

SECURITIES & EXCHANGE COMMISSION EDGAR FILING

ENDRA Life Sciences Inc.

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Corporate Issuer CIK: 1681682

April 14, 2017

VIA EDGAR CORRESPONDENCE

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street N.E.
Washington, D.C. 20549
Attn: Amanda Ravitz

**Re: ENDRA Life Sciences Inc.
Amendment No. 8 to Registration Statement on Form S-1
Filed March 27, 2017
File No. 333-214724**

Dear Ms. Ravitz:

On behalf of ENDRA Life Sciences Inc. (the "Company"), we submit this letter providing a response to the verbal comments communicated by the Staff of the Securities and Exchange Commission (the "Staff") on April 13, 2017 with respect to the Company's amended registration statement on Form S-1 (File No. 333-214724) (the "Registration Statement"). Simultaneously with the filing of this letter, the Company is filing by EDGAR amendment no. 9 to the Registration Statement (the "Registration Statement Amendment") responding to the Staff's comments. Below we have noted the Staff's comments in bold face type and the Company's responses in regular type.

- 1. The Registration Statement omits the presentation on a pro forma basis, taking into account the anticipated reverse stock split, of the Company's earnings per share, which presentation was present in the Notes to Financial Statements in amendment no. 7 to the Registration Statement. Please reinsert such presentation for the last completed fiscal year of the Company and any subsequent interim periods presented in the financial statements included in the Registration Statement Amendment.**

Additional disclosure responding to this comment has been added on page F-14 of the Registration Statement Amendment with respect to the fiscal year ended December 31, 2016. No subsequent interim period is presented in the financial statements included in the Registration Statement Amendment.

- 2. When presenting information on a pro forma basis taking into account the conversion of outstanding convertible notes, please make clear that the conversion price is dependent on the election of the noteholders.**

Noteholders holding a majority of the outstanding principal amount of the Company's convertible promissory notes have elected to convert all outstanding convertible promissory notes into shares of the Company's common stock at a conversion price of \$1.40 per share. Additional disclosure clarifying this point has been added on page 6, page 35, page 37, page 67, page 73, page 75 and page F-11.

3. **Please make sure that throughout the prospectus, including the financial statements included therein, it is clear whether figures are presented on a pre- or post-reverse stock split basis.**

Revised disclosure responding to this comment has been added on page F-11 of the Registration Statement Amendment.

4. **The number of shares of common stock outstanding presented on page 6 of the Registration Statement does not seem consistent with such figure as presented in amendment no. 7 to the Registration Statement. Please reconcile this apparent discrepancy.**

Revised disclosure responding to this comment has been included on page 6, page 35, page 37 and page 75 of the Registration Statement Amendment to include shares issuable upon the conversion of the outstanding principal and accrued interest on our outstanding promissory notes, consistent with the presentation in previous amendments to the Registration Statement. The figure on page 6 of the Registration Statement excluded such shares, accounting for the discrepancy noted by the Staff in its comment.

5. **Where estimated revenue for the quarter ending March 31, 2017 is presented in the Registration Statement, please also present estimated net loss for such period.**

Additional disclosure responding to this comment has been added on page 1 and page 38 of the Registration Statement Amendment.

6. **We note an inconsistency in the disclosure describing the application and approval process of the FDA on page 3 and page 55 of the Registration Statement. Please make this disclosure consistent.**

Revised disclosure responding to this comment has been added on page 3, page 39 and page 55 of the Registration Statement Amendment.

7. **In your response to comment no. 2 in your letter dated December 6, 2016, you stated that, since the Company intended to hire a full-time Chief Financial Officer following the offering, you did not believe any additional risk factor disclosure was required regarding Mr. Wells' availability to act as the Company's Chief Financial Officer. Please reevaluate this response in light of Mr. Wells' presentation in the Registration Statement as the Company's full-time Chief Financial Officer.**

Revised disclosure responding to this comment has been added on page 24 and page 61 of the Registration Statement Amendment. In preparation for serving as the Company's Chief Financial Officer, Mr. Wells has recently reduced his responsibilities serving as principal financial officer for other companies. With respect to the disclosure on page 61, the Company would like to note that Mr. Wells is currently transitioning out of his role with Loton, Corp. but, as that development is not yet public, the Registration Statement Amendment still describes Mr. Wells as the principal financial officer of Loton, Corp.

We appreciate your time and attention to the Company's responses to the Staff's comments. Should you have any questions, please call me at (919) 743-7312.

Very truly yours,

/s/ James M. Herriott

James M. Herriott

cc: Francois Michelin, Chief Executive Officer
Michael Thornton, Chief Technology Officer
David Wells, Chief Financial Officer