



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

September 15, 2010

Claire L. Kruger
Chief Executive Officer and Chief Operating Officer
Spherix Incorporated
6430 Rockledge Drive #503
Bethesda, Maryland 20817

**Re: Spherix Incorporated
Amendment No. 1 to Registration Statement on Form S-1
Filed September 3, 2010
File No. 333-167963**

Dear Ms. Kruger:

We have reviewed your amendment and response letter filed on September 3, 2010. We have additional comments.

Exhibit 5.1

1. Please revise the opinion limitation on page two to state that your opinion covers the statutory provisions of the Delaware General Corporation Law as well as the rules and regulations underlying those provisions and applicable judicial and regulatory determinations.
2. We note that section 5.e of the form of warrant filed as Exhibit 10.21 states that the warrants will be governed under the jurisdiction governing the securities purchase agreement. Section 5.9 of the securities purchase agreement filed as Exhibit 10.20 states that the warrants will be governed under New York law. Please provide a legality opinion under New York law with respect to the opinion stating that the warrants will be your valid and legally binding obligations.

Please respond to this letter by amending your registration statement and providing the requested information. Where you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

Ms. Claire L. Kruger
Spherix Incorporated
September 15, 2010
Page 2

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

You may contact Chambre Malone, Staff Attorney at (202) 551-3262 or Dietrich King, Staff Attorney at (202) 551-3338 if you have any questions.

Sincerely,

Pamela Long
Assistant Director

cc: James E. Baker, Jr. (via facsimile at (410) 230-3801)
Baxter, Baker, Sidle, Conn & Jones, P.A.
120 E. Baltimore Street, Suite 2100
Baltimore, Maryland 21202