**Please see attached instructions. This form is a representation of the information that must be submitted online. The Committee will not consider a request that is not completely filled out.**

House Appropriations Subcommittee on Defense

FY 2019 Member Request Form

**PRIORITY #:**

**Member: Staff Contact: Phone:**

**Military Service Branch:**  Defense-wide

**Appropriation Account** (provide only one)**:** Defense Health Programs

Research, Development, Testing and Evaluation

**Program:** Tuberous Sclerosis Complex Research Program

**Description of Program Request:**

Created in 2001, the Tuberous Sclerosis Complex Research Program (TSCRP) was established within the Department of Defense (DOD) to “encourage innovative research aimed at understanding the pathogenesis of tuberous sclerosis complex (TSC) and improving its diagnosis and treatment.” Tuberous sclerosis complex (TSC) is a genetic disorder that can cause tumor growth in ***all*** of the body’s vital organs. Symptoms can include seizures, kidney failure, brain and lung tumors, autism spectrum disorder, and severe learning disabilities. TSC occurs in approximately 1:6000 live births, affecting an estimated 50,000 Americans. Because two-thirds of TSC cases result from a spontaneous genetic mutation, TSC can afflict any family. Critical cellular pathways disrupted in TSC are shared with other diseases, including cancer and diabetes.

The DoD has a long established history of funding medical research, and has long viewed the health of its personnel as an essential component of national security. Since 1992, Congress has provided funding for disease-specific research through the Congressionally Directed Medical Research Program (CDMRP), including research into breast cancer, ovarian cancer, and neurofibromatosis. Research into these diseases improves the quality of life for military personnel and their families, while at the same time advancing treatments and cures that benefit the civilian population.

From fiscal years 2002 to 2017, Congress appropriated an aggregate of $71 million to the TSCRP, a national program designed to fulfill a national objective -- finding a cure for TSC. (the pending fiscal year 2018 Defense Appropriations Act includes an additional $6 million for the TSCRP). Funds appropriated to this program are awarded to researchers around the country through a competitive, peer-reviewed process.

Research on TSC is having a significant impact on our understanding of epilepsy, autism, cancer and diabetes, and the TSC program at DOD is critical to ongoing progress. A hallmark achievement is the research supported by the TSCRP that examined the role that TSC genes play in cell growth and proliferation – specifically in controlling the mammalian Target of Rapamycin (mTOR) signaling pathway in cells, which is important in normal cell growth and has been shown to be disrupted in traumatic brain injury and many types of cancer. This research has rapidly led to the development of animal models of TSC and clinical trials, resulting in the first drug specifically to treat TSC being approved by the FDA in 2010. Research on epilepsy is also of growing significance to the U.S. military, which is examining the links between traumatic brain injury and epilepsy. Since an estimated 80% to 90% of individuals with TSC will also experience seizures at some point in their lifetime, research may lead to the development of new medical interventions for the 2.5 million Americans with epilepsy***.***

Fiscal Year 2019 appropriations are requested to continue to award competitive grants for cutting-edge research to accelerate the development of new treatments and prevention strategies to combat tuberous sclerosis complex. These funds will support innovative basic and traslational research, clinical trials of new therapeutic agents, and attract new researchers into this field of study. This request builds upon the ongoing TSCRP. However, without sustaining federal investment, progress will cease and a cure for TSC will remain an elusive goal. Continued funding is essential to support competitive grant awards and provide significant advances in research to improve the prevention, diagnosis and treatment of TSC, improving the lives of those with TSC and to someday find a cure.

**Military Value:**

Research on TSC will pave the way to finding cures and treatments for individuals with TSC as well as those with other neurological disorders like epilepsy and autism spectrum disorder (ASD). The cellular pathways involved in TSC are also activated by traumatic brain injury, an all-too-common occurrence in military personnel. TSCRP-funded research has led to the development of mouse models used in research on both TSC and traumatic brain injury. Seizures often result from traumatic brain injury in military personnel and 80-90% of individuals with TSC experience seizures during their lifetime. TSC research may lead to new interventions for preventing the development of seizures in high-risk military and civilian individuals.

TSCRP-funded studies are also relevant to autism spectrum disorder, diabetes, cancer and other disorders that afflict service personnel and their families.

**DoD Supporting Program Manager/Agency** (office contact information)**:**

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**Has this project been requested previously? X Yes No**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Congressional Funding History** (for  specific **project** request)**:** | **FY 2017** | **FY 2016** | **FY 2015** | **FY 2014** | **FY 2013** |
|  | $6,000,000 | $6,000,000 | $6,000,000 | $6,000,000 | $6,000,000 |
|  |  |  |  |  |  |

**FY 2019 Funding Request Amount:** $10,000,000