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

FORM 8-K

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

DATE OF REPORT (DATE OF EARLIEST EVENT REPORTED): September 1, 2020

MOLECULIN BIOTECH, INC.
(Exact Name of Registrant as Specified in its Charter)

DELAWARE	**001-37758**	**47-4671997**
(State or Other Jurisdiction of Incorporation or Organization)	(Commission File No.)	(I.R.S. Employer Identification No.)

5300 Memorial Drive, Suite 950, Houston, TX 77007
(Address of principal executive offices and zip code)

(713) 300-5160
(Registrant's telephone number, including area code)
(Former name or former address, if changed from last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-14(c)).

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter). Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒ Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol (s)	Name of each exchange on which registered
Common Stock, par value $.001 per share	MBRX	The NASDAQ Stock Market LLC

Item 7.01 Regulation FD Disclosure.

On September 1, 2020, Moleculin Biotech, Inc. (the "Company") conducted an investor webinar using the presentation set forth as Exhibit 99.1 herein. The information contained in Item 7.01 of this Current Report on Form 8-K, including Exhibit 99.1, is being furnished and shall not be deemed to be "filed" for the purpose of the Securities Exchange Act of 1934, as amended ("Exchange Act"), nor shall it be deemed incorporated by reference in any filing under the Exchange Act or the Securities Act of 1933, as amended ("Securities Act"), unless specifically identified therein as being incorporated by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	**Description**
99.1	Investor Presentation dated September 2020

SIGNATURE

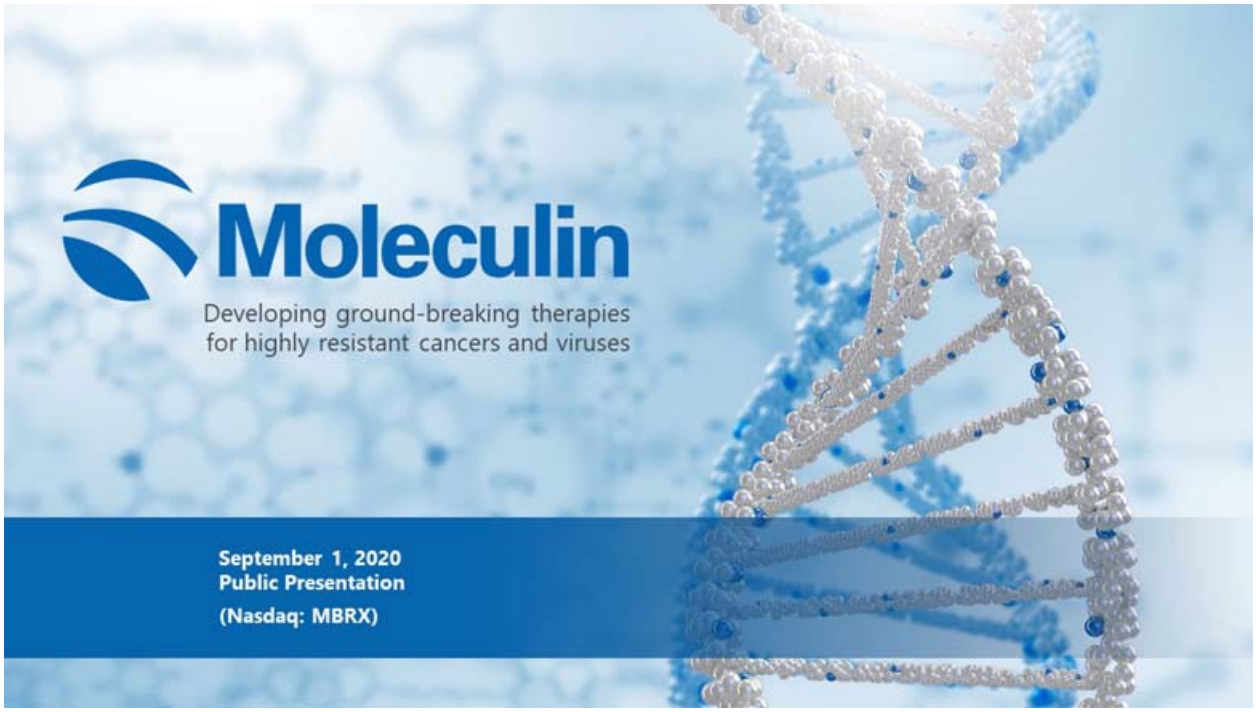
Pursuant to the requirements of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MOLECULIN BIOTECH, INC.

Date: September 1, 2020

By: /s/ Jonathan P. Foster
Jonathan P. Foster
Chief Financial Officer

Exhibit 99.1


Moleculin
Developing ground-breaking therapies
for highly resistant cancers and viruses
September 1, 2020
Public Presentation
(Nasdaq: MBRX)

Disclaimer

All statements contained herein other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, and our objectives for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," and similar expressions are intended to identify forward looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors, including those discussed under Item 1A. "Risk Factors" in our most recently filed Form 10-K filed with the Securities and Exchange Commission ("SEC") and updated from time to time in our Form 10-Q filings and in our other public filings with the SEC. Any forward-looking statements contained in this release speak only as of its date. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this presentation may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward looking statements. More detailed information about Moleculin is set forth in our filings with the Securities and Exchange Commission. Investors and security holders are urged to read these documents free of charge on the SEC's web site at http://www.sec.gov.


Highly Experienced Leadership

Executive Management Team

Walter Klemp,
Chairman, President & CEO

Don Picker, PhD
Chief Science Officer

Jonathan P. Foster, CPA, CGMA
EVP & CFO

Robert Shepard, MD, FACP
Chief Medical Officer

Sandra Silberman, MD & PhD
Chief Medical Officer – New Products

Moleculin

Selected Prior Experience

soliton · ZENO · Inc. 500 · Drypers · Coopers & Lybrand

SYNERGY PHARMACEUTICALS · TAPESTRY Life Science

CARBOPLATIN

InfuSystem · LSG Sky Chefs · Drypers · Schlumberger · Deloitte.

DANA-FARBER CANCER INSTITUTE · UNIVERSITY OF VIRGINIA · HARVARD UNIVERSITY · Takeda · FDA · Tufts

AstraZeneca · Roche · Bristol-Myers Squibb · NOVARTIS · Pfizer

Science Advisory Board

Waldemar Priebe, PhD

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

Paul Waymack, MD, SC

FDA

Pancreatic

James Abbruzzese, MD

DANA-FARBER CANCER INSTITUTE

Duke University School of Medicine

Hematology

Elihu Estey, MD

FRED HUTCH CURES START HERE

JOHNS HOPKINS SCHOOL of MEDICINE

Marty Tallman, MD

Memorial Sloan Kettering Cancer Center

Jorge Cortes, MD

The NEW ENGLAND JOURNAL of MEDICINE

GEORGIA CANCER CENTER AUGUSTA UNIVERSITY

Virology

Richard Whitley, MD

NIH National Institute of Allergy and Infectious Diseases

Dominique Schols PhD

KATHOLIEKE UNIVERSITEIT LEUVEN Rega Instituut

Hongbo Zhai, MD

UCSF

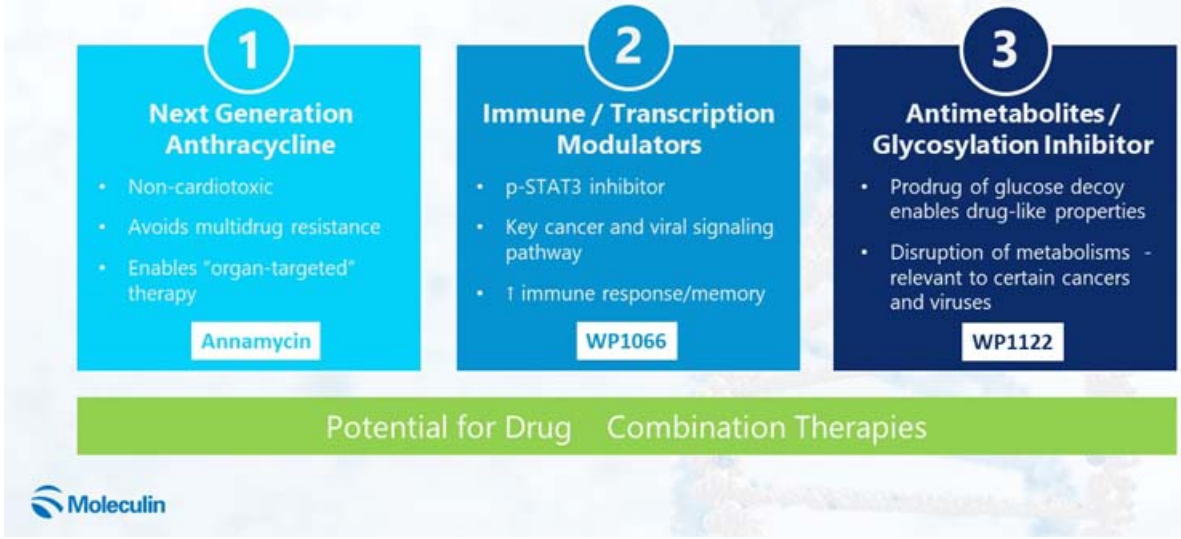
Moleculin

Investment Highlights

World class collaboration
Highly experienced team
Exclusive IP/Fast Track

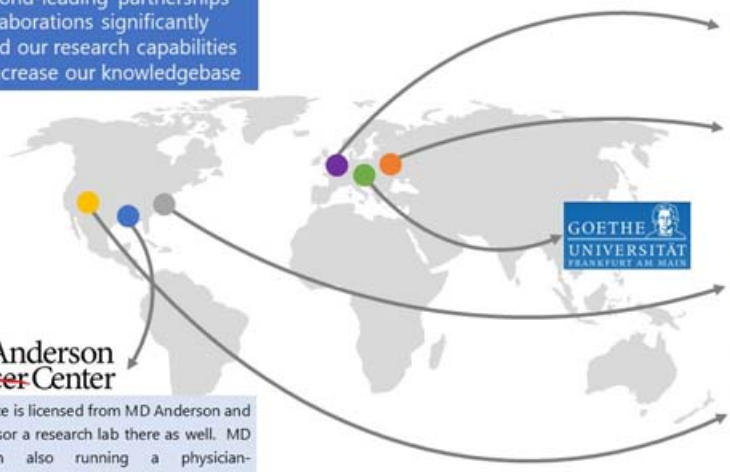
Moleculin

Three Core Technologies



Leading Partnerships, Collaborations

Our world-leading partnerships & collaborations significantly expand our research capabilities and increase our knowledgebase



REGA INSTITUTE KU LEUVEN

Dr. Dominique Schols of the Rega Institute has joined the Moleculin Science Advisory Board

WPD Pharmaceuticals

D-E-R-M-E-N

Annamycin AML trial in EU, Sublicenses for co-development, collaborations on development. WP1220 Phase 1 trial

GOETHE UNIVERSITÄT FRANKFURT AM MAIN

EMORY UNIVERSITY

Physician sponsored pediatric "all-comers" brain tumor trial – DIPG, Medulloblastoma, Gliomas...

MD Anderson Cancer Center

All science is licensed from MD Anderson and we sponsor a research lab there as well. MD Anderson also running a physician-sponsored GBM trial with WP1066.

MAYO CLINIC

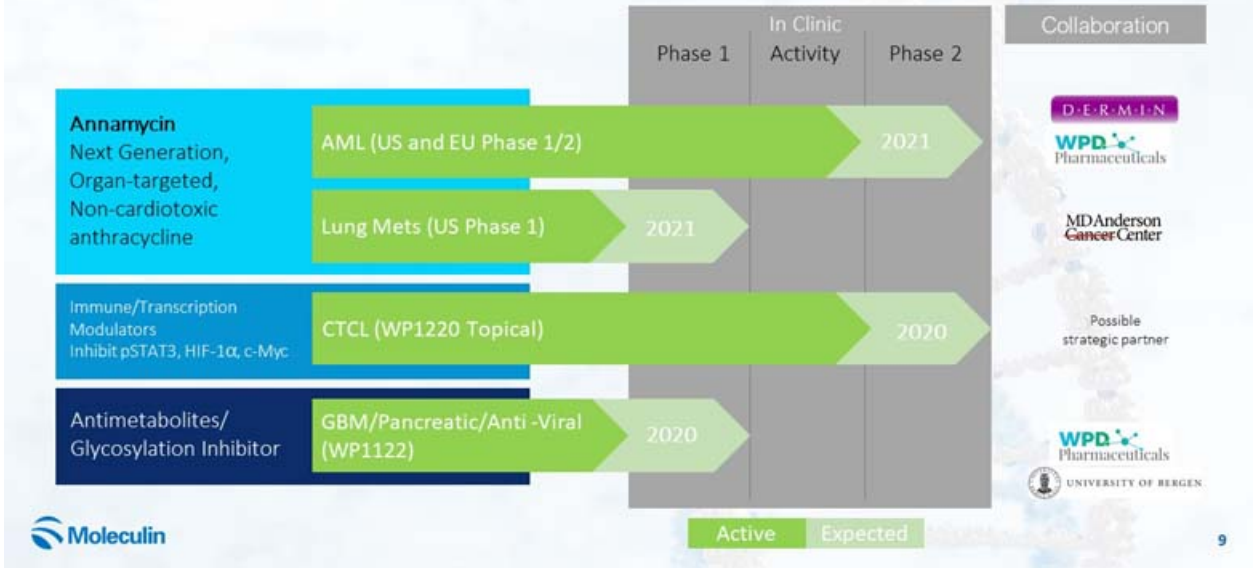
THE UNIVERSITY OF IOWA

ImQuest BioSciences

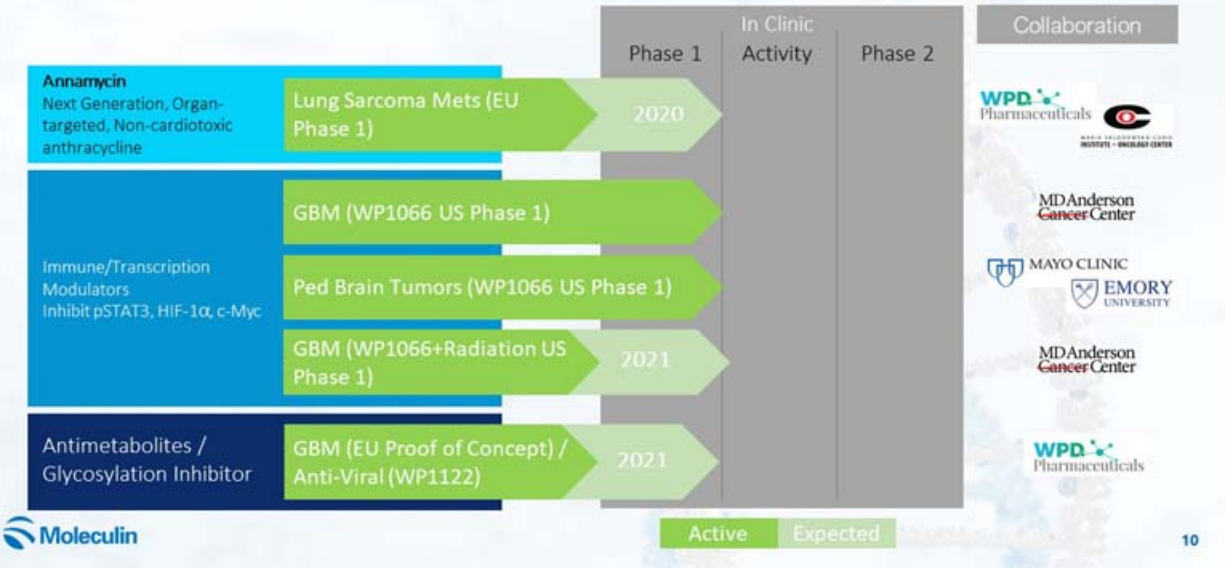
IITRI

Moleculin

Development Pipeline – Internally Funded



Development Pipeline – Externally Funded



Key Developments

3 drug candidates in 5 clinical trials

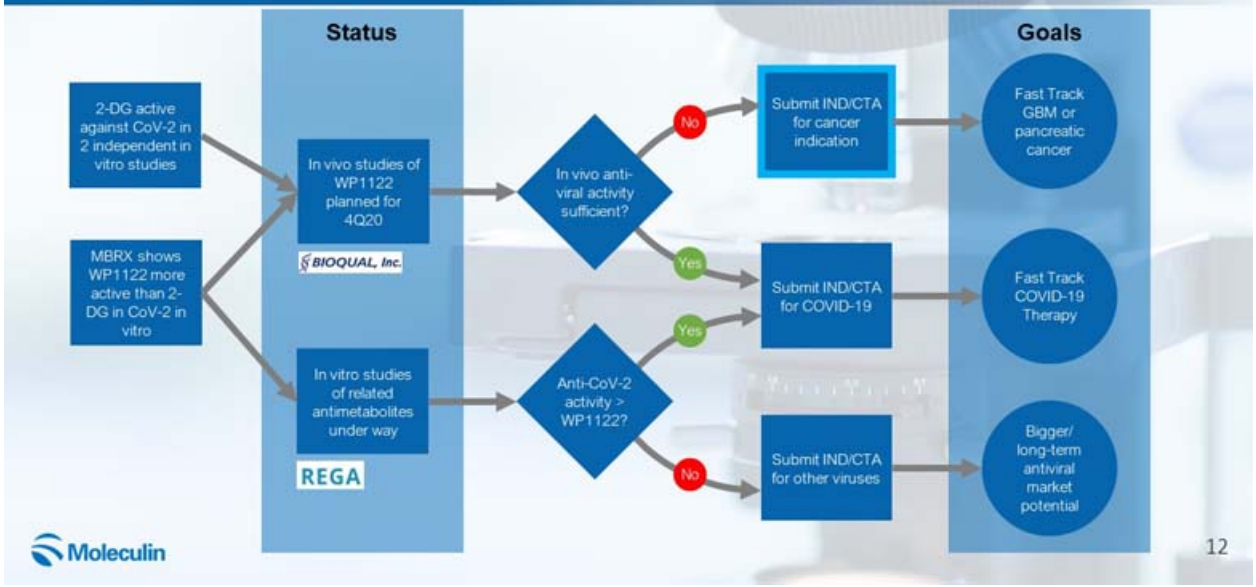
Next Generation Anthracycline – Annamycin (2 Clinical Trials)

- **Positive interim safety and efficacy data in US and Europe AML Trials**
  - 45% efficacy in 11 relapsed AML patients treated at/or above 120 mg/m^2 (1 CRi, 3 PRs, 1 BTB); clearing circulating blasts
  - No evidence of cardiotoxicity
- **U.S. concluded successfully Phase 1 portion; Europe in fifth cohort level of 240 mg/m^2 ; Approval to accelerate dosage intervals**
- **ODD and Fast Track Designation from FDA for the treatment of relapsed or refractory acute myeloid (AML)**
- **Active against metastases to the lungs in pre-clinical testing**
  - Significantly improved survival in an aggressive form for triple negative breast cancer metastasized to the lungs in animal models; Moving to IND in 2020

Immune/Transcription Modulators - (3 Clinical Trials)

- **Emory University began Phase 1 pediatric brain tumor trial**
- **Continue MD Anderson Phase 1 in adult brain tumors**
- **Efficacy and safety demonstrated in European Phase 1 clinical trial of WP1220 for the topical treatment of cutaneous T-Cell Lymphoma (CTCL) – moving to Phase 2**
- **FDA granted Orphan Drug Designation for WP1066 for the treatment of glioblastoma, the most aggressive form of brain tumor**
- **WP1066 appears to:**
  - (a) Counteract resistance to checkpoint blockade therapy (specifically, immune checkpoint target PD-L1) and
  - (b) Be capable of immune reprogramming

Key Developments – Antimetabolites



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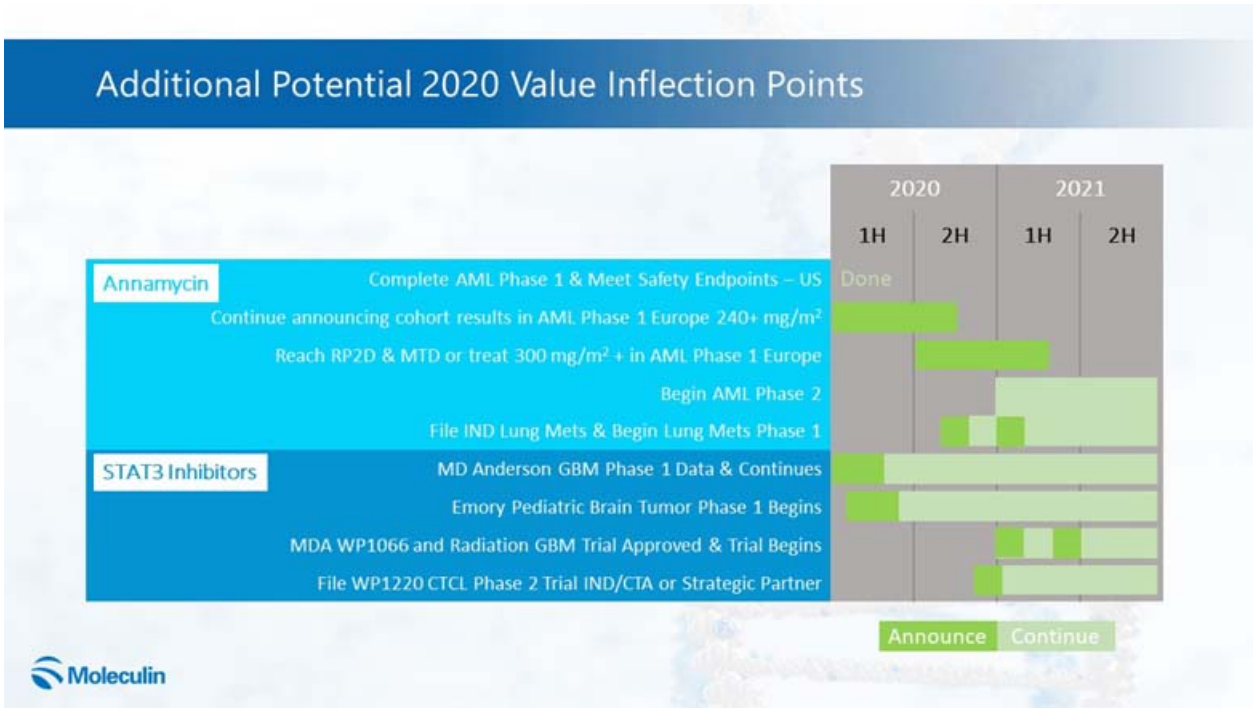
Additional Potential 2020 Value Inflection Points
2020
2021
1H
2H
1H
2H
Annamycin
Complete AML Phase 1 & Meet Safety Endpoints – US
Done
Continue announcing cohort results in AML Phase 1 Europe 240+ mg/m²
Reach RP2D & MTD or treat 300 mg/m² + in AML Phase 1 Europe
Begin AML Phase 2
File IND Lung Mets & Begin Lung Mets Phase 1
STAT3 Inhibitors
MD Anderson GBM Phase 1 Data & Continues
Emory Pediatric Brain Tumor Phase 1 Begins
MDA WP1066 and Radiation GBM Trial Approved & Trial Begins
File WP1220 CTCL Phase 2 Trial IND/CTA or Strategic Partner
Announce
Continue
Moleculin


Financial Review

Financial Statement Summary

In thousands, except for share and per share data and shares outstanding	For the Year Ended 12/31/19	For the 6 mos 6/30/2020
	(Unaudited)	(Unaudited)
Statement of Operations Data		
Revenue	-	-
Research and development	$11,013	$6,535
General and administrative and depreciation	6,511	3,561
Loss from operations	(17,524)	(10,096)
Net loss	(13,205)	(11,321)
Net loss per common share – basic and diluted	$ (0.32)	$ (0.21)
Basic and diluted weighted average shares outstanding	40,721,406	54,707,132
Balance Sheet Data		
Cash and cash equivalents	$ 10,735	$ 16,734
Prepaid expenses and other	2,749	3,015
Total current assets	13,484	19,749
Total assets	$25,235	$31,380
Total current liabilities	3,570	3,739
Total liabilities	9,664	15,751
Total stockholders' equity	15,571	15,629
Total liabilities and stockholders' equity	$25,235	$31,380

- "Capital efficient" approach
- Leverage R&D with contractors, sponsored research, and investigator led trials
- Five clinical trials on a $12M run-rate R&D spend
- **$17 million raise in Jan-Aug**
- 61.7 million shares outstanding August 7, 2020

The above financial information is summarized from the Company's most recent forms filed with the SEC (www.sec.gov)

Moleculin

Various Sources of Financing

Opportunistic Approach

- Approx. $20 million raised 2019; $17 million YTD 2020
- Three analysts have reported on MBRX – Roth, Maxim, & Opco
- Overnight and intraday deals
- $15 million ATM – Opco
- Equity Line - Lincoln Park Capital
- Successful out-licensing of technology in low priority areas
- Partnerships on drugs showing activity

The above financial information is summarized from the Company's most recent 10-K AND 10-Q filed with the SEC (www.sec.gov)

Investment Highlights