

Amanda Ravitz
Assistant Director
Securities and Exchange Commission (Mail Stop 4561)
100 F Street, N.E.
Washington, D.C. 20549

**Re: InVivo Therapeutics Holdings Corp.
Registration Statement on Form S-1
Filed February 1, 2011
File No. 333-171998**

**Proxy Statement on Schedule 14A
Filed April 14, 2011
File No. 000-52089**

Dear Ms. Ravitz:

On behalf of InVivo Therapeutics Holdings Corp. (the "Company"), we submit the following responses to the comments of the Staff of the Securities and Exchange Commission (the "Staff") as set forth in your letters dated February 28, 2011 and April 22, 2011 to Mr. Frank Reynolds, the Company's Chief Executive Officer and Chief Financial Officer.

These responses set forth below have been organized in the same manner in which the Staff's comments were organized.

All responses pertaining to the Company set forth in this letter were prepared by the Company in consultation with its counsel, BRL Law Group LLC. On March 24, 2011, the Company filed its annual report on Form 10-K (the "10-K"). As noted below, the 10-K addresses many of the comments of the Staff.

The purpose of this response letter is to explain to the Staff how the Company addresses the Staff's comments in the 10-K. Certain of the Staff's comments were specific to the registration statement on Form S-1 (the "S-1") and therefore were not addressed in the 10-K, but instead, as noted below, will be addressed in a subsequent response letter and an amendment to the S-1, which the Company expects to file shortly.

COMMENT LETTER DATED APRIL 22, 2011:

COMMENT 1. *You appear to disclose different voting standards for approval of proposals 1 and 2, regarding the amendments to your articles of incorporation, in the second and third paragraphs on page 2. Please reconcile.*

RESPONSE:

In response to the Staff's comment, the Company will correct this inconsistency in its Definitive Proxy Statement. The correct voting standard for approval of proposals 1 and 2, regarding the amendments to our articles of incorporation, is the standard detailed in the third paragraph on page 2. We will revise the second paragraph on page 2 to clarify that proposals 1 and 2 each require the affirmative vote of a majority of the voting power of the Company to amend the articles of incorporation.

COMMENT LETTER DATED FEBRUARY 28, 2011:

Registration Statement Cover Page

COMMENT 1. *Refer to footnote (1) to the fee table. Rule 416 of the Securities Act of 1933 may only be used to address changes in the number of shares issuable upon exercise of the warrants for stock splits, stock dividends and similar transactions. You may not use Rule 416 to address additional securities issuable in connection with other types of antidilution provisions, such as those based upon market fluctuations or best price provisions, like the one found in Section 3(d) of the Investor Warrant filed as Exhibit 4.3. Please revise your footnote to limit it to the types of adjustments allowed by Rule 416. Similarly revise counsel's opinion set forth as Exhibit 5.1.*

RESPONSE:

In response to the Staff's comments, the Company will revise the disclosure in the footnote accordingly in an amendment to the S-1. Counsel's opinion will also be revised in response to this comment.

Prospectus Cover Page

COMMENT 2. *Please clarify, if true, that the shares will be offered at market or privately negotiated prices. Alternatively, state the price at which selling shareholders will offer their shares.*

RESPONSE:

In response to the Staff's comment, in an amendment to the S-1, the Company will revise the disclosure on the cover page to clarify that the shares will be offered at market or privately negotiated prices.

COMMENT 3. *Because your first reference to the "new bridge warrants" appears here without further explanation, please either define the term or provide other context for understandability.*

RESPONSE:

In response to the Staff's comment, in an amendment to the S-1, the Company will revise the

disclosure on the cover page to provide context for the term “new bridge warrants.”

Prospectus Summary, page 1

COMMENT 4. *Revise the forepart of your registration statement to disclose your assets and net loss for the most recent audited period and stub period.*

RESPONSE:

In response to the Staff’s comment, the Company will revise the disclosure in an amendment to the S-1.

COMMENT 5. *Please provide a summary description of your business activities, including a discussion of’ your plans to develop your product through to revenue generation.*

RESPONSE:

In response to the Staff’s comment, the Company will revise the disclosure in an amendment to the S-1.

COMMENT 6. *Revise the summary significantly to comply with the requirements of plain English set forth in Rule 421 of the Securities Act of 1933. In particular, avoid referring to yourself in the third person as ITHC except where it will enhance readability, clearly refer to various transactions by different names, rather than using the term “Offering” and “Closing” to refer to each, and avoid excessive use of defined, upper-cased terminology.*

RESPONSE:

In response to the Staff’s comments, in an amendment to the S-1, the Company will revise the prospectus summary to comply with the requirements of plain English and to avoid defined terms where possible.

COMMENT 7. *The first sentence on page 2 is unclear. Did the private offering occur concurrently with the merger, before the merger or on November 10 and December 3, 2010?*

RESPONSE:

In response to the Staff’s comments, the Company has clarified the timing of the private offering on page 4 of the 10-K and will revise the S-1 to clarify that the private offering had three separate closings, on each of October 26, November 10 and December 3, 2010.

COMMENT 8. *Refer to the third paragraph on page 2. Tell us what solicitation activities the placement agent engaged in to identify investors to participate in bridge financing.*

RESPONSE:

The Company supplementally advises the Staff that the Bridge Financing was offered to a limited number of accredited investors (as defined by Rule 501(a) of the Securities Act of 1933) that were existing clients of the Placement Agent or parties with whom the Placement Agent had an existing relationship. In addition, several accredited investors who participated in the Bridge Financing are “friends and family” of the Company, along with one entity that is beneficially owned by Adam K. Stern, a Senior Managing Director of the Placement Agent and now a member of the Company’s Board of Directors.

Offering by Selling Security holders, page 3

COMMENT 9. *We see on page 3 that you reference the forward-split of your common stock on a 2.02898 for 1 basis effective October 22, 2010. This transaction appears to relate solely to the legal acquirer in the merger transaction, Invivo Therapeutics Holdings Corporation. However, we note on page 1, that as part of the merger, Invivo common stock converted on a 13.7706 for 1 basis. Consistent with SAB Topic 4C, please revise the filing to give retroactive treatment to this conversion of the common stock throughout the filing. Please also revise to appropriately reconcile for us the outstanding common shares of Invivo on a pre and post-merger basis, which would reflect the 13.7706 for 1 conversion.*

RESPONSE:

In response to the Staff’s comment, in an amendment to the S-1, the Company will revise the language to appropriately reconcile the outstanding common shares of the Company on a pre- and post-merger basis.

Risk Factors, page 5

COMMENT 10. *Revise the third sentence under this heading to remove the suggestion that there may be other risk factors outside of this section that are not described here.*

RESPONSE:

In response to the Staff’s comments, in an amendment to the S-1, the Company will remove the suggestion that there may be other risk factors outside of this section.

COMMENT 11. *Please add a risk factor that addresses the risks related to the use of methylprednisolone sodium succinate.*

RESPONSE:

The Company supplementally advises the Staff that we have only done very limited pre-clinical testing of the combination of our polymer with this drug and do not yet know enough about the combination of the two at this time to add a risk factor.

We will need substantial additional funding, page 5

COMMENT 12. *Please quantify your near term funding needs as well as the amount you will need to bring your product to market.*

RESPONSE:

The Company supplementally advises the Staff that as a developmental stage enterprise we feel that there are too many variables that affect the cost and timing of the Company's planned products for us to make reasonable projections and estimates at this time. However, the Company will add disclosure in the amendment to the S-1 regarding the Company's near term funding needs.

The results seen in our animal testing.... page 8

COMMENT 13. *We note your disclosure on pages 30-34 regarding the testing of your products. Given such tests appear limited in nature; address the limited nature of your tests in your risk factor disclosure.*

RESPONSE:

In response to the Staff's comment, the Company has revised this risk factor on page 17 of the 10-K and will revise the risk factor in the amendment to the S-1 to address the limited nature of the Company's testing.

We may require FDA approval... page 7

COMMENT 14. *We note that several of your risk factors appear to address the same risks related to regulatory approval including the risks of delay and that approval will ultimately not be granted. For example, this risk factor and the second and fourth risk factors on page 8 all refer to the need for regulatory approval. Please revise your risk factor disclosure for conciseness. Address each significant risk separately under its own subcaption and avoid unnecessary duplication.*

RESPONSE:

In response to the Staff's comments, the Company has revised and consolidated the relevant risk factors on pages 16 through 18 of the 10-K and will similarly revise the risk factor in the amendment to the S-1.

Our products could be subject to claims for patent infringement, page 12

COMMENT 15. *Please revise this risk factor and the following risk factor for clarity and to avoid repetition. Also, given your claims regarding the creation of a "new paradigm" for the treatment of spinal cord injury clarify how you determined there is a material risk that you may infringe the patent rights of third parties.*

RESPONSE:

In response to the Staff’s comments, the Company has revised and consolidated these risk factors into a single risk factor on pages 20 through 21 of the 10-K and will revise the language in the amendment to the S-1 for clarity and to avoid repetition. The Company has also taken out all marketing style language out of the 10-K and will remove similar language in the amendment to the S-1, including the “new paradigm” claim. The Company supplementally advises the Staff that it is our view that claims of patent infringement in the life sciences field is always a major risk, even if you have appropriate patents and licenses covering your technology and products.

InVivo’s Convertible Notes converted into common stock, page 15

COMMENT 16. *Revise to indicate the remedies that note holders might seek as a result of the valuation discussed.*

RESPONSE:

The Company supplementally advises the Staff that we have deleted this risk factor from the 10-K as it is no longer relevant and will similarly remove such language in the amendment to the S-1. The InVivo shareholders had a right to object to the Merger at the time of the Merger and did not do so.

Capitalization, page 20

COMMENT 17. *Please revise to include detailed footnote disclosure quantifying and identifying each pro forma adjustment recorded along with an explanation of how each pro forma adjustment was calculated and determined for both pro-forma as adjusted columns. As part of your revised disclosure, please include all relevant assumption used in such calculations, including the conversion terms and number of warrants outstanding.*

RESPONSE:

In response to the Staff’s comments, the Company will revise to include detailed footnote disclosure quantifying and identifying each pro forma adjustment in an amendment to the S-1. The Company will also disclose an explanation for how each pro forma adjustment was calculated and determined and will include all relevant assumptions used in the calculations.

Dilution, page 21

COMMENT 18. *Please revise the filing to include a detailed explanation of the calculation of the dilution upon the exercise of the investor and bridge warrants. We note that it is not possible to recalculate the amounts included in the increase per share attributable to the exercising of the warrants.*

RESPONSE:

In response to the Staff's comment, the Company will revise to include a detailed explanation of the calculation of the dilution upon the exercise of the investor and bridge warrants in an amendment to the S-1.

Management's Discussion and Analysis, page 22

COMMENT 19. *Item 11(h) of the Form S-1 requires the filing of Managements' Discussion and Analysis consistent with Item 303 of Regulation S-K. For smaller reporting companies, Item 303(A) and 303(B) of Regulation S-K requires the discussion of the two most recent fiscal years and any subsequent interim periods. Please revise accordingly.*

RESPONSE:

The Management's Discussion and Analysis beginning on page 27 of the 10-K includes the Company's two most recent fiscal years and the language in the amendment to the S-1 will be similarly adjusted.

Business, page 26

COMMENT 20. *Revise significantly to explain clearly the present development stage of your product and explain clearly each step you need to take to be ready to generate revenue from your proposed product. Include in this description estimated timelines and capital needs.*

RESPONSE:

In response to the Staff's comments, the Company has revised its disclosure on pages 5 and 12 of the 10-K to more clearly describe the FDA review process. The Company supplementally advises the Staff that it believes at this stage in its development it cannot make accurate estimates of timelines and capital needs. The amendment to the S-1 will reflect similar language as what is included in the 10-K.

COMMENT 21. *Please revise your disclosure to avoid marketing style language such as the references to "groundbreaking technologies," a "new paradigm of care," a "novel approach," "world renown" and "prolific." Instead, explain clearly how your technology may improve medical care for spinal cord injuries. Also, revise your disclosure to avoid frequent reliance on defined terms such as "SCI" and "hNSC."*

RESPONSE:

In response to the Staff's comments, the Company has avoided using this type of language in the 10-K and will reflect this revised disclosure in the amendment to the S-1.

COMMENT 22. *Please tell us the basis for your belief that the global per unit price for your product will be \$44,000.*

RESPONSE:

The Company supplementally advises the Staff that this disclosure will be deleted from the amendment to the S-1.

COMMENT 23. *We note the disclosure in the fifth risk factor on page 11 regarding applicable regulations. Please provide the disclosure required by Item 101(h) (4) (ix) of Regulation S-K.*

RESPONSE:

In response to the Staff's comment, the Company has added disclosure on page 13 of the 10-K and will add similar language to the amendment to the S-1 regarding its compliance with environmental, health and safety laws.

Market Opportunity, page 27

COMMENT 24. *You cite the Christopher & Dana Reeve Foundation and the NSCISC in several places in your prospectus. Please provide us with copies of reports of each of these organizations where they make these statements. Clearly mark the supporting statements in the supplemental materials. Also, clarify whether you have any relationships with these organizations.*

RESPONSE:

The Company will provide these reports to the Staff under separate cover in connection with the filing of the amendment to the S-1. The Company also supplementally advises the Staff that it does not have a relationship with these organizations.

Our Planned First Product, page 28

COMMENT 25. *Please expand your disclosure to describe more clearly the polymer scaffold.*

RESPONSE:

In response to the Staff's comment, on page 7 of the 10-K, the Company has expanded its disclosure regarding its polymer scaffold and will also revise its disclosure in the amendment to the S-1.

Pre-Clinical Results in Animals, page 29

COMMENT 26. *Please clarify which tests were carried out by you and which tests were carried out by third parties. Also, discuss the number of subjects in the study and explain what you mean by "functional locomotive improvement" and "sustainable functional recovery."*

RESPONSE:

In response to the Staff's comments, the Company has clarified its disclosures on pages 8-11 of the 10-K and will revise the amendment to the S-1 accordingly.

COMMENT 27. *Please explain the Basso-Beattie-Bresnahan scoring system, the 20-point observational scale used in the graph on page 32 and the neuromotor scoring system used in the graph on page 33.*

RESPONSE:

In response to the Staff's comments, the Company has revised its disclosure on page 9 of the 10-K and will revise the amendment to the S-1 accordingly.

COMMENT 28. *Please reconcile your description of your products on pages 28 and 29 with the descriptions of the products used in the tests described in the penultimate paragraph on page 32. For example, explain the distinction between the standard PLGA scaffold and a PLGA-polylysine scaffold. Also, clarify who conducted the 2nd Primate Study.*

RESPONSE:

In response to the Staff's comments, the Company has revised its disclosure on pages 7 and 11 of the 10-K and will revise the amendment to the S-1 accordingly.

Clinical Regulatory Plan, page 33

COMMENT 29. *We note your disclosure in the last risk factor on page 9 that you intend to have your products marketed outside the United States. Please describe material applicable regulations in the jurisdictions where you intend to sell your products.*

RESPONSE:

The Company supplementally advises the Staff that at this stage of our development, we are unsure of where we will market our products outside of the United States.

Sales and Marketing, page 35

COMMENT 30. *In light of your early stage of development, a full page chart picturing your product delivery plans appears premature. Please revise to remove or explain how this aids an investor's understanding of your business.*

RESPONSE:

In response to the Staff's comment, the Company has removed this chart from the 10-K and will revise the amendment to the S-1 accordingly.

Intellectual Property, page 36

COMMENT 31. *Please describe the material terms of your five year plan referenced in the fifth paragraph.*

RESPONSE:

The Company supplementally advises the Staff that we will file a Confidential Treatment Request for portions of this agreement.

COMMENT 32. *Please quantify the payments you are required to make under the licenses described.*

RESPONSE:

The Company supplementally advises the Staff that we will file a Confidential Treatment Request for portions of this agreement.

Non-Executive Officers and Scientific and Business Advisory Boards, page 41

COMMENT 33. *With a view to disclosure, please describe the structure, functions and powers of your advisory boards. Please also revise to remove promotional language that reads like a marketing document or resume.*

RESPONSE:

In response to the Staff's comments, the Company will revise language in the amendment to the S-1 to further describe its advisory boards. The Company will also remove the promotional language from the biographies of our advisory board members.

Executive Compensation, page 44

COMMENT 34. *Please disclose assumptions made in determining the value of the options awarded to Frank Reynolds in 2009 as disclosed in the table on page 44. Refer to Instruction 1 to Item 402(n)(2)(vi) of Regulation S-K.*

RESPONSE:

In response to the Staff's comment, the Company added footnote disclosure to the Summary Compensation Table in its Preliminary Proxy Statement and will revise the amendment to the S-1 accordingly. The following footnotes were added to the "Option/SAR Awards" column of the Summary Compensation Table to disclose the assumptions made in determining the value of the options awarded to Frank Reynolds in 2009:

- (1) The amounts shown in this column represent the aggregate grant date fair value of awards computed in accordance with Financial Accounting

Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 718, not the actual amounts paid to or realized by the Named Executive Officer during fiscal 2010 and fiscal 2009. FASB ASC Topic 718 fair value amount as of the grant date for stock options generally is spread over the number of months of service required for the grant to vest.

- (2) The fair value of each stock option award is estimated as of the date of grant using the Black-Scholes valuation model. Additional information regarding the assumptions used to estimate the fair value of all stock options awards can be found in the section entitled “Stock-Based Compensation” under Item 7—Management’s Discussion and Analysis of Financial Condition and Results of Operations contained in our Annual Report on Form 10-K for fiscal 2010.

Board Independence, page 45

COMMENT 35. *Please provide your analysis showing how you determined that the independence standards identified by you in this section are consistent with the requirements of Item 407(a) of Regulation S-K.*

RESPONSE:

In response to the Staff’s comment, the Company will revise language in the amendment to the S-1 to clarify that it used the independence standards of the Nasdaq Stock Market in determining the independence of its directors.

Certain Relationships and Related Transactions, page 51

COMMENT 36. *Please revise this section to clearly describe the relationships between Adam Stern, Spencer Trask Ventures and each of the “several related parties” referenced in the second paragraph.*

RESPONSE:

In response to the Staff’s comment, the Company will revise the language in the amendment to the S-1 accordingly.

COMMENT 37. *Tell us which exhibit listed in your exhibit index represents each agreement with Spencer Trask Ventures disclosed in this section.*

RESPONSE:

The Company supplementally advises the Staff that the following exhibits represent the indicated agreement with Spencer Trask Ventures:

- Exhibit 10.15 is our Finder’s Fee Agreement with Spencer Trask Ventures in connection with the Bridge Financing;
- Exhibit 10.16 is our engagement of Spencer Trask Ventures as our Placement Agent in

the Offering. This agreement also appoints Spencer Trask Ventures as our Warrant Solicitation Agent and grants Spencer Trask Ventures a 18-month right of first refusal to act as our agent in future private offerings;

- Exhibit 10.17 is a non-exclusive, 18-month Finder's Fee Agreement with Spencer Trask Ventures;
- Exhibit 10.18 is a Master Services Agreement whereby the Company has agreed to pay Spencer Trask Ventures \$5,000 per month for two years for advisory and consultative services;
- Exhibit 4.4(i) is the warrant granted to Spencer Trask Ventures in connection with the Offering and has an exercise price of \$1.00 per share; and
- Exhibit 4.4(ii) is the warrant granted to Spencer Trask Ventures in connection with the Offering and has an exercise price of \$1.40 per share.

Selling Securityholders, page 53

COMMENT 38. *Please identify the natural person or persons who have voting or investment control of the shares held by each selling security holder that is not a natural person.*

RESPONSE:

In response to the Staff's comment, the Company will revise the language in the amendment to the S-1 accordingly.

COMMENT 39. *Please clarify why certain shareholders appear twice in the list such as Todd Stuart and Milen Petkov Tzvetanov. Also, it appears at least one officer or director George Nolen is included in the list. Please provide the disclosure required by Item 507 of Regulation S-K for each security holder that has had a material relationship with you within the past three years.*

RESPONSE:

In response to the Staff's comments, the Company will revise the selling securityholder table to consolidate entries so that securityholders only appear once in the list. The Company will provide the disclosure required by Item 507 regarding its two directors, George Nolen and Christi M. Pedra, who are participating in the Offering, in the amendment to the S-1.

Unaudited Financial Statements, page F-1

COMMENT 40. *Please update the filing to comply with Rule 8-08 of Regulation S-X. Please also provide an updated accountant's consent with any amendment to the filing.*

RESPONSE:

In response to the Staff's comment, the Company will include audited financial statements for the year ended December 31, 2010 and the financial information will be current in accordance with Rule 8-08 of Regulation S-X in the amendment to the S-1. This information was also

included in the 10-K. An updated accountant's consent will also be included with the amendment to the S-1.

Note 2. Significant Accounting Policies, page F-5

Derivatives, page F-7

COMMENT 41. *We note your policy that derivative financial instruments, specifically warrants to purchase common stock, “are initially recorded at fair value, or relative fair value when issued with other instruments.” We note that under FASB ASC 470-20-25-2, proceeds from the sale of debt instruments with stock purchase warrants are allocated based on the relative fair value of the debt instrument and the warrants. However, FASB ASC 815-10-30-1 requires that “all derivative instruments shall be measured initially at fair value.” Please describe for us how your policy for recording derivative financial instruments at relative fair value complies with FASB ASC 815-10-30-1.*

RESPONSE:

The Company would like to clarify its accounting policy specifically with respect to warrants issued in conjunction with debt instruments. The Company allocated the proceeds received between the debt instrument and the warrant on a **relative fair value basis**, in accordance with ASC 470-20-25-2. Immediately after the relative fair value allocation, the Company records the derivative warrant at its then **fair value** with any change from the relative fair value allocation being charged (credited) to operations at that time. Specifically as it relates to the Convertible Bridge Notes described on page F-10, the relative fair value of the warrants on the commitment date was approximately \$138,000. At that time, the fair value of those warrants was determined to be approximately \$191,000. The difference of \$53,000 was immediately charged to Derivative Loss at that date.

In response to the Staff's comment, the Company proposes revising the accounting policy on page F-7 of the S-1 to remove the reference to “relative fair value when issued with other instruments” as the relative fair value allocation process is adequately disclosed on page F-10.

Note 8. Convertible Notes Payable, page F-11

COMMENT 42. *As a result of a series of financing, the conversion features of your convertible notes payable was accelerated and certain contingent discount provisions were resolved and you recorded \$134,410 of additional interest expense related to the contingent beneficial conversion feature. Please describe for us in greater detail the contingent conversion terms of the convertible notes payable, your accounting for those contingent conversion terms in accordance with FASB ASC 470-20-25-20 and provide us with your calculation of the contingent beneficial conversion feature recorded as additional interest expense. In a related matter, please provide us with a similar analysis for the conversion of your Convertible Bridge Notes discussed on page F-16.*

RESPONSE:

In response to the Staff’s comment, additional detail related to the convertible notes payable described on page F-11 of the S-1 is hereby provided. The convertible notes payable were dated between August 2006 and March 2010 with an annual interest rate of 8%. Maturity dates were generally between one year and three years from the issuance date. The notes had mandatory conversion terms described in the promissory notes as follows: “The outstanding principal amount of the Note (and the Company’s election the accrued and unpaid interest on the Note) shall convert automatically and immediately upon the earlier to occur of (i) the closing of a Financing Round (as defined in 1.1(g) below and (ii) the Maturity Date, into Conversion Shares. The amount of Conversion Shares shall be determined by multiplying the outstanding principal amount of this Note (and, at the Company’s election, the accrued and unpaid interest on the Note) by the Conversion Rate....” Conversion shares “shall mean (i) the equity securities or debt of the Company...sold and issued in the Financing Round, or (ii) if no Financing Round has occurred by the Maturity Date the Company’s common stock par value \$0.001 per share”. The Conversion Rate is defined as “one (1) divided by the Discount Factor.” The Discount Factor is defined as follows: “If a Financing Round occurs prior to the Maturity Date, the Discount Factor shall be [either 0.9 or 0.8] and Financing Round does not occur prior to the Maturity Date the Discount Factor shall be 1.”

Therefore, on the dates the convertible notes payable were issued, the Company evaluated the conversion terms. According to ASC 470-20-25-5, “An embedded beneficial conversion feature present in a convertible instrument shall be recognized separately at issuance by allocating a portion of the proceeds equal to the intrinsic value of that feature to additional paid-in capital.” In order to determine the intrinsic value, if any, of the conversion feature, the Company followed the provisions of ASC 470-20-30-6 and -7. The Company determined “[t]he most favorable conversion price that would be in effect at the conversion date, assuming there are no changes to the current circumstances except for the passage of time”. The terms of the convertible notes payable required that upon the Maturity Date, the notes convert into the Company’s common stock without discount. This assumes nothing, including the completion of a Financing Round by the Company, other than the passage of time. As a result of this analysis, the Company determined that there was no beneficial conversion feature required to be recognized on the commitment date.

However, the Company recognized that the conversion terms were subject to change in the event of a Financing Round. In accordance with ASC 470-20-25-20: “Changes to the conversion terms that would be triggered by future events not controlled by the issuer shall be accounted for as contingent conversion options, and the intrinsic value of such conversion options shall not be recognized until and unless the triggering event occurs. The term *recognized* is used to mean that the calculated intrinsic value is recorded in equity with a corresponding discount to the convertible instrument.” Therefore, at the commitment date, the Company measured the contingent beneficial conversion feature based on the intrinsic value of the fixed percentage discount consistent with the methodology described in Example 7, Case D (ASC 470-20-55-44 through -47). This amount was determined by dividing the face amount of the convertible notes by the Discount Factor.

In March 2010, the Company completed a series of financings which met the definition of a Financing Round. Therefore, all convertible notes payable that had not reached their Maturity Date were mandatorily convertible with any applicable Discount Factor. In addition to the beneficial conversion feature on the face value of the convertible notes payable, the Company elected in certain cases to convert the accrued interest based on the Discount Factor as well. The Company calculated the beneficial conversion feature on the converted accrued interest using a methodology consistent with Example 7, Case D. The total beneficial conversion feature was determined to be \$134,410 (see calculation that follows). At this time, the Company recorded the beneficial conversion feature as follows:

Dr. Discount on convertible notes payable	\$134,410
Cr. Additional paid-in capital	\$134,410

Since the convertible notes payable mandatorily converted simultaneously with the Financing Round and in accordance with ASC 470-20-40-1, the unamortized discount remaining at the date of the conversion was recognized immediately as interest expense. Consequently, the Company made the following entry:

Dr. Interest expense	\$134,410
Cr. Discount on convertible notes payable	\$134,410

With respect to the convertible bridge notes, the bridge notes pay interest at 6% and have a stated maturity date of December 31, 2010. The notes and all accrued interest are **only** convertible in the event of a Qualified Next Round Financing, as defined in the notes, at 100% of the price in that Qualified Next Round Financing. Otherwise, the bridge notes must be repaid at their maturity date. The Company also issued the investors warrants in conjunction with the convertible bridge notes. In accordance with ASC 470-20-25-2, the Company allocated the \$500,000 of proceeds between the bridge notes and the warrants on a relative fair value basis. Next and in accordance with ASC 470-2-30-5 and Example 2 (ASC 470-20-55-10), the Company used the effective conversion price to determine if a beneficial conversion feature existed. As a result of allocating \$138,352 of the total proceeds to the warrants, the Company determined that there was a beneficial conversion feature in the same amount. However, this beneficial conversion feature was entirely contingent on the Company completing a Qualified Next Round Financing. In accordance with ASC 470-20-25-6, this contingent beneficial conversion feature was measured at the commitment date but was not recognized until the contingency was resolved. Therefore, as of September 30, 2010, no beneficial conversion feature had been recognized related to the convertible bridge notes. The existing discount was amortized from the issuance date through the stated redemption date (December 31, 2010).

On October 26, 2010, the Company completed a private placement that met the definition of a Qualified Next Round Financing. As a result and in conjunction with the conversion of the bridge notes to common stock, the Company recognized the contingent beneficial conversion feature of \$138,352 as follows:

Dr. Interest expense	\$138,352
Cr. Additional paid-in capital	\$138,352

In addition, the remaining unamortized portion of the existing discount was recognized immediately as interest expense at the date of the conversion. Please see the exhibits to this response letter for detailed calculations pertaining to this Comment 42.

Note 15, Subsequent Events

Reverse Merger and Private Placement of Securities, page F-15

COMMENT 43. *We see that on October 26, 2010, Invivo Therapeutics Corporation completed a reverse merger with Invivo Therapeutics Holdings Corporation (formerly known as Design Source, Inc.). Upon closing of this transaction, Invivo Therapeutics Holdings Corporation will transfer all of the assets and liabilities of Design Source to another subsidiary and split-off this subsidiary through the sale of its stock. Please describe for us in appropriate detail, how you accounted for and valued this reverse merger and sale of Design Source operating assets and liabilities. As part of your response, please refer to the authoritative literature, which supports your accounting for these transactions.*

RESPONSE:

In response to the Staff's comment:

Summary of the Merger

On October 26, 2010, we acquired the business of InVivo Therapeutics Corporation ("InVivo"), through the completion of a reverse merger transaction (the "Merger"). InVivo is now a wholly owned subsidiary of ITHC, which continues to operate the business of InVivo. We issued 31,147,190 shares of our Common Stock to the holders of InVivo common stock on October 26, 2010 in exchange for the 2,261,862 outstanding shares of InVivo. We also issued options and warrants in exchange for the outstanding options and warrants of InVivo.

Simultaneously with the closing of the Merger on October 26, 2010, ITHC transferred all of its operating assets and liabilities to its wholly-owned subsidiary, D Source Split Corp., a company organized under the laws of Nevada ("DSSC"). DSSC was then split-off from ITHC through the sale of all outstanding shares of DSSC (the "Split-Off"). In connection with the Split-Off, 14,747,554 shares of our Common Stock held by Peter Reichard, Lawrence Reichard and Peter Coker (the "Split-Off Shareholders") were surrendered and cancelled without further consideration, other than the shares of DSSC. An additional 1,014,490 shares of our Common Stock were cancelled by a shareholder for no additional consideration. The assets and liabilities of ITHC were transferred to the Split-Off Shareholders in the Split-Off. ITHC executed a split off agreement with the Split-Off Shareholders which obligates the Split-Off Shareholders to assume all prior liabilities associated with ITHC before the Merger.

Accounting for the Split-Off

The business purpose of the Split-Off was to (a) create a shell company with no assets or liabilities and (b) reallocate the ownership levels among the pre-Merger shareholders to previously negotiated levels, in order to facilitate the Merger.

At the time of the Split-Off, ITHC had minimal operating assets and negative net assets of approximately \$165,000. Therefore, the Split-Off was essentially an extinguishment of ITHC's pre-Merger net liabilities. In accordance with ASC 470-50-40-2, the Split-Off was accounted for as an extinguishment of debt by controlling shareholders and was therefore treated as a contribution of capital of \$165,000 immediately prior to the Merger. We believe this treatment is consistent with the guidance in SAB Topic 5.T, "Accounting for Expenses or Liabilities Paid by Principal Stockholder(s)".

Although all transactions related to the Merger occurred essentially simultaneously, InVivo was not a party to the Split-Off or the Split-Off Agreement which was executed by the pre-Merger executive officers of ITHC. Additionally, execution of the Split-Off and Split-Off Agreement were conditions of the Merger. Therefore, we have considered the Split-Off to have occurred immediately prior to the Merger for accounting purposes. As InVivo is the ongoing accounting entity (see Accounting for the Reverse Merger below), the Split-Off is not reflected in the post-Merger consolidated financial statements of the Company.

Accounting for the Reverse Merger

At the time of the Merger, Design Source, Inc. had nominal net assets including nominal cash, no property or other assets and no employees other than its two executive officers. In addition, Design Source was also considered a "shell company" as defined in Rule 12b-2 of the Exchange Act. InVivo at the time of the Merger was a development stage medical device and technology company that had been in existence since 2005, owned or licensed technology and had approximately 13 employees including a full management team. As a result, InVivo was a "business" as referenced in ASC 805-40-25-1.

After the Split-Off, ITHC was a shell company with no assets or liabilities. With respect to the accounting for the Merger, the Company notes in the SEC's Financial Reporting Manual, Topic 12:

The acquisition of a private operating company by a non-operating public shell corporation typically results in the owners and management of the private company having actual or effective voting and operating control of the combined company. The staff considers a public shell reverse acquisition to be a capital transaction in substance, rather than a business combination. That is, the transaction is a reverse recapitalization, equivalent to the issuance of stock by the private company for the net monetary assets of the shell corporation accompanied by a recapitalization.

12210.1 SEC rules do not directly address a registrant's financial reporting obligations in the event that it acquires another entity in a transaction accounted for as either a reverse acquisition or reverse recapitalization. For accounting purposes, the legal acquiree is treated as the continuing reporting entity that acquired the registrant (the legal acquirer).

Reports filed by the registrant after a reverse acquisition or reverse recapitalization should parallel the financial reporting required under GAAP—as if the accounting acquirer were the legal successor to the registrant’s reporting obligation as of the date of the acquisition.

Additionally, ASC 805-40-45-1 states:

Consolidated financial statements prepared following a reverse acquisition are issued under the name of the legal parent (accounting acquiree) but described in the notes as a continuation of the financial statements of the legal subsidiary (accounting acquirer), with one adjustment, which is to retroactively adjust the accounting acquirer’s legal capital to reflect the legal capital of the accounting acquiree. That adjustment is required to reflect the capital of the legal parent (the accounting acquiree). Comparative information presented in those consolidated financial statements also is retroactively adjusted to reflect the legal capital of the legal parent (accounting acquiree).

The Merger was accounted for as a “reverse merger” with a public shell and InVivo is deemed to be the accounting acquirer. The Merger was recorded as a reverse recapitalization, equivalent to the issuance of common stock by InVivo for the net monetary assets of ITHC accompanied by a recapitalization. At the date of the Merger, the 6,999,981 outstanding ITHC shares are reflected as an issuance of InVivo common stock to the prior shareholders of ITHC. ITHC had no net monetary assets as of the Merger so this issuance was recorded as a reclassification between additional paid-in capital and par value of Common Stock.

The Company retroactively adjusted its legal capital to reflect the legal capital of ITHC by adjusting all capital transactions for the 13.7706-for-1 share exchange. All comparative periods presented in the consolidated financial statements have also retroactively restated, as were the earnings per share amounts. The retroactive adjustment to InVivo’s capital to reflect ITHC’s capital structure resulted in a reclassification between additional paid-in capital and par value of common stock.

COMMENT 44. *In this regard, historical stockholders’ equity of the accounting acquirer prior to the reverse merger should be retroactively adjusted (a recapitalization) for the equivalent number of shares issued in the merger. Earnings per share for periods prior to the merger should also be adjusted to reflect the number of equivalent shares issued in this reverse merger recapitalization. Accordingly, please revise the filing to appropriately present the recapitalization of the accounting acquirer within shareholders’ equity and earnings per share.*

RESPONSE:

We note the Staff’s comment regarding retroactively adjusting the accounting acquiree’s historical stockholders’ equity and earnings per share to give effect to the reverse merger. We prepared the financial statements of InVivo Therapeutics Corporation in accordance with ASC 805-40-45 which states:

Consolidated financial statements prepared **following a reverse acquisition** are issued under the name of the legal parent (accounting acquiree) but described in the notes as a continuation of the financial statements of the legal subsidiary (accounting acquirer), with one adjustment, which is to retroactively adjust the accounting acquirer's legal capital to reflect the legal capital of the accounting acquiree. That adjustment is required to reflect the capital of the legal parent (the accounting acquiree). Comparative information presented in those consolidated financial statements also is retroactively adjusted to reflect the legal capital of the legal parent (accounting acquiree). [emphasis added]

The financial statements of InVivo Therapeutics Corporation contained in the S-1 were not "prepared following a reverse acquisition". Rather they contained only periods ended **prior to** the reverse acquisition. Further, they did not represent the consolidated financial statements of InVivo Therapeutics Corporation and InVivo Therapeutics Holding Corporation. However, as noted in response to Staff Question Number 40 above, the Company has updated the financial information in the S-1 to include the audited consolidated financial statements for the year ended December 31, 2010. In these consolidated financial statements, all financial statements will reflect the accounting described in the Staff's Comment No. 43 above including the retroactive adjustment for the reverse merger.

COMMENT 45. *We see that you have entered into a registrant rights agreement with the investors in your private unit placement offering. We note that there are certain registrant payment arrangement penalty provisions in this agreement. Please tell us how you have accounted for these registration payment arrangements under paragraphs 30-1 to 30-5 for FASB ASC 825-20.*

RESPONSE:

In response to the Staff's comment, the Company notes that it intends to account for the registration rights agreement entered into on October 26, 2010 in accordance with ASC 825-20. Specifically, at each reporting period, the Company will assess the probability of it transferring consideration under the registration payment arrangement. If at any time it determines that such an event is *probable* and the amount can be *reasonably estimated*, the amount of such an obligation will be recognized as a liability with a charge to earnings. Future changes in that liability will also be charged (credited) to earnings. At the date the registration rights agreement was entered into and at December 31, 2010, the Company does not expect to conclude that it is probable that they will be obligated to transfer any consideration under the terms of this registration rights agreement although this analysis is ongoing.

Pro Forma Consolidated Statement of Operations, Six Months Ended September 30, 2010, page F- 37

COMMENT 46. *We note that Invivo Therapeutics Corporation's fiscal year ended December 31, 2010 and as of the date of this filing, the most recent balance sheet required to be filed under*

Rule 3-01 of Regulation S-X was September 30, 2010. We see that you have provided pro forma statements of income for the six months ended September 30, 2010. Subsequent to the reverse acquisition, the financial statements of the accounting acquirer become the financial statements of the registrant under U.S. GAAP. Accordingly, please revise the filing to include a pro forma statement of income for the period from the most recent fiscal year end of the accounting acquirer, December 31, 2009, to the most recent interim date for which a balance sheet is required, September 30, 2010, in accordance with Rule 11-02(c)(2)(i) of Regulation S-X.

RESPONSE:

In response to the Staff's comment, the Company will revise in the amendment to the S-1 the pro forma information and provide a pro forma income statement for the year ended December 31, 2010. No pro forma balance sheet at December 31, 2010 is required because the most current balance sheet date is after the merger date.

COMMENT 47. *Reference is made to the pro forma weighted average number of common shares outstanding, basic and diluted of 51,647,171. We note from the Merger and Related Transactions summary included on pages 1 and 2 that the weighted average pro forma common shares outstanding reflects the issuance of common shares as part of the Transactions as described on page 2. Please disclose in detail how the pro forma weighted average number of common shares outstanding, basic and diluted was calculated as of each period-end presented. Your disclosure should include in detail all relevant assumptions used in such calculation. Your disclosure should also include specific references to the common shares issuances discussed on pages 1 and 2 in the Merger Transaction and Related Transactions summary.*

RESPONSE:

The Company plans to file this disclosure when it files the amendment to the S-1.

Back Cover Page

COMMENT 48. *Please tell us how you determined that you need not provide the disclosure required by Item 502(b) of Regulation S-K.*

RESPONSE:

In response to the Staff's comment, we note that Rule 174(b) under the Securities Act states that "[n]o prospectus need be delivered if the issuer is subject, immediately prior to the time of filing the registration statement, to the reporting requirements of section 13 or 15(d) of the Securities Exchange Act of 1934." We are, and were prior to the filing of the Registration Statement, subject to the reporting requirements of section 13 of the Securities Exchange Act and therefore determined that the Item 502(b) disclosure was not required.

Recent Sales of Unregistered Securities, page II-2

COMMENT 49. *Please state the facts relied upon to make available each of the exemptions from registration you are claiming in this section.*

RESPONSE:

In response to the Staff's comment, the Company will add the requested disclosure to the amendment to the S-1.

Exhibits and Financial Statement Schedules, page II-2

COMMENT 50. *You should file as one exhibit your complete articles of incorporation as amended, including the October 4, 2010 amendment, without requiring investors to assemble documents from multiple filings. See Regulation S-K Item 601(b)(3).*

RESPONSE:

In response to the Staff's comment, the Company filed its complete articles of incorporation as one exhibit to its 10-K and will incorporate this exhibit by reference into the S-1.

COMMENT 51. *We note that certain of your exhibits are unsigned, undated or otherwise incomplete and/or lack attachments. For example:*

- *Exhibit 2.1 is unsigned and is missing exhibits;*
- *Exhibits 2.2, 10.5, 10.6 are undated and unsigned; and*
- *Exhibit 10.1 is unsigned, undated and appears to be missing schedules;*

Please file complete agreements.

RESPONSE:

In response to the Staff's comment, the Company is currently compiling the documents that were filed as exhibits and will correct the deficiencies listed in this Comment 51 in connection with the filing of the amendment to the S-1.

Signatures, page II-8

COMMENT 52. *Your registration statement must also be signed by your controller or principal accounting officer in his capacity as such. Please revise.*

RESPONSE:

In response to the Staff's comment, the Company will revise the signature page to the amendment to the S-1 to clarify that Frank M. Reynolds is also signing in his capacity as the Company's principal accounting officer.

Exhibit 5.1

COMMENT 53. *Counsel must opine on the legality of the securities under the laws of Nevada and may not carve out elements of Nevada law as they attempt to do in the fourth paragraph. Please revise.*

RESPONSE:

Counsel will provide an updated legal opinion, which will address the Staff's comment, and which will be filed with the amendment to the S-1.

COMMENT 54. *We note the statement in the sixth paragraph that the opinion may not be relied upon by any other person. Investors are entitled to rely upon the opinion. Please delete the sixth paragraph.*

RESPONSE:

Counsel will provide an updated legal opinion, which will address the Staff's comment, and which will be filed with the amendment to the S-1.

COMMENT 55. *Refer to the second sentence in the sixth paragraph. Please tell us how you will ensure that your legal opinion is current as of the date the registration statement is declared effective.*

RESPONSE:

Counsel will provide an updated legal opinion, which will address the Staff's comment, and which will be filed with the amendment to the S-1.

Form 8-K filed November 1, 2010

Statements of Operations, page F-4

COMMENT 56. *We note that the column representing the statement of operations for the period from November 28, 2005 (inception) to December 31, 2009, does not agree to the statement of operations for the same period included with the Form S-1 filed February 1, 2011 on page F-21. Please reconcile for us the differences. Alternatively, please revise the affected filing to correctly present the statement of operations for the period from November 28, 2005 (inception) to December 31, 2009. Please also advise us of the accuracy of the statement of operations for the period from November 28, 2005 (inception) to June 30, 2010 included herein.*

RESPONSE:

In response to the Staff's comment, the Company acknowledges that the inception to December 31, 2009 and inception to June 30, 2010 are incorrect. The error resulted from an error in a spreadsheet used to support the financial statements that inadvertently included the six month period ended June 30, 2009 activity in both inception to date columns. We have included updated, audited inception to date information through December 31, 2010 in our recently filed 10-K and do not intend to amend the information included in the Form 8-K as more current information has been provided and to amend these prior financial statements would not provide meaningful information to current or prospective investors.

Pro Forma Financial Statements, page F-23

COMMENT 57. *We note that InVivo Therapeutics Corporation's fiscal year ended December 31, 2010 and as of the date of this filing, the most recent balance sheet required to be filed under Rule 3-01 of Regulation S-X was June 30, 2010. We see that you have provided pro forma statements of income for the three months ended June 30, 2010, mislabeled here as for the year-ended March 31, 2010. Subsequent to the reverse acquisition, the financial statements of the accounting acquirer become the financial statements of the registrant under U.S. GAAP. Accordingly, please revise the filing to include a pro forma statement of income for the period from the most recent fiscal year end of the accounting acquirer, December 31, 2009, to the most recent interim date for which a balance sheet is required, June 30, 2010, in accordance with Rule 1 l-02(c)(2)(i) of Regulation S-X.*

RESPONSE:

In response to the Staff's comment, the Company notes that it will provide, in the amendment to the S-1, the pro forma financial statements based on InVivo's fiscal year ending December 31. Therefore, we will present a pro forma income statement for the year ended December 31, 2010 in the amendment to the S-1.

If you have any questions with regards to these responses, need further supplemental information or would like to discuss any of the matters covered in this letter, please contact the undersigned at (617) 475-1520 or Thomas Rosedale of BRL Law Group LLC at (617) 399-6935.

Very truly yours,

/s/ Frank M. Reynolds

Frank M. Reynolds

Enclosures

Copy to: Thomas B. Rosedale

A	B	A+B=C	D	Beneficial Conversion Feature			
				A/D	B/D	E	E-C
Face Value	Accrued Interest	Total	Discount Factor	Face Value	Accrued Interest	Subtotal	
\$735,000	\$106,815	\$841,815	0.9	\$816,667	\$118,683	\$935,350	\$ 93,535
\$155,000	\$ 8,498	\$163,498	0.8	\$193,750	\$ 10,623	\$204,373	\$ 40,875
							<u>\$134,410</u>
							S-1, p. F-11

Proceeds received from convertible bridge notes	A	<u>\$ 500,000</u>	
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Estimated fair value of instruments issued:

Estimated fair value of bridge notes		\$ 500,000	B	72%
Estimated fair value of warrants		<u>191,281</u>	C	<u>28%</u>
Total estimated fair value		<u>\$ 691,281</u>		<u>100%</u>

Relative fair value allocation:

Convertible bridge notes	A*B=D	\$ 361,648	
Warrants	A*C	<u>138,352</u>	
Total proceeds		<u>\$ 500,000</u>	

Effective conversion price:

Carrying value of bridge notes	D	\$ 361,648	
Shares issued upon conversion (pre-exchange)	E	<u>36,310</u>	
Effective conversion price per share	F	<u>\$ 9.96</u>	

Fair value per share	G	<u>\$ 13.77</u>	
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Incremental fair value	G-F=H	<u>\$ 3.81</u>	
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Beneficial conversion feature:

Incremental fair value per share	H	\$ 3.81	
Number of shares issued	E	<u>36,310</u>	
Beneficial conversion feature	E*H	<u>\$ 138,363</u>	S-1, p. F-10

Total convertible bridge notes converted:

Face value		\$ 500,000	
Accrued interest through conversion date		<u>4,597</u>	
		<u>\$ 504,597</u>	S-1, p. F-16