

SYNGAP RESEARCH FUND

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1270 Lincoln Avenue, Palo Alto, California, 94301, USA

Grant Award Agreement

Last Name, First, Middle ("Awardee" or "Principal Investigator"): Poduri, Annapurna

Institution Name ("Institution" or "Grantee"): The Children's Hospital Corporation d/b/a Boston Children's Hospital

Project Title ("Research Project"): SYNGAP1 Genotype and Phenotype Analysis

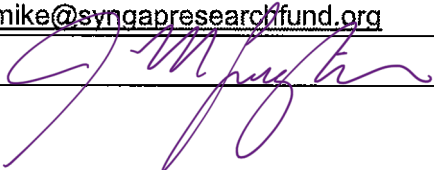
Award Type: Lab support for Postdoctoral Fellowship

Award Period From: 9/1/2021 To: 8/31/2023


Award Total: \$238,133

Effective Date: 9/01/2021


SRF Signing Officer:

Position Title :	Managing Director
Name :	J. Michael Graglia
Phone Number :	650-441-4191
E-mail :	mike@syngapresearchfund.org
Signature :	 Date 8/31/21

SRF Fiscal Officer:

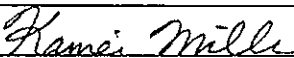
Position Title :	Treasurer
Name :	Rebecca Kohlhepp
Phone Number :	410-861-3848
E-mail :	rebecca@syngapresearchfund.org
Signature :	 Date 8/31/21

Grantee Signing Officer:


Position Title :	Senior Grant Officer
Name :	Kamei Miller
Phone Number :	617-919-2729
E-mail :	osp@childrens.harvard.edu
Signature :	 Date 8/31/2021

Grantee Fiscal Officer:

Position Title :	Director, Research Finance
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Name :	Karen Renaud
Phone Number :	857-218-4378
E-mail :	rfhelp@childrens.harvard.edu
Signature :	 Date 8/31/2021 <i>Kamei Miller signing on behalf of Karen Renaud</i>

Principal Investigator:

Institution Name :	Boston Children's Hospital
Position Title :	Professor of Neurology
Name :	Annapurna Poduri
Phone Number :	617-355-8656
E-mail :	annapurna.poduri@childrens.harvard.edu
Signature :	 Date 8-31-2021

Milestones:

AIM 1: To ascertain individuals with SYNGAP1 variants and assess variant pathogenicity.

Results are a pathogenicity assessment for each variant present in the SYNGAP1 Ciitizen Digital NHS at the time of submission, following American College of Medical Genetics and Genomics (ACMG) criteria.

- By the end of Year 1, Ciitizen data will be shared with Institution with appropriate privacy safeguards. A pathogenicity assessment will be produced for an initial set of variants informed by Ciitizen genotype and phenotype data.
- By the end of Year 2, a pathogenicity assessment will be completed for each variant present in the SYNGAP1 Ciitizen database at the time of submission.

AIM 2: To comprehensively characterize the epilepsy phenotypic spectrum of SYNGAP1.

- By the end of Year 1, Ciitizen patient clinical data will be collected and encoded in standardized terminology, according to International League Against Epilepsy recommendations. An analysis of SYNGAP1 epilepsy, comorbidities and the relationship between genetic variant, epilepsy phenotype and comorbidity severity will be produced for an initial cohort of patients.
- By the end of Year 2, a comprehensive analysis of epilepsy phenotypes and relationship to genetic variants will be produced for all patients in the SYNGAP1 Ciitizen database at the time of submission. An evaluation of correlation between variants, epilepsy onset and cognitive and behavioral comorbidities will be completed.

AIM 3: To delineate genotype-phenotype correlations.

- By the end of Year 1, complete analysis of correlation between variant location and functional domains of SYNGAP1 for a subset of variants. Complete correlation analysis of variant location to epilepsy for a subset of variants.
- By the end of Year 2, complete variant to functional domain analysis for all variants present in the SYNGAP1 Ciitizen database at time of submission. Complete correlation analysis of variants to epilepsy as well as other clinical features and response to medications.

Terms and Conditions

Attached.

Grant Award Agreement Terms and Conditions

Recitals: SynGAP Research Fund ("SRF") is a California nonprofit public benefit corporation exempt from U.S. federal income tax pursuant to Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Code"). SRF was formed for the charitable purpose of improving the quality of life of SYNGAP1 patients through the research and development of treatments, therapies and support systems. SRF desires to provide funding to the Institution in the form of the Award in furtherance of its charitable purposes under the terms and conditions set forth herein, which are intended to provide SRF with adequate assurance that such funding will be used for the intended purposes and consistent with SRF's tax-exempt status. By accepting this Award, the Institution agrees to accept such funding and to carry out the intended purposes of the Award, in furtherance of SRF's purposes, on the terms and conditions set forth herein.

Award: The Award will be made to the Institution. The Institution is responsible for disbursing funds to the Awardee (typically the Principal Investigator). In accepting the Award from SynGAP Research Fund, the Awardee and the Institution agree to expend the Award exclusively for the purposes as set forth in the Research Project application submitted and pursuant to the milestones and reporting obligations described herein (the "Award Purposes").

The Award Period starts and ends on the dates set out above, and has been approved at the level of funding indicated below:

Year 1: Start Date: 9/1/2021, End Date: 8/31/2021, Total: \$119,067

Year 2: Start Date: 9/1/2022, End Date: 8/31/2022, Total: \$119,066

At the sole discretion of SRF, the Award Period and/or funding level may be increased and/or extended subject to need, available funds and approval by SRF's Board of Directors. The Institution acknowledges SRF has no obligation to make any additional grants or provide any other financial support to the Institution.

Payment Schedule: Award total will be disbursed in its entirety in one payment made promptly upon the execution of this Grant Award Agreement.

No-Cost Extension: The Research Project shall be carried out in accordance with the milestones described herein. In the event that these milestones are not met within the time frame established herein, SRF and the Institution may mutually agree to extend the Award Period and corresponding payment dates set forth in the Payment Schedule, provided work towards completion of the milestones continues and there is no additional expense to SRF.

Restricted Fund; Accounting: The Institution shall hold the Award funds in a separate restricted fund, the principal and income (if any) of which shall be expended by Institution and Awardee solely for the Award Purposes. Although the Award funds need not be physically segregated, the funds and any income thereon shall be accounted for separately in the Institution's books and records.

The Institution or the Awardee, as applicable, shall (i) keep records of all of its receipts and expenditures of the Award funds, (ii) maintain a systematic accounting record of the receipt and disbursement of the Award funds and shall maintain substantiating documents (such as bills, invoices, cancelled checks, etc.) in its files for at least four (4) years after the Award funds have been fully spent, and (iii) make its books and records relating to the Award available to SRF for inspection, copying and auditing at reasonable times during the Award Period and for four (4) years after the Award funds have been fully spent, to confirm the Institution's and Awardee's compliance with their respective obligations under this Grant Award Agreement. Any onsite visit or audit shall be conducted at SRF's expense, following prior written notice, during normal business hours and no more than once in any 12-month period.

Copyrights: The copyrights in all written materials, photographs, drawings, software, and other works subject to copyright protection created or generated under this Grant Award Agreement shall be owned by the Institution. All such copyrighted works shall include a formal acknowledgement of SRF funding under this Agreement. The Institution shall provide at least one hard copy and an electronic copy of each such copyrighted work to SRF. SRF encourages the Institution to publish and disseminate any such copyrighted works. Institution grants SRF an irrevocable, royalty-free, nontransferable, non-exclusive right and license to use, reproduce, make derivative works, display, and perform publicly any copyrights or copyrighted material (including any computer software and its documentation and/or databases) first developed and delivered under this Grant Award Agreement in furtherance of SRF's charitable purposes.

Patents: The Institution will have the right to elect title to the patent rights in inventions resulting from work under this Grant Award Agreement. With respect to any intellectual property that the Institution creates, develops, conceives, or reduces to practice, independently or jointly with others, under this Grant Award Agreement and to which SRF does not have ownership rights, the Institution hereby grants to SRF a worldwide, perpetual, paid-up, royalty-free, irrevocable, non-exclusive license for noncommercial research and education applications of such intellectual property, and all applications required to meet SRF's charitable obligations.

Data: With respect to research data, which shall include the recorded factual material commonly accepted in the scientific community as necessary to validate research findings (but not any preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues), the Institution shall retain all rights in said data but shall provide timely and unrestricted access to the data to SRF. All materials generated from the Research Project will be openly shared with the scientific community, including at the direction and request of SRF.

Publications: SynGAP Research Fund must be acknowledged as a source of funds in any publication dealing with the work carried out as part of the Research Project.

Use of Name: - Neither Party may use the name of the other Party, nor any adaptation of its name, nor any logos, seals, insignia or other words, symbols or devices that identify the other Party, including any, unit, division or affiliate of such Party, nor the name of any staff member, employee, agent or student of the other Party in any advertising, promotional materials, sales literature or publicity without obtaining prior written approval of the Party whose name is to be used. For SRF, approval must be obtained from: info@syngapresearchfund.org. For Institution, approval must be obtained from: osp@childrens.harvard.edu.

Notwithstanding, a Party may, without prior consent, use or disclose the other Party's name as required by law, court order, regulation or for its own internal purposes.

The Parties may publish information regarding this project and identify Awardee and their affiliation and respond to legitimate business inquiries regarding the Agreement. In any such statement or response, the existence and purpose of the relationship that is the subject of this Agreement must be accurately and appropriately described.

Recognition and Terminology: If the Award type is in support of a postdoctoral fellowship, the recipient must be recognized as a "SynGAP Research Fund Fellow" or "SRF Fellow" in any materials referencing the fellowship.

Reporting: Reporting must occur every 6 months during the course of the Award Period. Reports should include:

1. Progress made towards the expected milestones and any significant accomplishments
2. Any setbacks or challenges to the project
3. Any significant staffing or other changes that may impact the outcome or long-term potential of the project
4. An accounting of how Award funds are being used

In addition, upon the completion of the Research Project, a final report shall be provided to SRF describing the outcome of the Research Project, including material findings and observations, an accounting of the expenditure of the Award funds, and whether any unobligated Award funds have not been spent. SRF may, in its sole discretion, determine whether these unspent Award funds remaining after the completion of the Research Project either must be returned to SRF or may be used towards another mutually agreeable purpose that is consistent with SRF's charitable purposes.

Liability: Each Party will be responsible for its own negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors in the performance of this Project and the administration of this Agreement, to the extent allowed by law. Neither Party is liable to the other for any special, incidental, or consequential damages that may arise in connection with the execution and performance of this Agreement.

Termination: In addition to any other grounds for termination set forth in this Grant Award Agreement, SRF, in its sole discretion, may, upon written notice to the Institution and the Awardee, revoke this Award and cancel payment of future unpaid balances if at any time any of the following occurs: (1) the Institution becomes insolvent or files a voluntary petition in bankruptcy, (2) any third party files an involuntary petition in bankruptcy against the Institution, (3) any act by one or more of the Institution's creditors in a bankruptcy proceeding to put

claim on or attach the Award funds in any manner, or (4) SRF determines, in its discretion, that (a) the Institution or Awardee is acting or has acted inconsistently with applicable law or the terms and conditions of this Grant Award Agreement, (b) SRF is not reasonably satisfied with the progress towards achieving the Award Purposes (including in the event that the milestones are not achieved within the desired timeline), (c) there is a change in the Awardee who are material to carrying out the Award Purposes and replacement Awardee has not been identified and approved by SRF to continue the Research Project, (d) there is a change in the Institution's tax-exempt or non-profit status, or (e) the Institution or Awardee after having received a notice from SRF that Institution or Awardee is acting in a manner that could be reasonably determined to damage the reputation of SRF, and after an opportunity to rectify the issue within a stated period, Institution or Awardee has failed to do so.

Miscellaneous: This Grant Award Agreement is binding on and shall inure to the benefit of the Institution, its successors and assigns, and upon SRF's representatives, successors and assigns. The Institution may not assign, transfer or subcontract any of its obligations under this Agreement without the prior written consent of SRF. This Grant Award Agreement may be amended at any time by written agreement signed by each party. Awardee and Institution are responsible for all currency conversion fees. All notices or other communications required hereunder shall be made to the addresses identified on the first page of this Grant Award Agreement or at such addresses as a party may designate by written notice to the other party. This Grant Award Agreement may be executed by the parties in separate counterparts and delivered by e-mail with scan attachment, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute one and the same instrument.