



Governance Regulations DAT-, MAP-, SIM- and K- CORE of the SPARC Data and Resource Center (SPARC DRC)

V.9.4.1

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Preamble

The Stimulating Peripheral Activity to Relieve Conditions (SPARC) program enables the development of the next generation of neuromodulation devices informed by the systematic development of high-resolution anatomical and functional neural circuit maps of the peripheral nervous system. The program comprises four highly interactive components and is supported through a combination of Cooperative Agreement and Other Transactions mechanisms.

Component 4 of the SPARC program is represented by the **Data and Resource Center (DRC)**. The DRC supports the creation of a multifunctional online hub facilitating coordination, synthesis, and prediction via four Core functionalities: Data Coordination, Map Synthesis, Modeling & Simulation, and Knowledge Management. Funded investigators closely coordinate with the DRC in order to achieve the following core functions:

- Data Coordination Core (DAT-CORE) – Store, organize, manage, and track access to data and resources generated by SPARC;
- Map Synthesis Core (MAP-CORE) – Map neural pathways and associated data into flatmaps and 3D scaffolds that provide a common coordinate framework for comparing and merging data across individuals and species. Build interactive, modular, continually updated visualizations of nerve-organ anatomy and function.
- Modeling and Simulation Core (SIM-CORE) – Develop an online framework capable of hosting and connecting simulations to create predictive, multiscale, multiphysics models spanning from modulation sources acting at feasible access points through to organ functional responses.
- Knowledge Management Core (K-CORE) – Curation and knowledge management hub for SPARC, working closely with the other cores on increasing the quality and FAIRness of SPARC datasets and building the SPARC Knowledge Graph and services.

Other activities include but are not limited to: development of informatics tools, development of ontology and provenance tools, development and/or implementation of standards, curation of data, development or adaptation of common data elements, maintenance of documentation and protocols regarding tools and technologies developed by or brought into the SPARC program, promoting and facilitating data upload and release, and providing a mechanism to protect patient rights and data.

These Governance Regulations define the rights and duties of the research and technology partners involved in the activities of the four SPARC DRC COREs.

1. Introduction

1.1. Definitions (in alphabetic order)

'Circular Resolution' are written resolutions.

'Council' refers to the representatives of the four Research Partners, see Section 4.2.

'Council Member' is each representative on the Council.

'COREs' are the four DRC COREs, i.e., the DAT, MAP, SIM, and K-CORE.

'Research Partners' are the teams involved in the DAT, MAP, SIM, and K-CORE, see Section 3.

'Sponsor' means the NIH SPARC Program Team and the SPARC DRC Project Coordinators, see Section 4.3.

'Third Parties' are guests to the Council Meetings, see Section 4.4.

1.2. Abbreviations and Acronyms

DRC	SPARC Data and Resource Center
NIH	National Institutes of Health
PI	Principal Investigator
SPARC	Stimulating Peripheral Activity to Relieve Conditions

1.3. Applicable Documents

The following documents, and any revised version thereof form an integral part of the present Governance Regulations:

- (a) This core text of the Governance Regulations;
- (b) CORE-specific and Joint Award documents (see Section 4.5. Appendix).

2. Purpose

The purpose of these government regulations is to foster “joined-up thinking”, harmonization and integration across the four SPARC COREs, align joint strategies and plan their implementation. In particular, the purpose is to (i) define, monitor, and evaluate the joint milestones in line with the requirements of the sponsor and the SPARC program; (ii) facilitate efficient and consensual decision making and ascertain coherence and sustainability across the Research Partners; and (iii) optimize CORE and resource synchronization.

Nothing in these governance plans supersedes anything in the COREs' Notices of Award.

3. Research Partners

The DRC is composed of the following Research Partners:

- (a) DAT-CORE – Team led by the SPARC PI Dr. Joost Wagenaar, Blackfynn, Inc., Philadelphia, USA;
- (b) MAP-CORE – Team led by the SPARC PI Prof. Peter Hunter, University of Auckland, New Zealand;
- (c) SIM-CORE – Team led by the SPARC PI Prof. Niels Kuster, IT'IS Foundation, Switzerland.
- (d) K-CORE – Team led by the SPARC PI Prof. Maryann Martone, FAIR Data Informatics lab, UCSD, USA and SPARC PI Dr. Bernard de Bono, Whitby et al, LLC, Indianapolis, USA.

4. Organization

4.1. Government Body

The DRC CORE Government Body shall consist of the following Members:

- (a) Council
- (b) Sponsor
- (c) Third Parties

4.2. Council

4.2.1. Composition, Duties and Powers

1. The Council consists of four (4) Council Members - one (1) representative for each of the four (4) Research Partners (see Section 3) - with voting rights.
2. The Council shall be responsible for the joint strategy and operative governance across the four COREs whilst adhering to and complying with the contractual obligations and the strategic demands set forth by the Sponsor.

3. The Council receives input from and gives directions to other CORE bodies (e.g., Tech-Lead meetings, Change Control Board), in the form of written communication between the Council Chair (see 4.2.2) and his Tech-Lead (accessible to all Government Body Members).
4. The Council is responsible for reporting to the Sponsor.
5. It is understood and agreed that each Council Member acts in the interest and on behalf of the corresponding Research Partner when executing his/her representative function within the Council, and that he/she feeds information back to their respective teams.
6. The Council shall exercise the following duties and powers:
 - (a) Obtaining inputs from the Sponsor and Third Parties;
 - (b) Establishing the joint COREs' strategic research plan and roadmap (and, whenever necessary, any updates thereof) together with the Sponsor;
 - (c) Formulating the vision and implementation plan of the SPARC Portal (jointly and in agreement with the Sponsor), as well as revisiting/ updating both at least once per year whilst monitoring progress;
 - (d) Planning and committing to the corresponding joint milestones and execution plan with defined deadlines, pending Sponsor approval;
 - (e) Defining the acceptance requirements and tests for the different milestones, for consideration by the Sponsor;
 - (f) Monitoring and reviewing the milestones, the execution plan, and the outcomes, as well as addressing blockers;
 - (g) Proposing revisions of the execution plan to the Sponsor in case the plan cannot be adhered to such that it has minimal impact on the milestones;
 - (h) Representing the SPARC program externally and promoting the SPARC vision, goals and results in research and industry;
 - (i) Approving external presentations (e.g., at scientific symposiums) by team members of the individual Research Partners related to the overall SPARC program (but not on CORE-specific projects);
 - (j) Modifying the Governance Regulations, pending Sponsor approval.

4.2.2. Council Meetings

1. The Council members meet regularly to discuss and decide on matters related to the joint strategy and operative governance across the four COREs.
2. The Council Meeting is composed of the four (4) Council Members and the Sponsor. Participation of Third Parties can be requested by Council Members and the Sponsor and requires approval of all Council Members at least one week prior to the Meeting.
3. Chairmanship of the Council Meeting shall be rotated between the four Council Members on a regular basis, e.g., quarterly.
4. The frequency of the Council Meetings shall be decided by the Council Members but shall be held at least once per month. Extraordinary Council Meetings can be requested to the Chair with at least 5-days' notice by any Council Member or the Sponsor.
5. The Chair is responsible for distributing the agenda at least two (2) days prior to the Council Meeting.
6. Minutes of each Council Meeting shall be kept by a minute taker determined at each Council meeting. A copy of the minutes will be provided to Council Members and the Sponsor for their records and shall be stored in a subfolder of the DRC document folder with restricted access rights (Government Body members only).
7. Council Members may be represented at Council Meetings. Delegates shall be announced to the Council Members and the Sponsor in writing at least one (1) day prior to the Council Meeting (email is sufficient).

4.2.3. Resolutions

1. In the Council Meeting, each Council Member shall have one (1) vote. The Sponsor and Third parties have no voting right.
2. Quorum shall be reached if all Council Members are present.
3. The Council Meeting shall adopt resolutions with the following majorities:
 - (a) Unanimity of the votes cast shall be required for the resolutions concerning modifications of the Governance Regulations;
 - (b) Unanimity of the votes cast shall be required for resolutions concerning proposal drafts for the roadmap and joint milestones acceptance requirements/ tests, revision of the execution plan,

decisions concerning long-term sustainability of the DRC, as well as approval of joint research plans.

(c) Unanimity of the votes cast shall be required for alignment with non-SPARC initiatives or (data / computational) standards.

(d) For all other resolutions of the Council, a simple majority is required.

4. Votes shall be cast verbally in the Council Meetings.
5. Resolutions may also be adopted by circular resolution (email is sufficient), provided neither a Council Member nor the Sponsor requests an oral discussion.
6. Council Members will attempt in good faith to resolve any irreconcilable differences in reaching a consensus on the joint roadmap, on a resolution, or with regard to any other dispute arising out of or in relation to this Governance Regulations through a constructive dialogue by applying the principles of mutual interest. In cases where differences persist, the Sponsor shall serve as mediator.

4.3. Sponsor, Composition, Duties and Meetings

1. The Sponsor is composed of the representatives of the National Institutes of Health (NIH) SPARC Program Team and the SPARC DRC Project Coordinators.
2. The Sponsor serves in a strategic function as the interface between the Research Partners, other SPARC Consortium members, the SPARC DRC Steering Committee, the SPARC DRC Subject Matter Experts, and NIH.
3. The Sponsor shall have the following powers and duties:
 - (a) approving the roadmap, joint milestones, and other award-related documentation, plans, and processes proposed by the Council (see 4.2.3. 3(b));
 - (b) scientific monitoring of the execution of the work as defined in the approved roadmap and joint milestones, including the reporting;
 - (c) monitoring the COREs' financial and scientific impact and progress.
 - (d) The Sponsor by default participates in the Council Meetings and may present proposals and motions to the Council but shall have no voting right.
4. The Sponsor by default participates in the Council Meetings and may present proposals and motions to the Council but shall have no voting right.

4.4. Third Parties

1. Upon request of a Council member or the Sponsor, the Council may invite interested Third Parties, e.g., representatives of industry, politics or international research institutions, but also employees of the individual Research Partners as non-permanent guests to the Council Meetings. By decision of the Council, invited Third Parties may be excluded from parts of the discussion and voting procedures concerning certain issues.
2. Third Parties attending Council Meetings shall not have the right to vote or move a motion.

4.5. Appendix

Joint and CORE-specific milestones / deliverables (to be updated for every award year and when modified during an award year).