



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

DIVISION OF
CORPORATION FINANCE

February 2, 2011

Pieter Muntendam, M.D.
President and Chief Executive Officer
BG Medicine, Inc.
610 Lincoln Street North
Waltham, MA 02451

**Re: BG Medicine, Inc.
Amendment No. 8 to Registration Statement on Form S-1
Filed February 1, 2011
File No. 333-164574**

Dear Mr. Muntendam:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If 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.

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

General

1. We note the reference on the cover page and elsewhere to stockholders having "indicated an interest in purchasing up to an aggregate of \$25.3 million." Please advise us of the basis for this statement. Provide a brief summary of the discussions and contacts that led to your belief, including dates of conversations.

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Item 16. Exhibits and Financial Statement Schedules

2. Please file an updated legality opinion.

You may contact Steve Lo at (202) 551-3394 or David Walz at (202) 551-3358 if you have questions regarding comments on the financial statements and related matters. Please contact Damon Colbert at (202) 551-3581 or James Lopez at (202) 551-3536 with any other questions.

Sincerely,

/s/ James Lopez (for)

John Reynolds
Assistant Director