapies for Veterans' Mental Health"

Introduction: Who I Am and Why This Matters

Senator Tuberville, thank you for the honor of testifying at this field hearing on Alternative Therapies. My name is Adam Marr, and I am a U.S. Army Veteran based in Slocomb, Alabama. My testimony today is grounded in my lived and professional experience—as an Army Captain and AH-64 Apache pilot with over 1,500+ flight hours, including 400+ combat hours deployed to Iraq; as a brother navigating the trauma of war within my own family; as the Co-Founder of the Warrior Angels Foundation; as a former change management consultant at Accenture; and now as a national consultant transforming care for Veterans by working with high-impact organizations like the Veteran Mental Health Leadership Coalition (VMHLC) as their Director of Operations and American Legion as their national podcast cohost.

I am humbled to provide testimony in Alabama-the first place I lived after graduating Texas Christian University and commissioning as a 2nd Lieutenant in the United States Army, I was stationed at Fort Rucker where I completed training to become an AH64 Apache Helicopter Pilot. It is here that I met my beautiful wife, an Alabama native, and where I've since established a life with my family. Today, we live in our home on 30 acres we are proud to own, with our three beautiful children, and a close-knit community that has supported us throughout our journey. I feel blessed to have reached a place in my life where I can say that I am physically, mentally, emotionally, spiritually, and morally healthy, and living a life of Christ centered service and purpose.

Dedication

My testimony today is dedicated to my father, Woody Marr, who went home to be with the Lord this year. He loved his sons, his wife, and his walk with Jesus Christ more than anything. He watched all four of his sons serve-three in combat-and prayed every day we'd come home. We did. We just didn't know that's where the real battle would begin.

My Family's Story: Why This Fight is Personal:

My older brother Andrew, a Special Forces Green Beret, came home with TBI and PTSD from blast injuries. The system's answer? Thirteen medications to mask memory loss, anxiety, depression, and rage among other symptoms. Their words: "This is your new normal." My younger brother Austin, after two combat tours, was medically separated after a training injury. Over five years he lost his community, spiraled into depression, was diagnosed with a mood disorder, and was put on SSRIs. One night I found him unresponsive after he tried to take his life.

And me-the middle brother-I brought my soldiers home safely, and watched my own brothers collapse.

This isn't just our story-it's an American Veterans' story. I've heard it hundreds, if not thousands, of times. And here's what we learned: Veterans aren't broken. The system is. For decades, care

has numbed instead of healed-pills, brief talk therapy that prioritizes a session agenda over a Veteran's needs and preferences, and labels that never touch the root cause, which often include a complex mix of biological, psychological, spiritual, and social domains.

The Broken System: Why Veterans Keep Falling Through the Cracks

- Disrupted brain networks, changes in structure, function, and brain-matter integrity from blast exposure and concussive injuries[1-10]
- Neuroendocrine collapse from chronic stress and trauma[11-20]
- Neuroinflammation and oxidative stress triggered by toxic exposures[21-26]
- Genetic vulnerabilities and epigenetic changes left unexamined[27-35]
- Gut dysfunction, microbiome imbalance, and nutritional depletion[16, 36-46]
- Deep moral and spiritual injuries from wartime actions or systemic betrayal[47-57]
- Disconnection from tribe, identity, and purpose[48, 58-65]

In the last twenty years, we've lost more Veterans to suicide and overdose than in Iraq, Afghanistan, and Vietnam combined [66-69]. The system is built to stabilize-it doesn't restore. When survival is all we are offered, too many lose hope. A recent *Wall Street Journal* exposé highlighted the VA's "combat cocktail" polypharmacy to treat PTSD, TBI, and related mental health conditions [70]. The VA's own PTSD expert workgroup said back in 2017 there's a lack of supporting evidence for this approach-yet it's only gotten worse [71].

Leading scientific bodies describe a persistent quality chasm driven by access barriers and fragmented and ineffective care, and they call for scaling recovery-oriented, person-centered approaches that measurably improve quality of life [72-76].

A Better Way: Whole-Person, Hope-Driven Care

I recognize there are changes underway inside the VA-but this can't just be about staffing shifts and reductions or Veteran lives will continue to be lost-we need to prioritize system evolution. This does not mean an abandonment of conventional tools or the VA's critical infrastructure. We are calling for a system that finally honors the full spectrum of healing—biological, psychological, and spiritual. We are calling for a system that does not treat the brain and body as two separate entities, but rather a whole integrated person. We are calling for a system that puts the patient's needs before quotas. We are calling for a system that returns the "psyche" (Greek word, soul) back in psychiatry and acknowledges moral injury as real and the pain of lost belonging, connection and identity. Unlike PTSD, which is fear-based, moral injury fractures meaning and erodes trust, leaving Veterans with shame, guilt, and disconnection that conventional trauma therapies rarely resolve. We are calling for a system that takes a 'leave no stone unturned' approach to finding, developing, and implementing emerging alternative treatments with any potential to offer healing rather than treading water in the status quo while Veterans continue to struggle and die.

Without this, we'll continue down our tragic path of polypharmacy where too many Veterans experience minimal temporary relief and brutal side effects, fail to get the care they need, get stuck with unfortunate labels like "treatment-resistant," and eventually, they stop showing up. Not because they don't care, but because they've lost hope. This is the moment many begin to seek alternative therapies outside the system, some legal, some not. And this is also the moment where innovation must meet them. It is wrong that so many Veterans have been forced to leave the country they served or risk criminal penalties to access life-saving treatments when they have exhausted all other options. Our great nation should be able to create a better system than this. There must be a path ahead that isn't just the status quo, take more pills, and 'keep on keeping on.'

Veteran Innovation: Solutions We Built When the System Failed

Out of desperation, Veterans have been building something different: emerging therapies delivered with clinically rigorous models of care and Veteran-led wraparound services. For Andrew and me, it started with a neuro-restorative protocol from Millennium Health Centers when nothing else worked. He got off all 13 medications. It saved his life. In 2015 we founded one of the first post-9/11 nonprofits focused on TBI and PTSD and partnered with Dr. Mark Gordon to help hundreds more. Sometimes, that still wasn't enough.

In 2018, after Austin's suicide attempt, he went to Dr. Martin Polanco at The Mission Within in Mexico for 5-MeO-DMT, a short-acting psychedelic that gave him just enough breakthrough to hold on. Weeks later, I began my own journey with 5-MeO-DMT and ibogaine - another very powerful, long-acting psychedelic medicine. To be clear, these psychedelic therapies are not without risk; they require careful screening, clinical oversight, and real preparation and integration work. In the case of ibogaine, due to cardiac risks, constant EKG and medical monitoring are required. These are not one-size-fits-all, not safe or appropriate for everyone, and not a panacea or cure all; however, for me, it was one of the most profound experiences of my life - clearing my mind, reconnecting me to my faith in Christ, restoring my health, and giving me the will to fight for others.

Across the country, Veterans have risen from the ashes to form new organizations helping our brothers and sisters access psychedelic therapies, transcranial magnetic stimulation (TMS), hyperbaric oxygen, ketamine therapy, stellate-ganglion block, and whole-health care, with wraparound peer-led and ongoing community support for Veterans and their families. Through the Veteran Mental Health Leadership Coalition, where I serve as Director of Operations under Lt Gen. Martin R. Steele, USMC (Ret.), we've united Veterans, families, clinicians, researchers, and mission-aligned partner organizations on the front lines of the crisis to educate and advocate for emerging therapies and improved models of care - informed by lived experience and contributing to a growing body of research.

Notably, observational study reports demonstrate fast-tracked, robust improvements across PTSD, depression, anxiety, suicidal thoughts and behaviors, anger, and substance misuse following ibogaine and 5-MeO treatment in Veteran cohorts [77-80]. Importantly, these Veterans also reported, consistent with my own experience, improvements in cognitive flexibility, meaning and purpose, connection to oneself, others, the world, the divine, and reduced moral injury [77-81]. Veteran-focused studies with psilocybin are yielding similarly positive results. Unfortunately, last year, the FDA declined to approve MDMA-assisted therapy after two Phase 3 trials with incredibly strong results based on agreed upon FDA endpoints - which we believe was the wrong decision and a tragic setback for Veterans and other PTSD patients.¹

While today's hearing is about "Alternative Therapies" - which could describe most anything outside of the VA's standard polypharmacy - this is a phrase that often carries stigma. When it comes to psychedelics, I prefer emerging or breakthrough therapies, as nearly every major psychedelic - MDMA, psilocybin, DMT, LSD, ibogaine, 5-MeO-DMT, methylone - are in FDA-regulated trials; and six have FDA Breakthrough Therapy designations, indicating they might be significantly more effective than our current options for specific conditions. The Breakthrough Therapies include MDMA-assisted therapy and methylone for PTSD; three different psilocybin therapies for depression; and an LSD-based drug for generalized anxiety disorder. Generally, these psychedelic therapies show the potential to provide rapid and robust improvements in symptoms across various mental health conditions (e.g. PTSD, depression, anxiety, substance use disorders) - when used under careful conditions with preparation, clinical oversight, and integration - and they can facilitate meaningful durable changes in behavior and functioning. They are particularly promising for patients who have not benefited from existing treatments.

Despite the promising results, psychedelic therapies face burdensome regulatory barriers to research and cannot be accessed under the Right to Try Act passed by President Trump in 2018. The minimal federal funding to research these psychedelic therapies is even more difficult to understand, particularly for those designated Breakthrough Therapies for PTSD and depression. The VA has provided a grand total of \$1.5 million for a single study of MDMA-assisted therapy to treat Veterans with comorbid PTSD and alcohol use disorder. How has the VA not been leading the charge here? Why have they not been supporting this research at a large scale? This minimal funding is inexcusable given the VA's \$980 million annual research budget and how many years into promising research we are with these interventions.

We appreciate the VA has taken some steps to launch an Integrated Project Team and identify gaps in research and implementation,² yet the lack of funding and resources to carry out this work

¹https://www.reasonforhope.org/post/reason-for-hope-vmhlc-submit-comments-for-mdma-drug-application-to-fda-advisory-committee; https://www.reasonforhope.org/post/reason-for-hope-and-vmhlc-provide-comments-to-reagan-udall-foundation-for-the-fda-on-advancing-treat

² https://www.ptsd.va.gov/professional/articles/article-pdf/id1643192.pdf

equates to a lack of progress and preparedness for FDA approval, and a continued complacency with the status quo.³ Seeing the slow uptake for similar FDA approved treatments including esketamine (Spravato) for treatment-resistant depression and 0ff-label ketamine therapy, we know this process may be painful.⁴

States Lead While Washington Lags

In contrast to VA complacency, across the US, states have been stepping up where federal leadership has lagged, largely thanks to the tireless efforts of our coalition members and partners:

- Texas recently passed legislation to allocate \$50 million for ibogaine drug development trials and has invested \$2 million for a psilocybin trial for Veterans with PTSD, led by our Chief Science Officer, Dr. Lynnette Averill at Baylor College of Medicine.
- Illinois appropriated \$6 million for a Breakthrough Therapies for Veteran Suicide Prevention Program to support MDMA and psilocybin research.
- Maryland appropriated \$1 million in funding to its Post-Traumatic Stress Disorder and Traumatic Brain Injuries Alternative Therapies Fund for Veterans, which should soon be funding research of MDMA-assisted therapy comparing group versus individual treatment protocols.
- Connecticut appropriated \$2 million for a transdiagnostic open label trial of psilocybin prioritizing treatment of Veterans.
- Arizona invested \$3 million into clinical trials of natural psilocybin mushrooms and is allocating \$5 million for ibogaine trials.
- Georgia appropriated \$1 million to Emory Healthcare Veterans Program for PTSD treatment and wrap-around services for Veterans and their families, which is intended to fund a trial of MDMA and/or psilocybin with prolonged exposure therapy.
- The state of Washington appropriated \$2 million to the University of Washington for clinical research of psilocybin therapy for substance use disorder treatment

Still, this funding pales in comparison to the significant federal investment that we believe is warranted based on the clinical potential demonstrated through existing research, including realworld studies.

³ The Department of Defense has granted \$10 million (split between two grants) for MDMA-assisted therapy clinical trials for active-duty servicemembers through the Congressionally Directed Medical Research Program Psychedelic Treatment Research Clinical Trial Award (established via Section 723 of the National Defense Authorization Act for FY2024), with an additional \$5 million granted for a study of MDMA-AT including Veterans and civilians through a different grant mechanism.

⁴ Despite FDA approval of esketamine in 2019 - and a directive from the Trump Administration urging VA use - only 15 Veterans had received esketamine in the first year. By the end of FY2023, available reports suggest approximately 1,800 Veterans have received ketamine or esketamine treatment. While uptake is growing, this remains staggeringly low given the immense need and the scale of the suicide crisis. Psychedelic therapies will likely prove even more challenging to implement - though we are optimistic they will lead to more robust and durable improvements for many patients, with lower abuse potential.

Words Are Not Enough: Veterans Need Action Now

While we are disappointed in the pace of federal progress, we appreciate the recent supportive statements from leaders in the Trump Administration. HHS Secretary Kennedy has publicly stated his team is working to provide Veterans access to certain psychedelic therapies "within 12 months." VA Secretary Collins has repeatedly expressed support for psychedelic research - including during hearings, on social media, and in internal Cabinet discussions. He has also expressed his support for Veterans accessing these treatments under Right to Try, while voicing frustration with regulations standing in the way.

However, at this point, words are not enough. Lives are on the line and we need action. Hopefully, we all agree that Veterans should not be forced to travel abroad or risk breaking the law to access care that could save their lives. But given the slow pace of progress so far and how overwhelmed the VA is just to keep up with current patient demands, we're more than a little concerned about the path forward. We are committed to working with Congress and the VA to help any way we can - because we cannot continue down the same path.

Finally, to reduce the VA's reliance on polypharmacy, we need to do more to advance access to the most promising non-medication emerging treatments. Many Veterans have greatly benefited from neuromodulation such as transcranial magnetic stimulation (TMS), a non-invasive treatment that uses magnetic pulses to help reset brain circuits involved in depression and other conditions. The VA covers TMS for treatment-resistant depression, but access remains limited with many clinics not having the necessary training or equipment; and we've received many complaints from Veterans about challenges they've encountered getting referrals for community care. Since the standard course of treatment requires daily clinic visits over 6 to 9 weeks, access is nearly impossible for Veterans in rural areas or who do not live near a clinic offering this treatment. Even for those nearby, the time commitment can be a major barrier for Veterans balancing work, family, and other obligations.

A newer accelerated approach, called SAINT (Stanford Accelerated Intelligent Neuromodulation Therapy), uses fMRI brain imaging to pinpoint the best spot to stimulate and delivers a full course of treatment in just 5 days. In a major clinical trial, roughly 80% of people with hard-to-treat depression went into remission, compared to just 10% on a sham treatment. SAINT's mean time

⁵ The Trump Administration has brought in capable subject matter experts including Dr. Mike Davis as FDA Deputy Director for the Center for Drug Evaluation and Research and Matt Zorn as Deputy General Counsel for HHS. And the VA has its own very capable experts, including the VA's witness for today's hearing, Dr. Ilse Weichers, who we appreciate for working to move things forward. We hope to see the expressed public support and expertise of the Trump Administration swiftly translated into meaningful progress for Veteran access to these emerging therapies.

to remission is an astonishingly fast 2.6 days, with efficacy also shown for acute suicidality, offering a potential rapid-response intervention in psychiatric crises. However, despite a prior Breakthrough Device designation, full FDA clearance, and coverage by Medicare and (more recently) Federal Blue Cross, SAINT is not currently offered at any VA facilities or reimbursed through community care.

There are additional accelerated protocols under investigation that seek to further condense TMS treatment into a single 9-hour day, paired with medications that temporarily boost neuroplasticity. Early results are promising, suggesting a one-day TMS protocol is safe and potentially more effective than standard treatment. Assuming the research holds up in more rigorous controlled trials, this would be a significant breakthrough for real-world access by reducing logistical burdens on patients. Given the promise of neuromodulation protocols like these, there is no excuse for the VA to not be front and center, supporting this research and rolling out scalable TMS care and coverage within the VA and their care networks.

Policy Roadmap: What Congress Can Do Today

Below are some concrete steps Congress and the VA can take to expand access to these emerging therapies and begin turning the tide on the Veteran mental health and suicide crisis:

- Dramatically expand federal funding for psychedelic therapy research and implementation including:
 - o Public-private partnerships to accelerate potential FDA approvals.
 - Investigator-initiated trials to inform optimal methods of treatment delivery, including use of group therapy and peer support; and transdiagnostic studies that are more inclusive of high-risk/complex patients to improve real-world generalizability.
 - o Utilize a diverse mix of sites in as many states as possible, including rural locations.
 - Prioritize Fox Suicide Prevention Grant funding to new (previously unfunded)
 VSOs with established programs that provide wrap-around services for psychedelic therapies, including preparation, integration, and peer support services.
- Expand adoption of esketamine and off-label ketamine therapy across additional VA facilities for depression, related mental health conditions, and suicidality. Ease the barriers to community care referrals for those who do not live near a VA facility offering this treatment.
- Establish a formal access pathway under the Right to Try Act, allowing qualified physicians to offer eligible investigational psychedelic therapies to patients with terminal or life-threatening conditions (such as un- or under-treated PTSD, depression, and

- suicidality) who have exhausted other options and are unable to participate in clinical trials due to strict eligibility criteria,
- Support accelerated approval of MDMA and psilocybin through the FDA's recently established National Priority Review Voucher program, with appropriate REMS requirements to ensure safety and post marketing data collection requirements to better assess durability and adverse events.
- Reduce step-therapy barriers that require Veterans to "fail first" on multiple ineffective medications (often from the same class) before gaining access to alternatives.
- Fund comparative trials of standard TMS with accelerated protocols including SAINT and one-day TMS; ensure insurance coverage for proven accelerated treatments; and invest in the equipment and infrastructure to make these life-saving options available to those most at risk, including in rural settings.
- Establish an emerging therapies task force comprised of VA experts, VSOs engaged in relevant work, and Veteran stakeholders to identify the most promising additional emerging therapies for functional improvement across the spectrum of invisible wounds of war (e.g., other novel psychedelic medicines, neuromodulation, neuro-restorative protocols, hormone restoration, moral injury-targeted programming, integrative wellness approaches), and develop a plan to accelerate adoption of those treatments that includes direction of the DVA Office of Research Oversight and the DoD Congressionally Directed Medical Research Programs (CDMRP) to launch and maintain a federally supported pilot programs mechanism in which these emerging therapies can receive priority funding for initial investigation.
- Support outcomes-based reimbursement models that account for functional improvement, not just symptom reduction.

Closing: Answering Veterans' and Families' Prayers

For me, this hearing is about much more than just separating fact from fiction on Alternative Therapies. I'm grateful to offer recommendations informed by a mix of expertise within our coalition; however, I didn't come here today as a policy expert. I'm here as a Veteran who nearly lost both of his brothers, who spent years watching others fall through the cracks, who experienced my own significant trauma, and who finally had to choose between staying silent or doing something. For me, this hearing is about exploring the full picture of how the system has let so many Veterans down, and how Veterans have been forging a new path to reclaim their lives and help their fellow Veterans - including through the use of various emerging therapies. This hearing is about how we can bring the system along to embrace necessary change, break out of the status quo, and work together to save Veteran lives.

What remains is partnership. If we walk this next part together, we can make real change not just for Veterans, but for the future of mental health itself. I've provided many additional details below that I hope will prove helpful:

- My Journey and Insights: From Family Crisis to National Advocacy
 - o The Breaking Point: When Every Option Failed
 - o Psychedelic Therapies: Lives Saved and My Faith Restored
 - Veteran healing programs and insights: group therapy, peer support, and the importance of family
 - o Stronger Together: About VMHLC and Acknowledgements
 - From Lived Experience to Advocacy
 - Partnerships that Drive Change
- Psychedelic Research and Regulatory Barriers Snapshot
- References

Senators, my father's prayers were answered when his sons came home from war. Many families are still praying for their Veteran to come home-physically, mentally, emotionally, spiritually, and morally. It's time their prayers are answered.

May God bless you, our great nation, and the Veterans and families who fought for our freedoms. Thank you.

APPENDIX

My Journey and Insights: From Family Crisis to National Advocacy

In 2015, my older brother, Andrew, a decorated Green Beret, was spiraling from combat-related brain trauma. I turned down a promotion to Major and an MBA at Rice to help save his life. Together, we launched the Warrior Angels Foundation to give Veterans access to the Millennium Protocol, developed by Dr. Mark Gordon. This approach targeted the hormonal and inflammatory damage caused by TBI, and it saved my brother's life. So, we focused on finding ways to get more Veterans like him access to this treatment through our nonprofit work.

The efforts of our lived experience and this protocol are best captured in episodes #700 and #1056 of The Joe Rogan Experience, where Andrew and Dr. Gordon were guests. It's also documented in our bestselling book, *Tales from the Blast Factory: A Brain-Injured Special Forces Veteran's Journey Back from the Brink*, and the Oscar-qualified and award-winning documentary, *Quiet Explosions: Healing the Brain*.

The Breaking Point: When Every Option Failed

We quickly learned a core truth: trauma is layered and so is healing. Sometimes, what we were offering wasn't enough. More tools were needed. In 2018, my younger brother, an Infantry combat Veteran, attempted to take his own life. We had exhausted every conventional option, but the pain was still too great, despite the biological interventions we tried. We needed something immediate.

That's when family friends retired SEAL Team 6 Operator Marcus Capone and his wife Amberlater the cofounder of Veterans Exploring Treatment Solutions (VETS) - came to our home. He sat with my mother, a devout Christian who had sent her sons to war and nearly lost all of them, not on the battlefield, but from the invisible wounds of war at home. He shared his story and spoke of his own life-saving intervention with a naturally occurring medicine derived from the iboga shrub in West Central Africa, called ibogaine. He told my mother that when everything else had failed him, this treatment gave him the rest and spiritual connection he needed to overcome his trauma. He assured her that he would escort my brother to Mexico, where the treatment would be administered safely under the care of a physician, with clinical oversight, and that it had been highly successful for Special Operations Veterans.

It wasn't easy to accept. But when all the other doors had closed, this one opened.

Sometimes, the only thing powerful enough to break through the darkness is a transformational experience-one that restores identity, renews the spirit, and reconnects a person to life.

Psychedelic Therapies: Lives Saved and My Faith Restored

After years of carrying the burden of others' healing, I reached my own breaking point shortly after saving my younger brother's life, administering first aid after his suicide attempt. I was emotionally exhausted, spiritually disconnected, and physically falling apart. I had helped build a nonprofit to serve Veterans in crisis with TBI through biological interventions. I had walked alongside my brothers through their trauma, trauma that nearly claimed their lives. But somewhere

along the way, I lost myself. The corporate consulting job that paid the bills had become a toxic environment. The mission that once gave me purpose was now consuming me.

That's when I took the step I never thought I would: I sought treatment for myself, because the brother I helped through his worst experience three years earlier was now there to help me through mine.

The Mission Within: A Veteran's Path to Healing with Ibogaine

When I underwent ibogaine treatment outside the U.S., under full clinical care, I had no expectations. I was burned out, disconnected from my body, my spirit, and my mission. The experience wasn't recreational; it was a reckoning I felt ill-prepared to face, but I was desperate.

Ibogaine is a powerful medicine that requires rigorous medical screening and monitoring due to its cardiotoxic potential. At The Mission Within, all participants are evaluated by a cardiologist and undergo EKGs, echocardiograms, complete lab work, and urinalysis before treatment. This high clinical standard made it possible for me to enter the process safely.

Guided through a structured protocol, I confronted long-buried memories and unresolved trauma. It wasn't euphoric. It was demanding, humbling, and deeply personal. But in the days that followed, supported by 5-MeO-DMT-a compound known to support emotional catharsis and spiritual renewal-I felt a complete rejuvenation of hope, joy, and a reconnection to my faith in Jesus Christ. This was not just about relieving symptoms-it was about confronting the deepest wounds of moral injury. Psychedelic-assisted therapy allowed me to revisit traumatic memories from an expanded perspective, no longer trapped in cycles of shame or self-condemnation. For the first time, I experienced forgiveness and compassion for myself and others. These therapies opened a path toward restoring moral clarity and spiritual connection-dimensions of healing that conventional treatments had never touched.

What unfolded was a profound reset-a reordering of thought and emotional patterns long distorted by trauma and chronic stress. The clinical care and coaching I received were thoughtful and professional. Integration support was offered, and the community was present. But even within that container, I found myself back in a corporate boardroom just one week later, trying to deliver for a new client while silently struggling to process what had just occurred.

At the time, I didn't know how to ask for more help. I mistook that need as a weakness or worse, as a disservice to the facilitators who had supported me so well. So, I stayed silent, even as the pressure mounted, later discovering how common this is within the quiet, professional culture of the military.

Transformation, Healing, Reconnection and Faith

That experience taught me a critical lesson: medicine opens the door, but healing doesn't happen on a clock. True integration can't be rushed, and sometimes, the most profound breakthroughs require more time, space, and support than we know how to ask for—something we now call wraparound services. These services provide continuous, holistic care that supports not just the physical and emotional aspects of healing, but also the spiritual, social, and psychological needs of individuals.

I am deeply grateful to Dr. Martín Polanco and The Mission Within—not only for helping save the life of my younger brother but for helping me reorient toward my Christ-centered, humble, servant-driven purpose that I had nearly lost. Their care, courage, and commitment created the conditions for transformation and set me on a path I'm still walking today, and I have even become the Chaplain of my American Legion Post 12.

The Importance of Community Healing

In my experience, one of the most vital aspects of healing for Veterans is the opportunity to heal alongside other Veterans. In 2023, I had the privilege of serving as a peer support facilitator during a groundbreaking Veteran Group Therapy Study, which was published in *Frontiers in Psychiatry* in 2025. The study, conducted by Imperial College London in collaboration with Heroic Hearts Project (HHP) and Beckley Retreats—both VMHLC partner organizations led by our members Jesse Gould and Neil Markey—focused on the profound benefits of peer-driven therapy for Veterans.

The sense of security and understanding among fellow Veterans created an environment where we could share our stories without fear of judgment or misunderstanding. For many, this was the first time they felt truly understood. The shared language of pain fostered a deep bond and allowed us to face our struggles together, building a foundation for real healing.

Veteran Group Therapy Study Insights

The study revealed that Veteran-focused group therapy, particularly in the context of psychedelic-assisted therapy, had substantial benefits for reducing PTSD symptoms. Key findings included:

- Improved PTSD Symptoms: Veterans who participated in the therapy showed a 50% reduction in PTSD symptoms after just a few sessions.
- Decreased Isolation: 70% of participants reported feeling significantly less isolated after engaging in group therapy with fellow Veterans.
- Increased Emotional Regulation: 60% experienced improvements in emotional regulation and coping mechanisms when sharing their experiences in a supportive, peer-driven environment.

 Enhanced Sense of Understanding: Veterans consistently reported feeling more understood and less judged, which helped them confront deep-seated trauma and reconnect with their sense of purpose.

This highlights the need for more programs that prioritize healing in community, specifically those that center the lived experiences of Veterans. Peer-led models, where Veterans facilitate therapy alongside highly trained professionals (many who are Veterans themselves), are proving to be an essential component of effective treatment, offering the critical balance of professional care and the healing power of shared experience.

My work with the Veteran Mental Health Leadership Coalition collaborating with these various programs, leading clinicians and researchers, and Veterans and their family members with a range of lived experiences, has provided me with rich insight on the future of care delivery.

Beönd Service - A Veteran-Led Model

On Veterans Day 2024, almost 7 yrs after my 1st ibogaine treatment, I was invited to help design a program for Veterans that I wish had existed when I first began my healing journey. The result was *Beond Service* a purpose-built, Veteran-led ibogaine therapy initiative within Beond Ibogaine clinic's medical infrastructure in Cancún, Mexico. This is a mission-first program, created by Veterans for Veterans, rooted in clinical safety, spiritual renewal, and post-traumatic growth.

In its first year, more than 50 Veterans participated in the 9-week program, all at no cost to them, thanks to donor funding and strategic partnerships. The program is rigorous: full medical and psychiatric intake, preparatory coaching, ibogaine-assisted therapy under 24/7 clinical supervision with cardiac monitoring, daily peer-led workshops, and trauma-informed integration. There's also a dedicated Home Base track for spouses and family members, with an alumni activation model to support ongoing reintegration and leadership development.

While Beond's medical and clinical infrastructure is critical, it is the care, the culture, the community, and the sense of purpose embedded in every aspect of the experience that makes *Beond Service* so effective. This is a program generating powerful outcomes and producing an evidence base that will demand reform. However, Veterans must leave the U.S. to access it, which is fundamentally wrong. The very people who fought for this nation should not have to cross borders to find healing.

VMHLC is also committed to ensuring that family is included as part of the healing process. Over the last several years, there has been an increasing recognition of the critical role of educating and supporting spouses and family members as Veterans go through these often challenging and transformative programs, with increased programming to help meet this critical need. For example, The Hope Project (now part of Heroic Hearts Project), led by Allison Wilson (spouse of Navy SEAL Johnny Wilson), provides trauma-informed peer support, counseling, retreats, and wellness

programming tailored specifically for military spouses. In addition, Beond Service offers a nine-week, cohort-based ibogaine therapy Spouse Program, along with an At-Home Healing Partner track that integrates functional medicine, nutrition, mindfulness, and peer-led support. These programs allow spouses to pursue their own healing journey while equipping them with tools to support their veteran before, during, and after treatment. Together, they demonstrate that sustainable recovery is achieved when the entire family system is included in care.

The groundbreaking programs and studies we've discussed - including from Warrior Angel Foundation, The Mission Within, Heroic Hearts Project, Beckley Retreats, VETS, and Beond Service - reflect just a portion of the innovation happening within the Veteran community. While research and clinical breakthroughs continue to unfold, the driving force behind these new models of care has always been Veterans themselves. When the traditional system failed to meet the needs of our community, Veterans stepped up.

Veterans have also stepped up to lead advocacy for expanded research and access to these therapies in the United States, so we are not forced to leave the country or break the law to save our own lives.

The Rise of a Unified Coalition

In 2022, a core group of leaders - each representing organizations that had been working tirelessly out of necessity - came together to unify our efforts. Under the guidance of Lieutenant General Martin Steele, USMC (Ret.), CEO of Reason for Hope, what began as an informal collaboration evolved into the Veteran Mental Health Leadership Coalition (VMHLC). Led by General Steele, VMHLC is a national alliance of Veterans, family members, clinicians, researchers, nonprofit leaders, and mission-aligned organizations on the frontlines of the Veteran mental health crisis.

Our work includes education and advocacy to advance the future of Veteran mental health care, with a focus on increasing research funding for psychedelic and other emerging therapies, reducing barriers to innovative treatments and community-based care, expanding the use of peer support and group therapy protocols, improving training and infrastructure, and decreasing reliance on polypharmacy.

From Lived Experience to Advocacy

Many of our members - myself included - are Veterans who have had to seek healing abroad through psychedelic therapy, a reality we consider unconscionable. However, our membership reflects a broad range of healing experiences, including transcranial magnetic stimulation (TMS), hyperbaric oxygen therapy, ketamine, cannabis, and stellate-ganglion block (amongst others), as well as those who have lost loved ones who may have benefited from these tools. Gary Hess, VMHLC's new Director of Advocacy and Peer Support, a USMC Veteran and founder of Veterans Alliance for Holistic Alternatives, embodies the range of lived experience turned to leadership of our members.

It should be no surprise that when Veterans (or anyone else) find something that works - particularly when it's unconventional and we're told it's unavailable - we become passionate advocates to expand access for those in need. Especially as it relates to accessing psychedelic therapies, this passion has led to a diverse mix of often strongly held policy views, with many of our members playing leading roles around the country pushing for various legal reforms to expand access under state laws. While such policies fall outside the scope of our coalition's collective advocacy focused on research and federally legal compassionate and medical use, we respect the different paths our members have taken toward healing and honor the leadership roles they have played in advancing change nationwide.

I firmly believe that, as long as Veterans are informed of the potential risks - both health and legal - they should be trusted to seek their own path to wellness. Sometimes the system simply moves too slowly, especially when every other option has been exhausted.

Maintaining a coalition with such diverse and deeply held beliefs is no small challenge, but it is one we embrace - and one that has been personally and professionally rewarding for me. Our only real requirement is mutual respect and compassion for each other's humanity.

The coalition's ability to hold space for such a broad range of perspectives is, without question, a testament to General Steele's long career of values-based leadership - marked by honor, integrity, and an unwavering commitment to those who serve. As a decorated combat Veteran who rose from enlisted Marine in Vietnam to three-star general, General Steele faced significant reputational risk and had little to gain personally in coming out of retirement to engage in this work. Yet his record shows a long history of being on the leading edge of Veteran mental health care. In this case, his bold leadership has helped raise millions of dollars for psychedelic therapy research, Veteran programs, and advocacy - including from an older generation of philanthropists unfamiliar with these treatments - and he has been instrumental in securing millions more in government funding for Veteran-focused studies. In true General Steele fashion, he has never sought the spotlight or made it about himself; it is always about taking care of the Veteran and their family.

I also want to acknowledge the exceptional partnership and support of General Steele's team of experts at Reason for Hope - a team united by the tragic loss of loved ones to suicide - including Brett Waters, Esq., Lynnette Averill, PhD, and Jesse MacLachlan; as well as Gary Hess, VMHLC Director of Advocacy and Peer Support. Their policy, research, and advocacy expertise has been invaluable to my testimony and our strategic work to advance critical legislation for Veteran-focused research funding and regulatory reform. I am also grateful for the insight and support from Ryan Roberts and his organization, The Journey Home, a VMHLC partner advancing the national conversation on moral injury through Veteran-led coaching, research, and community-based healing frameworks.

Partnerships That Drive Change

Today, VMHLC includes over 100 leaders and 50 partner organizations throughout the country who have spent years tackling this issue from various angles, driven by the urgency of the crisis and the unmet needs of our communities. Many of our advocacy partners are newer state-based organizations such as Texans for Greater Mental Health (led by Logan Davidson), who played a leading role in securing historic funding for psilocybin and ibogaine research in Texas, and the Nevada Coalition for Psychedelic Medicine (led by Navy SEAL Veteran Jon Dalton), who led the effort to pass a state resolution urging various federal research and regulatory reforms. The VMHLC provides infrastructure to bridge individual efforts and ensure we become more than the sum of our parts, so we can elevate our shared goals to save and improve lives.

The Impact of Collaboration and Partnerships

VMHLC is now a leading voice shaping national and international conversations on Veteran mental health and emerging therapies. We have now testified multiple times before Congress and before various state legislatures throughout the country, while leading U.S. engagement in policy initiatives from Canada to the Czech Republic. Our coalition and our individual members and partners have played critical roles unlocking research funding (as outlined above) and driving regulatory reforms, including reducing barriers to research and FDA approved treatments. We appreciate the support from a growing number of leading national veteran organizations who have helped accelerate this momentum, ranging from our coalition partners the Navy SEAL Foundation and Grunt Style Foundation, to Iraq and Afghanistan Veterans of America, Disabled American Veterans, Veterans of Foreign War, and The American Legion, where I serve as co-host of the national Tango Alpha Lima podcast.

In 2023, The American Legion's National Executive Committee passed a landmark resolution on emerging therapies, urging Congress and the VA to support various psychedelic research and clinician training; and I have twice participated in related briefings at the national convention as part of the Be The One Summit.

Psychedelic Research and Regulatory Barriers Snapshot

Psychedelic medicines and assisted-therapies have shown rapid, robust, and durable effects across multiple trials led by premier academic institutions across the world, with generally favorable safety profiles and low risk of abuse. These interventions represent one of the most promising advances in decades, specifically for the signature injuries of war. The wildly delayed pace, limited funding support, and lack of strong top-down support for this research within the VA is inexcusable as the evidence is highly promising specifically in all of the priority mental health domains for Veterans.

Current Evidence Base

- Esketamine FDA-approved for treatment-resistant depression and suicidality; ketamine used widely off-label; decades of research confirm rapid anti-suicidal and antidepressant effects. Yet, only a small fraction of eligible Veterans have received these treatments inside the VA, despite strong safety and efficacy data and Veterans struggle to get a referral for treatment with a community care partner.
- MDMA-Assisted Therapy Phase 3 trials demonstrate large, durable effects for PTSD. Psilocybin Phase 2 and 3 trials for major depression show rapid and long-lasting symptom reduction after 1–2 doses; trials underway for PTSD, substance use, and end-of-life anxiety; three FDA Breakthrough Therapy Designations
- Methylone Phase 2 and 3 trials for PTSD are underway; FDA Breakthrough Therapy Designation
- LSD Phase 2 and 3 trials underway for Generalized Anxiety Disorder; FDA Breakthrough Therapy Designation
- Ibogaine Strong observational data in Veteran and international populations suggests dramatic effects on PTSD, depression, suicidality, and OUD. Controlled U.S. clinical trials are urgently needed.
- 5-MeO-DMT Early phase trials show promise
- Overall Across compounds, the evidence consistently points to rapid symptom reduction, improved quality of life, and potential life-saving effects for those who have not responded to standard care.

Regulatory Barriers and Federal Progress

Despite the promising results, because most psychedelic compounds remain classified as Schedule I controlled substances, they face the most restrictive barriers to research, and federally legal access in the United States is generally limited to clinical trials.⁶ The recent passage of the HALT Fentanyl

⁶ Currently, DEA is considering a petition to reschedule psilocybin to schedule II, which was recently transmitted to HHS for a scientific and medical review and scheduling recommendation.

Act reduced some of these barriers to more closely align Schedule I and Schedule II research requirements, which we appreciate, but overall, the barriers remain significant.

Additionally, there remains no mechanism under the Controlled Substances Act to administer these Schedule I breakthrough therapies under the Right to Try Act (passed by President Trump in 2018), even though they qualify as "eligible investigational drugs" under the law. This is a tragic flaw in our regulatory system that defies Congress' and President Trump's clear intent to empower patients with terminal or life-threatening illnesses who do not qualify for clinical trials to have access to these interventions.

These therapies are not fringe science - they are supported by leading medical institutions, published in top-tier journals, and endorsed by the FDA through Breakthrough Therapy designations. For Veterans, they may be the difference between life and death.

We must act now. The VA has both a moral and scientific obligation to support and expedite this research, build the infrastructure, and prepare for clinical implementation. In the vast majority of cases, at worst, these therapies are life-improving. At best, they are life-saving.

References

- 1 World Health Organization. Mental Health Strengthening Our Response (2022).
- Winsper, C., Crawford-Docherty, A., Weich, S., Fenton, S.-J. & Singh, S. P. How do recovery-oriented interventions contribute to personal mental health recovery? A systematic review and logic model. *Clinical Psychology Review* 76, 101815 (2020). https://doi.org/10.1016/j.cpr.2020.101815
- National Academies of Science, Engineering, and Medicine. Improving the quality of health care for mental and substance-use conditions *Consensus Study Report* (2006).
- 4 (SAMHSA), S. A. M. H. S. A. SAMHSA's Working Definition of Recovery (2010)
- National Academies of Science, Engineering, and Medicine. Blueprint for a National Prevention Infrastructure for Mental, Emotional, and Behavioral Disorders *NASEM; Health and Medicine Division* (2025).
- Badea, A. *et al.* Repeated mild blast exposure in young adult rats results in dynamic and persistent microstructural changes in the brain. *Neuroimage Clin* 18, 60-73 (2018). https://doi.org:10.1016/j.nicl.2018.01.007
- Braun, M. *et al.* Macroscopic changes in aquaporin-4 underlie blast traumatic brain injury-related impairment in glymphatic function. *Brain* 147, 2214-2229 (2024). https://doi.org:10.1093/brain/awae065
- de Lanerolle, N. C. *et al.* Concussive brain injury from explosive blast. *Ann Clin Transl Neurol* **1**, 692-702 (2014). https://doi.org/10.1002/acn3.98
- Dennis, E. L. *et al.* Differences in Brain Volume in Military Service Members and Veterans After Blast-Related Mild TBI: A LIMBIC-CENC Study. *JAMA Netw Open* 7, e2443416 (2024). https://doi.org.10.1001/jamanetworkopen.2024.43416
- Edlow, B. L. *et al.* Long-Term Effects of Repeated Blast Exposure in United States Special Operations Forces Personnel: A Pilot Study Protocol. *J Neurotrauma* 39, 1391-1407 (2022). https://doi.org;10.1089/neu.2022.0030
- Eonta, S. E. *et al.* Case Study of a Breacher: Investigation of Neurotrauma Biomarker Levels, Self-reported Symptoms, and Functional MRI Analysis Before and After Exposure to Measured Low-Level Blast. *Mil Med* 185, e513-e517 (2020). https://doi.org:10.1093/milmed/usz185
- Kamimori, G. H. *et al.* Longitudinal Investigation of Neurotrauma Serum Biomarkers, Behavioral Characterization, and Brain Imaging in Soldiers Following Repeated Low-Level Blast Exposure (New Zealand Breacher Study). *Mil Med* 183, 28-33 (2018). https://doi.org:10.1093/milmed/usx186
- Robinson, M. E. *et al.* Close-range blast exposure is associated with altered functional connectivity in Veterans independent of concussion symptoms at time of exposure. *Hum Brain Mapp* 36, 911-922 (2015). https://doi.org:10.1002/hbm.22675

- Trotter, B. B., Robinson, M. E., Milberg, W. P., McGlinchey, R. E. & Salat, D. H. Military blast exposure, ageing and white matter integrity. *Brain* 138, 2278-2292 (2015). https://doi.org:10.1093/brain/awv139
- Zuckerman, A. et al. Controlled Low-Pressure Blast-Wave Exposure Causes Distinct Behavioral and Morphological Responses Modelling Mild Traumatic Brain Injury, Post-Traumatic Stress Disorder, and Comorbid Mild Traumatic Brain Injury-Post-Traumatic Stress Disorder. J Neurotrauma 34, 145-164 (2017). https://doi.org:10.1089/neu.2015.4310
- Brand, J., McDonald, S. J., Gawryluk, J. R., Christie, B. R. & Shultz, S. R. Stress and traumatic brain injury: An inherent bi-directional relationship with temporal and synergistic complexities. *Neurosci Biobehav Rev* 151, 105242 (2023). https://doi.org:10.1016/j.neubiorev.2023.105242
- Frueh, B. C. *et al.* "Operator syndrome": A unique constellation of medical and behavioral health-care needs of military special operation forces. *Int J Psychiatry Med* 55, 281-295 (2020). https://doi.org:10.1177/0091217420906659
- Guo, H. *et al.* Neurobiological Links between Stress, Brain Injury, and Disease. *Oxid Med Cell Longev* 2022, 8111022 (2022). https://doi.org:10.1155/2022/8111022
- Ntali, G. & Tsagarakis, S. Traumatic brain injury induced neuroendocrine changes: acute hormonal changes of anterior pituitary function. *Pituitary* 22, 283-295 (2019). https://doi.org:10.1007/s11102-019-00944-0
- Caputo, M., Mele, C., Prodam, F., Marzullo, P. & Aimaretti, G. Clinical picture and the treatment of TBI-induced hypopituitarism. *Pituitary* 22, 261-269 (2019). https://doi.org:10.1007/s11102-019-00956-w
- El Baassiri, M. G. *et al.* Dysregulated brain-gut axis in the setting of traumatic brain injury: review of mechanisms and anti-inflammatory pharmacotherapies. *J Neuroinflammation* 21, 124 (2024). https://doi.org:10.1186/s12974-024-03118-3
- Hacioglu, A., Kelestimur, F. & Tanriverdi, F. Long-term neuroendocrine consequences of traumatic brain injury and strategies for management. *Expert Rev Endocrinol Metab* 15, 123-139 (2020). https://doi.org:10.1080/17446651.2020.1733411
- Molaie, A. M. & Maguire, J. Neuroendocrine Abnormalities Following Traumatic Brain Injury: An Important Contributor to Neuropsychiatric Sequelae. *Front Endocrinol (Lausanne)* 9, 176 (2018). https://doi.org/10.3389/fendo.2018.00176
- Pavlovic, D., Pekic, S., Stojanovic, M. & Popovic, V. Traumatic brain injury: neuropathological, neurocognitive and neurobehavioral sequelae. *Pituitary* 22, 270-282 (2019). https://doi.org:10.1007/s11102-019-00957-9
- Wexler, T. L. Neuroendocrine Disruptions Following Head Injury. *Curr Neurol Neurosci Rep* 23, 213-224 (2023). https://doi.org:10.1007/s11910-023-01263-5
- Teleanu, D. M. *et al.* An Overview of Oxidative Stress, Neuroinflammation, and Neurodegenerative Diseases. *Int J Mol Sci* 23 (2022). https://doi.org:10.3390/ijms23115938

- Chen, B. *et al.* Curcumin Alleviates Oxidative Stress, Neuroinflammation, and Promotes Behavioral Recovery After Traumatic Brain Injury. *Curr Neurovasc Res* 20, 43-53 (2023). https://doi.org/10.2174/1567202620666230303144323
- 28 Karve, I. P., Taylor, J. M. & Crack, P. J. The contribution of astrocytes and microglia to traumatic brain injury. *Br J Pharmacol* 173, 692-702 (2016). https://doi.org:10.1111/bph.13125
- Thapa, K., Khan, H., Singh, T. G. & Kaur, A. Traumatic Brain Injury: Mechanistic Insight on Pathophysiology and Potential Therapeutic Targets. *J Mol Neurosci* 71, 1725-1742 (2021). https://doi.org:10.1007/s12031-021-01841-7
- Devanney, N. A., Stewart, A. N. & Gensel, J. C. Microglia and macrophage metabolism in CNS injury and disease: The role of immunometabolism in neurodegeneration and neurotrauma. *Exp Neurol* 329, 113310 (2020). https://doi.org:10.1016/j.expneurol.2020.113310
- Orr, T. J. *et al.* Traumatic Brain Injury: A Comprehensive Review of Biomechanics and Molecular Pathophysiology. *World Neurosurg* 185, 74-88 (2024). https://doi.org:10.1016/j.wneu.2024.01.084
- Bennett, M. R. & Lagopoulos, J. Stress and trauma: BDNF control of dendritic-spine formation and regression. *Prog Neurobiol* 112, 80-99 (2014). https://doi.org:10.1016/j.pneurobio.2013.10.005
- Nagalakshmi, B., Sagarkar, S. & Sakharkar, A. J. Epigenetic Mechanisms of Traumatic Brain Injuries. *Prog Mol Biol Transl Sci* 157, 263-298 (2018). https://doi.org:10.1016/bs.pmbts.2017.12.013
- Thapak, P. & Gomez-Pinilla, F. The bioenergetics of traumatic brain injury and its long-term impact for brain plasticity and function. *Pharmacol Res* 208, 107389 (2024). https://doi.org:10.1016/j.phrs.2024.107389
- Wang, Z. *et al.* Molecular Toxicology and Pathophysiology of Comorbid Alcohol Use Disorder and Post-Traumatic Stress Disorder Associated with Traumatic Brain Injury. *Int J Mol Sci* 24 (2023). https://doi.org/10.3390/ijms24108805
- Fei, X. *et al.* Single-Nucleus RNA Sequencing Reveals That Gabra6(+) Neurons in Prefrontal Cortex Promote the Progression of PTSD After Shockwave-Induced TBI. *Adv Sci (Weinh)* 12, e2407000 (2025). https://doi.org:10.1002/advs.202407000
- Katrinli, S. *et al.* Epigenome-wide association studies identify novel DNA methylation sites associated with PTSD: a meta-analysis of 23 military and civilian cohorts. *Genome Med* 16, 147 (2024). https://doi.org:10.1186/s13073-024-01417-1
- Neale, Z. E. *et al.* Subjective cognitive concerns, APOE ε4, PTSD symptoms, and risk for dementia among older veterans. *Alzheimers Res Ther* 16, 143 (2024). https://doi.org:10.1186/s13195-024-01512-w
- Thompson, P. M. *et al.* ENIGMA and global neuroscience: A decade of large-scale studies of the brain in health and disease across more than 40 countries. *Transl Psychiatry* 10, 100 (2020). https://doi.org:10.1038/s41398-020-0705-1

- Zhu, Z. *et al.* Recent advances in the role of miRNAs in post-traumatic stress disorder and traumatic brain injury. *Mol Psychiatry* 28, 2630-2644 (2023). https://doi.org:10.1038/s41380-023-02126-8
- Keightley, P. C., Koloski, N. A. & Talley, N. J. Pathways in gut-brain communication: evidence for distinct gut-to-brain and brain-to-gut syndromes. *Aust N Z J Psychiatry* 49, 207-214 (2015). https://doi.org:10.1177/0004867415569801
- Kolacz, J., Kovacic, K. K. & Porges, S. W. Traumatic stress and the autonomic brain-gut connection in development: Polyvagal Theory as an integrative framework for psychosocial and gastrointestinal pathology. *Dev Psychobiol* 61, 796-809 (2019). https://doi.org:10.1002/dev.21852
- Musleh-Vega, S., Ojeda, J. & Vidal, P. M. Gut Microbiota-Brain Axis as a Potential Modulator of Psychological Stress after Spinal Cord Injury. *Biomedicines* 10 (2022). https://doi.org:10.3390/biomedicines10040847
- 44 Pivac, N. *et al.* PTSD, Immune System, and Inflammation. *Adv Exp Med Biol* 1411, 225-262 (2023). https://doi.org:10.1007/978-981-19-7376-5 11
- Sugden, S. G. & Merlo, G. Using lifestyle interventions and the gut microbiota to improve PTSD symptoms. *Front Neurosci* 18, 1488841 (2024). https://doi.org:10.3389/fnins.2024.1488841
- Beurel, E., Toups, M. & Nemeroff, C. B. The Bidirectional Relationship of Depression and Inflammation: Double Trouble. *Neuron* 107, 234-256 (2020). https://doi.org:10.1016/j.neuron.2020.06.002
- Kelly, L. S. *et al.* Stress-related changes in the gut microbiome after trauma. *J Trauma Acute Care Surg* 91, 192-199 (2021). https://doi.org/10.1097/ta.0000000000003209
- Malan-Muller, S. *et al.* Exploring the relationship between the gut microbiome and mental health outcomes in a posttraumatic stress disorder cohort relative to trauma-exposed controls. *Eur Neuropsychopharmacol* 56, 24-38 (2022). https://doi.org:10.1016/j.euroneuro.2021.11.009
- 49 Malan-Muller, S. *et al.* The Gut Microbiome and Mental Health: Implications for Anxiety- and Trauma-Related Disorders. *Omics* 22, 90-107 (2018). https://doi.org:10.1089/omi.2017.0077
- Martínez, M. *et al.* The Role of the Oral Microbiota Related to Periodontal Diseases in Anxiety, Mood and Trauma- and Stress-Related Disorders. *Front Psychiatry* 12, 814177 (2021). https://doi.org:10.3389/fpsyt.2021.814177
- Mittinty, M. M., Lee, J. Y., Walton, D. M., El-Omar, E. M. & Elliott, J. M. Integrating the Gut Microbiome and Stress-Diathesis to Explore Post-Trauma Recovery: An Updated Model. *Pathogens* 11 (2022). https://doi.org/10.3390/pathogens11070716
- 52 Fleming, W. H. Complex Moral Injury: Shattered Moral Assumptions. *J Relig Health* 61, 1022-1050 (2022). https://doi.org:10.1007/s10943-022-01542-4
- Griffin, B. J. *et al.* Moral Injury: An Integrative Review. *J Trauma Stress* 32, 350-362 (2019). https://doi.org:10.1002/jts.22362

- Jamieson, N., Usher, K., Maple, M. & Ratnarajah, D. Invisible wounds and suicide: Moral injury and veteran mental health. *Int J Ment Health Nurs* 29, 105-109 (2020). https://doi.org:10.1111/inm.12704
- Jones, E. Moral injury in a context of trauma. *Br J Psychiatry* 216, 127-128 (2020). https://doi.org:10.1192/bjp.2020.46
- Meador, K. G. & Nieuwsma, J. A. Moral Injury: Contextualized Care. *J Med Humanit* 39, 93-99 (2018). https://doi.org:10.1007/s10912-017-9480-2
- 57 Phelps, A. J. *et al.* Addressing moral injury in the military. *BMJ Mil Health* 170, 51-55 (2024). https://doi.org:10.1136/bmjmilitary-2022-002128
- Andresen, F. J., Monteith, L. L., Kugler, J., Cruz, R. A. & Blais, R. K. Institutional betrayal following military sexual trauma is associated with more severe depression and specific posttraumatic stress disorder symptom clusters. *J Clin Psychol* 75, 1305-1319 (2019). https://doi.org/10.1002/jclp.22773
- Hodgson, T. J., Carey, L. B. & Koenig, H. G. Moral Injury, Betrayal and Retribution: Australian Veterans and the Role of Chaplains. *J Relig Health* 61, 993-1021 (2022). https://doi.org:10.1007/s10943-022-01507-7
- 60 McAdams, M., Henninger, M. W., Bloeser, K. & McCarron, K. K. Institutional Betrayal in Military and Veteran Populations: A Systematic Scoping Review. *J Am Psychiatr Nurses Assoc* 31, 8-22 (2025). https://doi.org:10.1177/10783903241299720
- Monteith, L. L., Bahraini, N. H., Matarazzo, B. B., Soberay, K. A. & Smith, C. P. Perceptions of Institutional Betrayal Predict Suicidal Self-Directed Violence Among Veterans Exposed to Military Sexual Trauma. *J Clin Psychol* 72, 743-755 (2016). https://doi.org:10.1002/jclp.22292
- Monteith, L. L., Holder, N., Iglesias, C. D. & Holliday, R. Institutional Betrayal and Closeness Among Women Veteran Survivors of Military Sexual Trauma: Associations with Self-Directed Violence and Mental Health Symptoms. *J Trauma Dissociation* 25, 315-333 (2024). https://doi.org:10.1080/15299732.2022.2120152
- 63 Grenawalt, T. A., Lu, J., Hamner, K., Gill, C. & Umucu, E. Social isolation and wellbeing in veterans with mental illness. *J Ment Health* 32, 407-411 (2023). https://doi.org:10.1080/09638237.2021.2022625
- Wilson, G., Hill, M. & Kiernan, M. D. Loneliness and social isolation of military veterans: systematic narrative review. *Occup Med (Lond)* 68, 600-609 (2018). https://doi.org:10.1093/occmed/kgy160
- Yarish, N. M. *et al.* Loneliness, social isolation, and cardiovascular disease among nonveteran and Veteran women. *J Women Aging* 36, 492-503 (2024). https://doi.org:10.1080/08952841.2024.2336655
- Flack, M. & Kite, L. Transition from military to civilian: Identity, social connectedness, and veteran wellbeing. *PLoS One* 16, e0261634 (2021). https://doi.org:10.1371/journal.pone.0261634

- Kunik, M. E. Addressing Purpose and Meaning of Life in the Clinical Setting. *Am J Geriatr Psychiatry* 24, 715-716 (2016). https://doi.org:10.1016/j.jagp.2016.04.006
- Reed, D. E., 2nd *et al.* Progress Toward Meaning-as-Goal and Its Association with Pain, Functioning, and Global Meaning and Purpose Among Veterans with Co-occurring Chronic Pain and PTSD. *Int J Behav Med* (2024). https://doi.org:10.1007/s12529-024-10320-3
- Blais, R. K. & Grimm, K. J. The interpersonal theory of suicide risk in male US service members/veterans: the independent effects of perceived burdensomeness and thwarted belongingness. *Eur J Psychotraumatol* 16, 2439748 (2025). https://doi.org:10.1080/20008066.2024.2439748
- Gros, D. F. *et al.* Relations Between Thwarted Belongingness, Perceived Burdensomeness, and History of Suicide Attempts and Readiness for Mental Health Treatment in High-Risk Veterans, Reserves, and Active Duty Service Members. *Mil Behav Health* 6, 326-333 (2018). https://doi.org:10.1080/21635781.2018.1486760
- 71 Partnership, A. s. W. Operation Deep Dive (2024).
- US Department of Veterans Affairs Office of Suicide Prevention. National Veteran Suicide Prevention Annual Report: Report Findings (2024).
- 73 Stop Soldier Suicide Veteran Suicide Statistics < https://stopsoldiersuicide.org/vet-stats (2025).
- 74 Thomas Howard Suitt, I. High Suicide Rates among United States Service Members and Veterans of the Post9/11 Wars *Watson Institute, Brown University* 20 Years of War: A Cost of War Research Series (2021).
- Ramachandran S, M. B. in *The Wall Street Journal* (2025).
- Armstrong, S. B. *et al.* Prospective associations of psychedelic treatment for co-occurring alcohol misuse and posttraumatic stress symptoms among United States Special Operations Forces Veterans. *Mil Psychol* 36, 184-191 (2024). https://doi.org:10.1080/08995605.2022.2156200
- Davis, A. K., Averill, L. A., Sepeda, N. D., Barsuglia, J. P. & Amoroso, T. Psychedelic Treatment for Trauma-Related Psychological and Cognitive Impairment Among US Special Operations Forces Veterans. *Chronic Stress (Thousand Oaks)* 4, 2470547020939564 (2020). https://doi.org:10.1177/2470547020939564
- Davis, A. K., Xin, Y., Sepeda, N. & Averill, L. A. Open-label study of consecutive ibogaine and 5-MeO-DMT assisted-therapy for trauma-exposed male Special Operations Forces Veterans: prospective data from a clinical program in Mexico. *Am J Drug Alcohol Abuse* 49, 587-596 (2023). https://doi.org:10.1080/00952990.2023.2220874
- Mangini, P., Averill, L. A. & Davis, A. K. Psychedelic treatment for co-occurring alcohol misuse and post-traumatic stress symptoms among United States Special Operations Forces Veterans. *Journal of Psychedelic Studies* 5, 149-155 (2021). https://doi.org:10.1556/2054.2021.00176

- Cherian, K. N. *et al.* Magnesium-ibogaine therapy in veterans with traumatic brain injuries. *Nat Med* 30, 373-381 (2024). https://doi.org:10.1038/s41591-023-02705-w
- Lissemore, J. I. *et al.* Magnesium–ibogaine therapy effects on cortical oscillations and neural complexity in veterans with traumatic brain injury. *Nature Mental Health* 3, 918-931 (2025). https://doi.org:10.1038/s44220-025-00463-x