

**Del Potter, PhD**  
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### **Education and Early Research**

Del Potter received his PhD in 1980 from a joint program between the UCSF Medical School and UC Berkeley's Department of Anthropology, specializing in psychiatric anthropology, ethnopsychopharmacology, and neuropharmacology. He subsequently completed clinical training at the San Francisco Psychoanalytic Institute. His postdoctoral research examined the cross-cultural psychohistory of shamanic practitioners and indigenous psychotherapeutic practice, with particular attention to the ceremonial use of psilocybin mushrooms and *Salvia divinorum* among the Mazatec of central Mexico; ayahuasca, yagé, and yopo ritual among the Shuar in Ecuador; and parallel traditions among the Yanomami of Brazil and the Cofán of Colombia. This fieldwork contributed to Richard Evans Schultes' comprehensive examination of psychotropic botanicals worldwide. Dr. Potter's subsequent research turned to the phytochemistry and analytical chemistry of indigenous shamanic formulations.

### **Mentorship and Novel Chemistry**

A formative mentorship with Dr. Alexander Shulgin directed Dr. Potter toward the novel chemistry of tryptamines, specifically compounds in the DMT and 5-MeO-DMT genre classes. He has since developed a robust portfolio of novel chemical entities comprising short-acting tryptamine compounds with agonism at serotonergic, sigma, and dopamine receptors—particularly 5-HT<sub>2a</sub> and 5-HT<sub>1a</sub>. This work includes compounds exhibiting partial or biased agonism at these receptors that retain the neuroplasticity and neurogenesis associated with receptor activity while producing no psychedelic effect. He continues to expand this portfolio through rapid preclinical pharmacological screening and the development of precision medicine approaches to predict the durability of pharmacological treatment.

### **Cannabis Manufacturing and Product Development (2016–2019)**

In 2016, Dr. Potter joined Leef Holdings as Chief Science Officer to design and implement what became California's largest commercially scaled, fully automated medical cannabis manufacturing enterprise. The facility—widely recognized as the most technologically advanced of its kind, with inputs and final outputs integrated into a single production line—received industry awards for safety and design and served as the model facility for the California Association of Fire Marshals. Dr. Potter developed comprehensive product lines encompassing distilled cannabis oil vape cartridges, edibles, hydrocarbon-derived products, and solventless formulations. He designed custom instrumentation, equipment, and infrastructure for each product category and developed patented proprietary technology for color and pesticide remediation.

### **Aya Biosciences (2019)**

In 2019, Dr. Potter founded Aya Biosciences, serving as Chief Science Officer to develop novel cannabis and psychedelic pharmaceutical therapeutics. He created cannabinoid-based formulations targeting sleep, pain relief, and appetite suppression, which were successfully evaluated in nonclinical models. In collaboration with 3M, he developed cannabinoid transdermal patch delivery formulations for sleep that demonstrated efficacy in internally conducted, self-reported clinical sleep studies.

### **Alvarius Pharmaceuticals (2020)**

Dr. Potter consulted with Alvarius Pharmaceuticals as Chief Science Officer, directing preclinical and clinical programs for a first-in-human, investigator-initiated study conducted at UCSF. This study assessed patient tolerability and generated pharmacokinetic data for intramuscular delivery of the company's primary pipeline candidate, 5-MeO-DMT. He subsequently oversaw a Phase 1 clinical trial of the same compound at Trinity College Dublin, utilizing pharmacokinetic and pharmacodynamic data from the intramuscular studies to construct pregastric delivery strategies and oral formulations—including fast-dissolving sublingual tablets, gel film strips, and transdermal patches—developed in partnership with Tioga Research, Catalent, and IntelGenx.

### **Brain Organoid Research**

Working with Dr. Keith Murphy at University College Dublin, Dr. Potter developed and validated the use of human stem cell-derived brain organoids to examine epigenetic cellular changes caused by drugs of abuse—particularly cocaine—and other mental health disorders. This research assessed the capacity of psychedelic compounds to reverse these neuronal changes and established protocols for using brain organoids as a preclinical screening model to evaluate therapeutic efficacy of small molecule compounds. The work identified biomarkers most predictive of epigenetic cellular changes caused by substance abuse and CNS disorders, as well as their reversal, enabling the screening of clinical populations for drug effects. Dr. Potter also researched the development of novel psychedelic chemical entities using AI modeling to directly target these biomarkers as a drug discovery platform. Validation of the organoid model employed conventional rodent models of substance abuse, including cue extinction paradigms with alcohol, cocaine, and heroin, as well as animal models of depression.

## **Pangea Botanica (2022)**

In 2022, Dr. Potter consulted with Pangea Botanica, a company employing AI modeling to assess the pharmaceutical potential of botanicals worldwide. He assisted in constructing a supply chain for *Salvia divinorum*, used in traditional Mazatec ceremonies, and in establishing a proof-of-concept laboratory in Huautla de Jiménez in the Sierra Madre north of Oaxaca to collect ethnobotanical information from local healers. These botanicals are currently undergoing metabolomic and algorithmic analysis to identify active compounds.

## **Spiritus Bioscience (2023)**

In 2023, Dr. Potter founded Spiritus Bioscience, focused on final-form delivery and formulation of psychedelic compounds. Through innovative formulation and delivery technologies, he is engineering the psychedelic experience to be more targeted, safer, and with fewer adverse effects. Beginning with drug delivery products for psilocin, DMT, and 5-MeO-DMT, he is developing pregastric final forms including metered oral sublingual spray, rapidly dissolving sublingual wafer, buccal film, inhaler medical device, and transdermal patches. The first product—a sublingual, oral mucosal spray of psilocin—will enter clinical trials in Australia in a proposed Phase 2b trial targeting Alcohol Use Disorder.

## **Current Affiliations**

Dr. Potter currently serves as founder and Chief Science Officer of BioUnbound, a nutraceutical company focused on alternative delivery strategies for bioactive peptide compounds using intradermal and sublingual approaches, alongside the development of novel peptide compounds for health, functional medicine, and longevity. His current research explores the intersection of psychedelics and peptides, developing protocols that employ peptide compounds with psychedelics to ease the transition to an energetic state, reduce adverse effects, reinforce neural plasticity, and improve therapeutic outcomes. He presented "Exploring the Synergies: Psychedelics, Bioactive Peptides, Mental Health and Longevity" at the Biohacker Summit in Helsinki in 2024.

Dr. Potter is also affiliated with Prism Sciences and Wild Beauty, LLCs, where he focuses on peptide formulation and delivery through oral thin film, orally dissolving tablets, and transdermal and intradermal patches, as well as the development of beauty products including injectable kits, microneedle patches, serums, and topicals combining peptides and salmon polynucleotides.

Dr. Potter is currently publishing his memoir.