

Mail Stop 4720

August 3, 2009

Dr. Lawrence Helson
President and Chief Executive Officer and Director
SignPath Pharma, Inc.
1375 California Road
Quakertown, PA 18951

**Re: SignPath Pharma, Inc.
Registration Statement on Form S-1/A1
Filed June 22, 2009
File No. 333-158474**

Dear Dr. Helson:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form S-1

1. We note your response to comment 1 and the revised disclosure that the selling shareholders will sell at a fixed price of \$0.85. Additionally, we note your response to comment 11 that at \$0.85 per share the selling shareholders would incur a loss and that the company does not expect that the selling shareholders will sell their shares prior to there being a public listing for its shares. This response implies that the shares will not be sold at a fixed price but will be sold at the market when a market develops. As you are not eligible to do an at the market offering, the shares must be sold at a fixed price. If you do not believe that the

shareholders will sell their shares at \$0.85 per share, please revise to include a fixed price at which the selling shareholders have agreed to sell their shares.

Risk Factors, page 6

We will rely on third parties to supply and manufacture our product candidates, without any direct control over the timing for the supply, production and delivery of our product candidates, thereby possibly adversely affecting any future revenues, page 17

2. We note your disclosure in this risk factor that, “Liposomal curcumin is manufactured in Vienna, Austria under contract with Polymun Inc.” If you have an agreement with Polymun, please describe the material terms and file the agreement. Alternatively, provide us with an analysis supporting your determination that you are not substantially dependent on the agreement. If SAFC and/or Sabinsa have agreements with Polymun, please clarify that you are not a party to the agreement and have no contractual rights under the agreement.

Report of Independent Registered Public Accounting Firm, page F-7

3. Please have your auditor revise their audit report to present the restated net loss and accumulated deficit balances for the year ended December 31, 2008. Due to the restatement of the Company’s December 31, 2008 financial information, the date of the audit report should also be revised.

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As appropriate, please amend your filing in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;

- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert this action as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Sasha Parikh at (202) 551-3627 or Gustavo Rodriguez at (202) 551-3752 if you have questions regarding comments on the financial statements and related matters. Please contact Michael Rosenthal at (202) 551-3674, Suzanne Hayes at (202) 551-3675 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Elliot H. Lutzker, Esq.
Phillips Nizer LLP
666 Fifth Avenue, 28th Floor
New York, New York 10103-0084