October 16, 2019

Mark A. Goldsmith
Chief Executive Officer
Revolution Medicines, Inc.
700 Saginaw Drive
Redwood City, CA 94063

Re: Revolution Medicines, Inc.
Draft Registration Statement on Form S-1
Submitted September 19, 2019
CIK No. 0001628171

Dear Dr. Goldsmith:

We have reviewed your 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.

Draft Registration Statement on Form S-1

Prospectus Summary
Overview, page 1

1. Please revise here and throughout to avoid conclusory statements regarding your product candidates and the results of your clinical tests and preclinical studies by describing how you conducted the tests, the number of tests conducted and the range of results observed.
For example, we note your disclosure on page 1 that RMC-4630 is a "potent and selective inhibitor of SHP2," your statement on page 4 regarding your "ability to inhibit various oncogenic RAS(ON) mutants" and your statement on page 108 that you have "substantial preclinical evidence that SHP2 is a central node that can be targeted to disrupt signaling pathways that may involve activation of multiple RTKs."

2. We note your disclosure on page 1 and throughout regarding your "deep" pipeline and your "deep differentiated pipeline." Please balance this disclosure here and throughout by disclosing that you have only one product candidate that is in clinical testing and that all of your other potential product candidates are in the preclinical and development stage.
Similarly, please balance your disclosure on page 3 that you believe that RMC-4630 is well positioned to become the backbone of targeted therapy combinations for the treatment of various RAS-dependent tumors and your disclosure on page 109, which describes how each category of your product candidates acts to inhibit cancer cells, by addressing your early stage of clinical testing, preclinical studies and the development of

product candidates.
3. Please revise your pipeline chart to include a column for each clinical stage. In this regard, we note that you have combined Phases 1 and 2 into a single column.
4. Please revise to include a brief definition here of what you mean by "frontier cancer targets."

Implications of being an emerging growth company, page 6

5. Please provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.

Risk Factors

Risks related to our common stock and this offering

Our amended and restated certificate of incorporation will provide for an exclusive forum, page 65

6. We note that your forum selection provision identifies the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any "proceeding brought on [y]our behalf." Please disclose whether this provision applies to actions arising under the Securities Act or Exchange Act. In that regard, we note that Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. If the provision applies to Securities Act claims, please also revise your prospectus to state that there is uncertainty as to whether a court would enforce such provision and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. If this provision does not apply to actions arising under the Securities Act or Exchange Act, please also ensure that the exclusive forum provision in the governing documents states this clearly, or tell us how you will inform investors in future filings that the provision does not apply to any actions arising under the Securities Act or Exchange Act. In addition, we note that, on page 65,

you state that your amended and restated certificate of incorporation will provide for an exclusive forum in the Court of Chancery of the State of Delaware and in the U.S. federal district courts, and, on page 179, you identify only the Court of Chancery of the State of Delaware as the exclusive forum. Please revise for consistency.

Use of Proceeds, page 70

7. Please revise to disclose an estimate of how far in the development of your multiple RAS programs the proceeds from this offering will allow you to reach. Also, please disclose the total estimated cost of each of the specified purposes for which the net proceeds are intended to be used, and, if material amounts of other funds are necessary to accomplish the specified purposes, provide an estimate of the amounts of such

other funds and the
sources thereof.
Capitalization, page 73

8. Please revise to disclose the appropriate short-term nature of the marketable securities
included in your capitalization table as of September 30, 2019, or remove as necessary. If
material, also include disclosure of your accounting and policy for such securities in your
pending unaudited interim financial statements as of September 30, 2019.
Management's discussion and analysis of financial condition and results of operations
Critical accounting policies, significant judgments, and use of estimates
Stock-based compensation, page 99

9. Once you have an estimated offering price or range, please explain to us the reasons for
any differences between the recent valuations of your common shares leading up to the
initial public offer and the estimated offering price. This information will help facilitate
our review of your accounting for equity issuances including stock compensation.
Business
Our pipeline
Our SHP2 inhibitor, RMC-4630, page 111

10. On page 111, please disclose the type of animal tested, the length of the test, the exact
number of animals in each test, the dose the animals received in each test, and whether
graphs (a) through (d) show the average or mean results. Similarly, please identify the
animals tested in the studies described on pages 112 to 115. Also, please disclose the
number of mice tested in Figure 7 on page 116. In addition, in your discussion of these
studies and throughout the prospectus, please remove your assessments that the studies
were effective or that your product candidates are or will be effective as only the FDA and
foreign government equivalent regulators have the authority to determine whether the
product candidate is effective or safe.

Our RAS(ON) portfolio
Our RAS (ON) inhibitor programs, page 120

11. Please tell us how many times you tested the inhibitors in the studies described in Figures
13 to 20 on pages 122 to 127 and whether the graphs demonstrate the average or mean of
the studies conducted. In addition, please revise to remove comparisons of your inhibitors
to other inhibitors unless you have conducted a head-to-head clinical trial. In this regard,
we note your comparison of RMC-5552 to other mTOR active site inhibitors on
page 127. Also, in Figure 21, please disclose the number of mice tested and whether the
results observed were statistically significant.
Collaboration agreement with Sanofi, page 128

12. We note that you are responsible for 20% of the expenses associated with the
identification, validation and optimization of SHP2 inhibitors for 2018-2020 pursuant to
the research plan and budget under the collaboration agreement with Sanofi. Please
provide quantitative information regarding these costs, and revise your prospectus
summary and throughout to clarify that you are responsible for 20% of the costs
associated with the identification, validation and optimization of SHP2 inhibitors for 2018
to 2020. In addition, please describe the material terms of the

Quality Agreement and
Clinical Supply Agreement with Sanofi or tell us why you believe this is not necessary. In
this regard, we note your disclosure on page 171.

Financial Statements
Notes to Financial Statements
7. Acquisition of Warp Drive, page F-22

13. Provide us your consideration of whether disaggregating the $55.8 million in-process
research and development asset by individual programs would provide useful information,
if such information is available.

You may contact Bonnie Baynes at 202-551-4924 or Lisa Vanjoske at 202-551-3614 if
you have questions regarding comments on the financial statements and related matters. Please
contact Sonia Bednarowski at 202-551-3666 or Dietrich King at 202-551-8071 with any other
questions.

Sincerely,

Division of
Corporation Finance
Office of Life
Sciences