**Tourettes Action are delighted to announce the winners of their Research grant award scheme.**

**Improving the lives of those living with TS**

Via our newly launched research grants awards scheme, Tourettes Action hopes to support research and to seek better treatment and management of TS and improve the lives of those living with TS. After selection by the [Tourettes Action Scientific Advisory board](https://www.tourettes-action.org.uk/storage/downloads/1479732853_BOARD-AND-COMMITTEES.pdf), and via an external peer review process, the winners of this first round of awards includes three grants, as detailed below.

**Grant award 1:** [**Dr**](http://datascience.columbia.edu/daniel-j-hsu) **Tara Murphy** (Great Ormond Street Hospital).

**Award amount:** £1,013.

**Title:** The impact of executive functioning and time processing abilities on adaptive functioning in children with Tourette syndrome.

This project will draw together important questions raised from several areas of research into TA including adaptive function, comorbidity, executive function and temporal processing:

1. To test for differences in performance of children with TS across several domains of adaptive functioning (i.e. socialisation, communication, and daily living).
2. To test the hypothesis suggested by the literature that the adaptive functioning skills of socialisation and communication are disproportionately impaired, relative to daily living, in children with TS.
3. To examine the contribution of executive functioning (EF, using ecologically valid, behavioural and experimental measures) and time processing abilities on parent report adaptive functioning in children with TS.
4. To test if children with TS show deficits in executive functioning and examine whether EF function is predicted by levels of ADHD and OCD.
5. To test if differences in performance exist across different components of EF functioning.
6. To examine the contribution of attention deficit traits and tic severity to temporal processing and adaptive functioning.

**Grant award 2: Professor Stephen Jackson** (Nottingham University)

**Title:** Developing novel and effective non-drug therapies for Tourette syndrome based upon tic prediction and non-invasive brain stimulation (NiBS).

**Award amount:** £31,167

The primary aim of this project is to develop a safe, effective, and novel treatment for TS based the recording of brain electrical signals (EEG) in combination with delivery of non-invasive brain stimulation [NiBS].

Key objectives will be to:

1. Using multiple converging brain imaging techniques, identify the neural antecedents that precede the execution of tics and their relationship to one another, in particular:
2. Use functional brain imaging (MRI) techniques to identify areas of increased brain activity that precede the execution of tics.
3. Use magnetoencephalography (MEG) to identify the timecourse and locus of brain magnetic signals that precede the execution of tics.
4. Use electroencephalography (EEG) to identify reliable brain electrical signals that immediately precede the execution of tics.
5. Identify a non-invasive brain stimulation (NiBS) protocol (i.e., type of stimulation, site of stimulation, duration of stimulation, intensity of stimulation) that reliably reduces the probability of tic execution.
6. Investigate whether a period of NiBS treatment in which NiBS is delivered immediately preceding the onset of tics can reduce the association between the neural antecedents of tics and tic execution, and thus reduce tic expression.

**Grant award 3: Professor Lorena Fernández de la Cruz** (Karolinska Institute, Sweden)

**Award amount:** £53,000

**Title:** Causes of mortality in Tourette’s Syndrome and Chronic Tic Disorders: A Swedish total population, 40- year longitudinal cohort study

The main objective of this project is to comprehensively examine the all-cause and

cause-specific mortality in Tourette’s Syndrome and Chronic Tic Disorder (henceforth

TS) at the population level. Specific aims are as follows:

1. To quantify the loss of life expectancy in individuals with TS
2. To establish the all-cause and cause-specific mortality in TS
3. To determine the extent to which comorbid psychiatric disorders explain the risks of premature mortality in TS
4. To explore if all-cause and cause-specific mortality differ in men and women with TS and in patients whose tics persist in adult life
5. To investigate a possible association between TS and conditions that are known to shorten life expectancy, such as metabolic and cardiovascular diseases
6. To explore if cumulative use of medications typically prescribed for TS, particularly antipsychotics, is associated with premature mortality or conditions that are known to shorten life expectancy (e.g., metabolic and cardiovascular complications).

**Success rate:**

For researchers interested in making future grant applications – here are some statistics about the success rate from this first round of Tourettes Action research grant awards. In the initial contact 16 ‘Expressions of interest’ were received, 7 of these were invited to make a full application (43%), with a final success rate of 19% with three projects being awarded research grant money.

**Thank you!**

Thank you to all the applicants and to all the experts who were involved in the external peer review process. Please find below the names of all peer reviewers who were involved in the Tourettes Action grant awards scheme for 2016-2017. These peer reviewers from numerous countries around the world, provide high-quality, insightful, and rigorous critiques of submitted applications. We extend our appreciation to all peer reviewers for providing their clinical, scientific, and methodological expertise and by doing so, for being instrumental in maintaining and enhancing the clinical relevance and scientific quality research funded by Tourettes Action. Although peer review is often considered a relatively unsung academic responsibility, we hope that by publishing the names of all Tourettes Action grant awards scheme peer reviewers they will receive the recognition they greatly deserve for their indispensable contributions.

**External peer reviewers for 2016-2017:**

Danielle Cath, Andrea Cavanna, Dr. Andreas Hartmann, Pieter Hoekstra, Jim Leckman, Jonathan W. Mink and Dr. Cara Verdellen.

There will be another grant round in the Autumn of 2017. For any information about future applications please contact research@tourettes-action.org.uk