2020 RRE

Member and Advisory Committee Snapshots

RRE Executive Committee

Dr. Kathleen Farrell
Senior Director of Clinical Research, Epilepsy Foundation

Dr. Nathan Fountain
Professor of Neurology, and Director of the F.E. Dreifuss Comprehensive Epilepsy Center, University of Virginia

Dr. Jacqueline French
Professor of Neurology, New York University
Chief Scientific Officer, Epilepsy Foundation

Dr. Brandy Fureman
Chief Outcomes Officer, Epilepsy Foundation

Dr. Billy Dunn
Director, Office of Neuroscience, U.S. Food and Drug Administration

Dr. Nicholas Kozauer
Director, Division of Neurology 2, U.S. Food and Drug Administration

2020 RRE Advisory Committee

The Epilepsy Foundation deeply appreciates the partnership of seven esteemed organizations that make up the Research Roundtable Advisory Committee: the American Epilepsy Society, Citizens United for Research in Epilepsy, the Epilepsy Leadership Council, the U.S. Food & Drug Administration, the FDA CDRH, Health Canada, the International League Against Epilepsy and the National Institute for Neurological Disorders and Stroke. This outstanding group, in addition to three members nominated from within the RRE, played a major role in organizing the agenda for the meeting around the chosen topic, confirming the most innovative speakers, and ensuring this years' Roundtable is a success for individuals with epilepsy, their families, and all who are dedicate their professional lives to treating epilepsy patients and finding a cure. Thank you!

American Epilepsy Society
The American Epilepsy Society (AES) is a medical and scientific society whose members are professionals engaged in both research and clinical care for people with epilepsy. For more than 75 years, AES has provided a dynamic global forum where professionals from academia, private practice, not-for-profit, government and industry participate in interdisciplinary communication and information sharing. AES champions sound science and clinical care through the exchange of knowledge, by providing education, supporting research, developing clinical guidance, and by furthering the advancement of the profession. AES is a chapter under the North American Commission of the International League Against Epilepsy.

Citizens United for Research in Epilepsy
Citizens United for Research in Epilepsy (CURE) is a non-profit organization devoted to finding a cure for epilepsy by promoting and funding patient-focused research. Since its inception in 1998, CURE has raised more than $50 million to fund epilepsy research and other initiatives that will lead the way to cures for the epilepsies. Through initiatives and programming including investigator-initiated grant programs, Frontiers in Research Seminar Series and Leaders in Epilepsy Research Webinar Series, CURE is committed to providing support to both the research community and families and individuals affected by epilepsy. CURE has also spearheaded the "team science" approach to epilepsy research, combining the research talents of multiple teams in a collaborative effort to accelerate understanding of epilepsies such as infantile spasms and post-traumatic epilepsy.

U.S. Food & Drug Administration (FDA)

U.S. FDA Center for Devices and Radiological Health (FDA CDRH)

Health Canada

International League Against Epilepsy

National Institute of Neurological Disorders and Stroke
The National Institute of Neurological Disorders and Stroke (NINDS) is one of the 27 Institutes and Centers at the National Institutes of Health (NIH), and since 1950 has been conducting and funding research for brain and nervous system disorders. NINDS promotes scientific discovery through basic and translational research, as well as through clinical trials that benefit patients. Initiatives like the Epilepsy Therapy Screening Program seek to pioneer new therapies for those living with seizures.

Research Roundtable Industry Advisory Members
Each year, members of the Research Roundtable elects representatives to participate on the Advisory Committee. The 2020 representatives are Drs. Dimitrios Arkilo (Takeda), Jon Giftakis (Medtronic) and Walter Kaufman (Anavex).

2020 RRE Member Companies

The Epilepsy Foundation is honored to include 22 highly innovative companies in the fifth year of the Research Roundtable for Epilepsy (RRE) initiative. Participating companies, designated representatives, and a brief summary of each member company's priorities for new and improved epilepsy therapies are listed below. On behalf of the community of individuals and families living with epilepsy, the Foundation commends the Research Roundtable member companies for contributing to this altruistic and collaborative partnership to advance new therapies for the epilepsies. Thank you!

Anavex Life Sciences Corporation
Anavex Life Sciences Corp. is a biopharmaceutical company dedicated to the development of differentiated therapeutics for the treatment of neurodegenerative and neurodevelopmental diseases including Alzheimer's disease, Parkinson's disease and rare, orphan indications such as Rett syndrome, for which the FDA has awarded orphan designation for ANAVEX 2-73. Anavex's lead drug candidate, ANAVEX 2-73, is an orally available, small-molecule activator of the sigma-1 receptor restoring cellular homeostasis by targeting protein misfolding, oxidative stress, mitochondrial dysfunction, inflammation and cellular stress, factors in both neurodegenerative and neurodevelopmental diseases. ANAVEX 2-73 Phase 2a clinical trial in Alzheimer's disease met both primary and secondary endpoints. ANAVEX 2-73 demonstrates a favorable safety, bioavailability, dose-response curve and cognitive and functional benefits. ANAVEX 2-73 demonstrated also efficacy in the following preclinical animal models: Rett syndrome (data from the Rett Syndrome Foundation), epileptic seizures (data from the NIH), Parkinson's disease (data from The Michael J. Fox Foundation for Parkinson's Research), Fragile X-autism-related disorders (data from the Fraxa Foundation), depression, anxiety and multiple sclerosis (MS), indicating its potential to treat additional CNS disorders. Anavex was awarded a grant from the Rett syndrome Foundation to commence a Phase 2 trial with ANAVEX 2-73. On-going clinical trials for ANAVEX2-73 include a Phase 2 study in Parkinson's disease with dementia, a Phase 2b/3 study in Alzheimer's disease and a Phase 2 study in Rett syndrome patients.

Aquestive Therapeutics
Aquestive Therapeutics is a specialty pharmaceutical company that develops and commercializes medicines to solve critical therapeutic problems and meaningfully improve people's lives. As the primary innovator and worldwide leader in delivering differentiated medicines on oral film, Aquestive has manufactured more than 1 billion doses of film medications to meet the needs of patients around the world. The company produces three commercial products: Sympazan™ (clobazam) Oral Film, Suboxone® (buprenorphine and naloxone) sublingual film and Zuplenz® (ondansetron) oral soluble film. Aquestive's proprietary pipeline includes Libervant™ (diazepam) Buccal Film, an investigational product candidate for the treatment of seizure clusters in select patients with refractory epilepsy. The company also collaborates with pharmaceutical partners to bring new molecules to market using proprietary, best-in-class technologies, like PharmFilm®, and proven capabilities for drug development and commercialization.

Biogen

At Biogen, our mission is clear: we are pioneers in neuroscience. Biogen discovers, develops and delivers worldwide innovative therapies for people living with serious neurological and neurodegenerative diseases as well as related therapeutic adjacencies. One of the world's first global biotechnology companies, Biogen was founded in 1978 by Charles Weissmann, Heinz Schaller, Kenneth Murray and Nobel Prize winners Walter Gilbert and Phillip Sharp. Today Biogen has the leading portfolio of medicines to treat multiple sclerosis, has introduced the first approved treatment for spinal muscular atrophy, commercializes biosimilars of advanced biologics and is focused on advancing research programs in multiple sclerosis and neuroimmunology, Alzheimer's disease and dementia, neuromuscular disorders, movement disorders, ophthalmology, immunology, neurocognitive disorders, acute neurology and pain.

Cerevel Therapeutics

Cerevel Therapeutics is planning to conduct the REALIZE trial, a Phase 2 study designed to assess the efficacy, safety and tolerability of CVL-865, an alpha2/3/3-subtype selective $GABA_A$ positive allosteric modulator (PAM), as an adjunctive treatment in participants with drug-resistant focal onset seizures. Cerevel Therapeutics was established in 2018 and is dedicated to unraveling the mysteries of the brain to treat neuroscience diseases. The company seeks to unlock the science surrounding new treatment opportunities through understanding the neurocircuitry of neuroscience diseases and associated symptoms. Cerevel Therapeutics has a diversified pipeline comprising five clinical-stage investigational therapies and several preclinical compounds with the potential to treat a range of neuroscience diseases, including Parkinson's disease, epilepsy, schizophrenia and substance use disorder. Headquartered in Boston, Cerevel Therapeutics is advancing its current research and development programs while exploring new modalities through internal research efforts, external collaborations or potential acquisitions. For more information, visit www.cerevel.com

Eisai Inc.

As epilepsy is the fourth most common neurological disorder and affects people of all ages and races, Eisai has spent over three decades discovering and developing innovative medicines to address the unmet needs of patients suffering from seizure disorders worldwide. Eisai continues to invest in discovering new treatments for epilepsy and other seizure disorders. Under our *human healthcare mission* (*hhc*), we market four epilepsy products: Fycompa®, an in-house discovered AMPA receptor antagonist; Inovelon®/BANZEL®, a treatment for the seizures associated with the rare disease Lennox-Gastaut syndrome; and Zebinix® and Zonegran®, treatments for partial-onset seizures. Understanding that epilepsy patients and their caregivers need more than just medications to navigate their condition on a day-to-day basis, we provide a "total care" treatment approach with programs and services that focus on resources, support and education. In partnership with the Child Neurology Foundation, we developed *Transitions of Care*, a program that provides resources to help those living with epilepsy, and/or their caregivers, navigate and simplify the transition from their pediatric neurology team to their adult neurology team. To help reduce the stigma associated with epilepsy, we teamed with Jumo Health to create six epilepsy-related Medikidz® comic books, whose animated superheroes explain medical conditions by providing accurate and engaging information for young people and their families. We also developed the Magnolia Paws for Compassion program in partnership with the Epilepsy Foundation and 4 Paws for Ability, which is designed to raise awareness of the support that animal assistance can provide to families affected by epilepsy or seizure disorders. More information on our epilepsy resources can be found on www.advancingepilepsycare.com. To learn more about our company, please visit us at www.eisai.com and follow us on LinkedIn and Twitter.

Encoded Therapeutics

Encoded Therapeutics, Inc., is a biotechnology company developing precision gene therapies for a broad range of severe genetic disorders. Our mission is to realize the potential of genomics-driven precision medicine by overcoming key limitations of viral gene therapy. We focus on delivering life-changing advances that move away from disease management and towards lasting disease modification. We are advancing our lead program, ETX101, for the treatment of *SCN1A*-positive Dravet Syndrome. For more information, please visit www.Encoded.com.

Engage Therapeutics

Engage Therapeutics is developing *Staccato* alprazolam for the immediate termination of an active epileptic seizure. *Staccato* alprazolam is an investigational drug designed to be used as a single-use, epileptic seizure rescue therapy that combines the *Staccato* delivery technology, which is currently used in a U.S. Food and Drug Administration (FDA) approved product, with alprazolam, an FDA-approved benzodiazepine. It is a small, hand-held inhaler device designed for easy delivery of alprazolam with a single normal breath potentially providing a way for people with epilepsy and their caregivers to stop an active seizure. The Company anticipates advancing Staccato alprazolam to a Phase 3 registration trial in the second half of 2020.

Greenwich Biosciences
Greenwich Biosciences is focused on discovering, developing, and commercializing novel therapeutics from its proprietary cannabinoid product platform. Our enduring commitment to scientific rigor and exacting pharmaceutical manufacturing standards enables us to bring forward plant-derived cannabinoid prescription medicines for patients. We are the first and only company to pursue and receive FDA approval for a plant-derived cannabinoid therapy that addresses difficult-to-treat conditions with significant unmet needs. It is our passion and purpose to continually seek solutions that transform the lives of those living with rare and severe neurological diseases. For additional information, please visit www.GreenwichBiosciences.com

Marinus Pharmaceuticals
Marinus Pharmaceuticals, Inc. is a biopharmaceutical company dedicated to the development of ganaxolone, which offers a new mechanism of action, demonstrated efficacy and safety, and convenient dosing to improve the lives of patients suffering from epilepsy and neuropsychiatric disorders. Ganaxolone is a positive allosteric modulator of GABAA receptor that are a well-characterized target in the brain known to mediate anti-seizure, antidepressant and anti-anxiety effects. Ganaxolone is being developed in three different dose forms (IV, capsule and liquid) intended to maximize therapeutic reach to adult and pediatric patient populations in both acute and chronic care settings. Marinus has initiated the first ever pivotal study in children with CDKL5 deficiency disorder, a rare form of epilepsy, and is currently conducting studies in patients with postpartum depression and refractory status epilepticus.

Medtronic
Medtronic LLC is a medical device company dedicated to human welfare by application of biomedical engineering in the research, design, manufacture, and sale of instruments or appliances that alleviate pain, restore health, and extend life. Medtronic has two product lines used in the surgical treatment of drug-resistant epilepsy, Deep Brain Stimulation (DBS) and Visualase™ MRI-Guided Laser Ablation. DBS therapy for epilepsy delivers controlled electrical pulses to the anterior nucleus of the thalamus (ANT). In 2018 the U.S. Food and Drug Administration (FDA) granted pre-market approval for Medtronic DBS Therapy for Epilepsy as adjunctive treatment for reducing the frequency of partial-onset seizures. The approval was based on results from the SANTE® trial, wherein patients had a median seizure frequency reduction of 75 percent at seven years post-implant. Visualase™ uses a small laser probe to heat and destroy unwanted brain tissue using real-time MRI guidance. Due to its minimally invasive nature, patients only have a one stitch closure and typically leave the hospital the day after surgery. We are currently conducting a clinical trial (SLATE) to demonstrate safety and efficacy in the surgical treatment of mesial temporal lobe epilepsy.

Neurelis
Neurelis, Inc. is an innovation-driven neuroscience company focused on providing solutions for unmet medical needs. We have reached a milestone in patient care with the Company's first FDA-approved treatment. For more information, please visit http://www.neurelis.com.

Neurocrine Biosciences
Neurocrine Biosciences is a neuroscience-focused, biopharmaceutical company with 28 years of experience discovering and developing life-changing treatments for people with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. The company's diverse portfolio includes FDA-approved treatments for tardive dyskinesia, Parkinson's disease and endometriosis* and clinical development programs in multiple therapeutic areas including a gene therapy for Parkinson's disease, chorea in Huntington disease, congenital adrenal hyperplasia, epilepsy, uterine fibroids* and polycystic ovary syndrome* (**in collaboration with AbbVie*). Headquartered in San Diego, Neurocrine Biosciences specializes in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems.

Otsuka Pharmaceutical
Otsuka Pharmaceutical Company is a global healthcare company with the corporate philosophy: "Otsuka–people creating new products for better health worldwide." Otsuka researches, develops, manufactures and markets innovative products, with a focus on pharmaceutical products to meet unmet medical needs and nutraceutical products for the maintenance of everyday health. Otsuka established a presence in the U.S. in 1973 and today its U.S. affiliates include Otsuka Pharmaceutical Development & Commercialization, Inc. (OPDC) and Otsuka America Pharmaceutical, Inc. (OAPI). OPDC and OAPI are indirect subsidiaries of Otsuka Pharmaceutical Company, Ltd., which is a subsidiary of Otsuka Holdings Co., Ltd. headquartered in Tokyo, Japan. These companies' 1,800 employees in the U.S. develop and commercialize medicines in mental health, oncology, cardio-renal and nephrology, using cutting-edge technology to address unmet healthcare

needs. Otsuka's most recently approved product in the U.S. is indicated for the treatment of adults with schizophrenia and as an adjunctive therapy to antidepressant medications for adults with major depressive disorder. In the medical device field, Otsuka markets a urea breath test used to detect H. pylori infection in the digestive tract. OPDC is dedicated to clinical development of promising drug candidates in mental health, oncology, cardio-renal, epilepsy and nephrology.

Ovid Therapeutics

Ovid Therapeutics Inc. is a New York-based biopharmaceutical company using its BoldMedicine® approach to develop medicines that transform the lives of patients with rare neurological disorders. Ovid has a broad pipeline of potential first-in-class medicines. The company's most advanced investigational medicine, OV101 (gaboxadol), is currently in clinical development for the treatment of Angelman syndrome and Fragile X syndrome. Ovid is also developing OV935 (soticlestat) in collaboration with Takeda Pharmaceutical Company Limited for the potential treatment of rare developmental and epileptic encephalopathies (DEE). For more information on Ovid, please visit http://www.ovidrx.com/.

Sage Therapeutics

Sage Therapeutics is a biopharmaceutical company committed to developing novel therapies with the potential to transform the lives of people with debilitating disorders of the brain. We are pursuing new pathways with the goal of improving brain health, and our depression, neurology and neuropsychiatry franchise programs aim to change how brain disorders are thought about and treated. Our mission is to make medicines that matter so people can get better, sooner. For more information, please visit www.sagerx.com.

SK Life Science

SK Life Science is a subsidiary of SK biopharmaceuticals, focused on developing and bringing treatments for disorders of the central nervous system (CNS) to market. Both are a part of the global conglomerate SK Group, the second largest company in Korea. SK life science is growing quickly in the U.S., with headquarters in Fair Lawn, New Jersey. SK life science has a pipeline of six products in development for the treatment of CNS disorders including epilepsy, sleep disorder and attention deficit hyperactivity disorder, among others. The company's lead product is cenobamate, an investigational compound that is being studied as a potential treatment option for patients with epilepsy. For more information, visit SK life science's website at www.SKLifeScienceInc.com

Supernus Pharmaceuticals

Supernus Pharmaceuticals is committed to pioneering new medications in neurology and psychiatry. Commitment to patients, healthcare providers, and caregivers is the foundation of our company. Our product portfolio includes Oxtellar XR® and TROKENDI XR®. Oxtellar XR is indicated for the treatment of partial-onset seizures in patients ≥ 6yrs of age and TROKENDI XR is indicated to prevent migraine headaches in adults and adolescents 12 years and older and to treat certain types of seizures (partial onset seizures and primary generalized tonic-clonic seizures) in people 6 years and older. Our robust CNS pipeline includes SPN-817 (huperzine A) being investigated for potential treatment in select seizure disorders. Furthermore, Supernus has recently announced plan to acquire USWM, with products indicated for Parkinson's Disease (Apokyn® pen and Xadago®), cervical dystonia and sialorrhea (Myobloc®/Neurobloc®) , as well as projects in development, including a continuous subcutaneous infusion of apomorphine for patients with Parkinson's Disease. The psychiatry pipeline includes SPN-812 for the treatment of ADHD and SPN-820 for treatment-resistant depression.

Takeda Pharmaceutical

Takeda Pharmaceutical Company Limited (TSE:4502/NYSE:TAK) is a global, values-based, R&D-driven biopharmaceutical leader headquartered in Japan, committed to bringing Better Health and a Brighter Future to patients by translating science into highly-innovative medicines. Takeda focuses its R&D efforts on four therapeutic areas: Oncology, Rare Diseases, Neuroscience and Gastroenterology (GI). We also make targeted R&D investments in Plasma-Derived Therapies and Vaccines. We are focusing on developing highly innovative medicines that contribute to making a difference in people's lives by advancing the frontier of new treatment options and leveraging our enhanced collaborative R&D engine and capabilities to create a robust, modality-diverse pipeline. Our employees are committed to improving quality of life for patients and to working with our partners in health care in approximately 80 countries. For more information, visit https://www.takeda.com

UCB

At UCB, everything we do starts with a simple question: "how can we create more value for people living with severe diseases?". For more than 30 years UCB has made a major contribution to improving epilepsy care and continues to work on addressing key unmet needs in epilepsy, notably drug-resistant epilepsy, acute seizures, and disease modification.

Given our long-term commitment to epilepsy research, UCB's goal is to create differentiated value and unique outcomes for patients by focusing on medical needs in specific patient populations. UCB continues to create value for people living with epilepsy through continued development of our portfolio which includes Keppra®, Vimpat®, Briviact®, Nayzilam® (midazolam nasal spray), and padsevonil (UCB0942). UCB contributes to cutting-edge research leading to the identification of novel AED targets, and validation of mechanisms that will pave the way for future therapeutic solutions for epilepsy patients, and UCB is targeting molecular disease mechanisms towards disease modification.

Xenon

Xenon is a clinical stage biopharmaceutical company committed to developing innovative therapeutics to improve the lives of patients with neurological disorders. We are advancing a novel product pipeline of neurology-focused therapies to address areas of high unmet medical need, with a focus on epilepsy. A significant focus of our discovery efforts has been on human channelopathies, enabling us to develop strong capabilities in small molecule ion channel drug discovery. Our ion channel discovery capability is founded upon our understanding of the genetics of channelopathies combined with our proprietary biology and medicinal chemistry assets and know-how.

Our pipeline includes four distinct therapeutic candidates – XEN496, XEN1101, NBI-921352/XEN901* (*Partnered with Neurocrine Biosciences), and XEN007 – that are aimed at treating neurological disorders, including epilepsy. We intend to pursue a variety of development strategies, such as those focused on using a "precision medicine" approach to address rare pediatric disorders, including KCNQ2 epilepsy, as well as those targeting broader patient populations, such as adult patients with focal epilepsy. For more information, please visit https://www.xenon-pharma.com/

Zogenix

Zogenix, Inc. (Nasdaq: ZGNX) is a pharmaceutical company committed to developing and commercializing CNS therapies that address unmet medical needs of people living with orphan and CNS disorders who need innovative treatment alternatives to improve their daily functioning. Zogenix's lead investigational product candidate is ZX008, a fenfluramine HCl oral solution. ZX008 is currently being evaluated in a Phase 3 clinical program, FAiRE (Fenfluramine Assessment in Rare Epilepsy), to assess the efficacy, safety, and PK of ZX008 when used as adjunctive therapy for uncontrolled seizures in pediatric and young adult subjects with Dravet syndrome and as adjunctive therapy for uncontrolled seizures in pediatric and adult subjects with Lennox-Gastaut Syndrome. For more information, www.zogenix.com

Zynerba Pharmaceuticals

At Zynerba Pharmaceuticals, we are dedicated to developing next-generation transdermal cannabinoid therapeutics to improve the lives of patients affected by rare and near-rare neuropsychiatric conditions. We currently focus our work on the following rare and near rare neuropsychiatric disorders: Fragile X Syndrome (FXS), Autism Spectrum Disorder (ASD), 22q (22q Deletion Syndrome) and certain refractory epilepsies, including developmental and epileptic encephalopathies (DEE). ZYN002 CBD gel is the first and only pharmaceutically-manufactured CBD, a non-euphoric cannabinoid, formulated as a patent-protected permeation-enhanced gel for transdermal delivery through the skin and into the circulatory system. ZYN002 is being developed for patients suffering from neuropsychiatric conditions such as FXS, ASD in pediatric patients, 22q and DEE.