Charter of the Compliance Committee
of the Board of Directors of Ionis Pharmaceuticals, Inc.

Composition. The Compliance Committee (the "***Committee***") of the Board of Directors (the "***Board***") of Ionis Pharmaceuticals, Inc. (the "***Company***") will consist of such number of directors as the Board determines from time to time, with an expectation that absent unusual circumstances, the Committee will have at least two directors., one of whom will be appointed by the Board as the Committee Chair, one of whom will be overlapping with the Audit Committee, and a further expectation that a majority will be independent directors as determined by the Nominating, Governance and Review Committee. The Committee also may have a Vice Chair who will assume the responsibilities of the Chair in the Chair's absence. Each member of the Committee will, in the judgment of the Board, have experience relevant to providing oversight and direction with respect to the Company's healthcare compliance program. The CEO of the Company will be an *ex officio*, non-voting member of the Committee.

Scope. The Committee is primarily responsible for overseeing and reviewing the Company's healthcare compliance program and the status of compliance with laws, regulations, industry standards, and internal procedures, including but not limited to those applicable to sales and marketing activities and pharmaceutical research and development that, if breached, may cause significant business, regulatory, government enforcement or reputational damage to the Company. The primary function of the Committee is to oversee the development and implementation of compliance and ethics policies and practices at the Company; however, management is responsible to design and implement such policies and practices.

The Committee will also be responsible for overseeing and reviewing the Company's compliance with U.S. and ex-U.S. requirements governing: manufacturing quality controls, including Current Good Manufacturing Practices ("***cGMP***"); the conduct of clinical trials, including Good Clinical Practices ("***GCP***") and Good Laboratory Practices ("***GLP***"); and the monitoring and reporting of product safety information ("***GVP***") (collectively "***quality compliance***").

Nothing in this Charter will expand the duties or liabilities of any Company director or officer beyond any duties and liabilities otherwise imposed by law.

Functions and Responsibility. The Committee is charged with the following functions:

- to be knowledgeable about the content and operation of the Company's healthcare compliance and quality compliance programs;
- to meet regularly, but no less than four times per year and at such other times as may be called by the Chair, to review and oversee the implementation and effectiveness of the Company's healthcare compliance program, including but not limited to the performance of the SVP, Chief Compliance and Quality Assurance Officer and the Executive Compliance Committee;
- to support the SVP, Chief Compliance and Quality Assurance Officer and the Executive Compliance Committee in the implementation and operations of the healthcare compliance program and the quality compliance program;
- to make reasonable inquiries regarding whether the Company's information and reporting

systems are adequate to assure the Committee that appropriate information relating to the Company's compliance with applicable laws will come to the Committee's attention in a timely manner and as a matter of course;

- to periodically evaluate the Company's healthcare compliance and quality compliance programs to ensure that they are adequate in scope and reasonably designed, funded and implemented taking into consideration the size and complexity of the Company's operations;
- to review and monitor efforts to promote a compliant and ethical culture, and to itself promote an organizational culture that encourages compliant and ethical conduct at the Company;
- to obtain, review and evaluate periodic reports and updates from the SVP, Chief Compliance and Quality Assurance Officer, and other internal and external resources as appropriate, regarding the regulatory and enforcement landscape applicable to the Company's operations;
- to receive, review and evaluate reports from the General Counsel and SVP, Chief Compliance and Quality Assurance Officer, including but not limited to the results of the Company's annual healthcare compliance program risk assessment and internal review processes, regarding any information or data suggesting significant non-compliance with laws, regulations and industry standards that could affect the healthcare compliance programs or the Company and ensure proper communication of significant compliance issues to the full Board;
- to oversee that any such non-compliance is investigated and that the Company's healthcare compliance program is enforced so that it is generally effective in deterring and detecting misconduct;
- to obtain regular, but not less than quarterly, reports from the SVP, Chief Compliance and Quality Assurance Officer regarding compliance program activities, including but not limited to internal and external investigations, hotline call activity, results of the Company's healthcare compliance auditing and monitoring activities, healthcare compliance trainings, and other matters that the Committee deems appropriate to assist it in monitoring the operations and evaluating the effectiveness of the Company's healthcare compliance program;
- to provide oversight of the Company's data privacy program encompassing proper use, processing, and storage of personal information of patients, customers and employees;
- to consult, as appropriate, with external regulatory, compliance or legal professionals with healthcare, data privacy, or quality compliance expertise to advise the Committee with respect to the discharge of its duties;
- to evaluate and provide recommendations to the Board on strategic issues related to the Company's healthcare compliance program; and
- perform such other functions and have such other powers as the Committee and the Board determine are necessary or appropriate in the efficient discharge of the foregoing.

The Board will provide the Committee with adequate resources and authority to discharge its responsibilities and duties. In particular, the Committee will have full authority at its own discretion to institute investigations of any matter brought to its attention, with full access to all books, records, facilities and personnel of the Company, and the authority to engage independent counsel and other advisors it deems necessary to conduct its duties. In addition, the Committee

will have appropriate funding, as determined by the Committee, in its capacity as a committee of the Board, for payment of independent counsel or other advisors it deems necessary to conduct its duties.

The purposes and responsibilities outlined in this Charter are meant to serve as guidelines and not as a limitation on the Committee's authority. The Committee may diverge from the specific activities outlined throughout this Charter as appropriate based on circumstances or regulatory requirements.

Annual Review of Charter. The Committee will review and reassess the adequacy of this Charter annually and recommend any proposed changes to the Board for its consideration.