



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

DIVISION OF  
CORPORATION FINANCE

Mailstop 4546

March 6, 2017

Martin J. Duvall  
Chief Executive Officer  
Tocagen Inc.  
3030 Bunker Hill Street, Suite 230  
San Diego, CA 92109

**Re: Tocagen Inc.  
Amendment No. 3 to Draft Registration Statement on Form S-1  
Submitted February 9, 2017  
CIK No. 0001419041**

Dear Mr. Duvall:

We have reviewed your amended draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Prospectus Summary  
Our Pipeline, page 4

1. Please revise your pipeline table on pages 4 and 83 to identify the specific pipeline programs in preclinical trials. If no specific program has been identified to evaluate RRV with anti-PD-L1 for development, please remove this row from your pipeline table as it is premature to include such information in your table.

Our Strategy, page 4

2. Please provide the meaning and significance of the term “statistical significance” in the first bullet point of this section. In doing so, please refrain from referencing p-values as

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such disclosure should be reserved for the Business section where more context can be provided.

Business

Our Lead Product Candidate: Toca 511 & Toca FC, page 88

3. When you first reference p-values on page 90 of this section, please explain the meaning and significance of p-values and how they relate to the FDA's evidentiary standards of efficacy. In addition, please explain the relationship between p-values and statistical significance on page 96 when you state that with Toca 511 & Toca FC the risk of death was reduced by 55% compared to lomustine, which is a statistically significant difference.

Pooled Safety Data, page 100

4. Please revise your disclosure in this section and in the table on page 101 to describe the serious adverse events reported in 4.8% of patients treated with Toca 511 and 2.5% of patients treated with Toca FC.

You may contact Mary Mast at (202) 551-3613 or Sharon Blume at (202) 551-3474 if you have questions regarding comments on the financial statements and related matters. Please contact Johnny Gharib at (202) 551-3170 or me at (202) 551-3675 with any other questions.

Sincerely,

/s/ Mary Beth Breslin for

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Karen E. Deschaine, Esq.  
Cooley LLP