

IPO ANALYSIS

Research on upcoming IPOs for selected
candidate companies.

Castle Biosciences

AMTD International

Rapt Therapeutics

August 2019

VentureDeal

Castle Biosciences Proposes Terms For U.S. IPO

Quick Take

Castle Biosciences ([CSTL](#)) has filed to raise \$50 million in an IPO of its common stock, according to an S-1/A [registration statement](#).

The firm is developing and commercializing a suite of genomic tools to assist in the diagnosis and treatment of skin and uveal cancers.

CSTL is showing accelerating growth, positive cash flow from operations, strong investor support for the IPO and near-breakeven operating margin.

Company & Technology

Friendswood, Texas-based Castle Bio was founded in 2007 to bring ‘actionable genomic information to the diagnosis and treatment of skin and uveal cancers.

Management is headed by founder and CEO Derek Maetzold, who has held senior roles at Encysive Pharmaceuticals, Schering-Plough, Amylin Pharmaceuticals, and Sandoz Pharmaceuticals.

Investors in the firm include Sofinnova HealthQuest, MGC Venture Partners, Industry Ventures Healthcare, BioBrit and SH Castle Biosciences.

The firm has developed or is developing genomic tests for skin and uveal (ocular) cancers as follows:

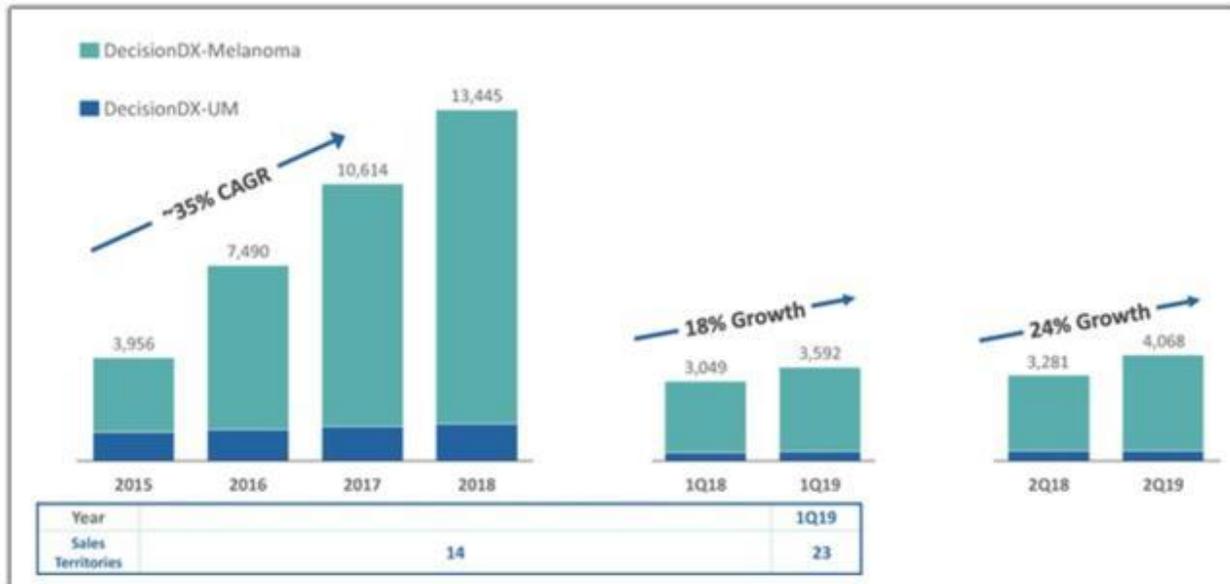
	DEVELOPMENT			VALIDATION			COMMERCIALIZATION			
	Secure Samples	Assay Development	Algorithm Development	Analytical Validation	Clinical Validation	Clinical Utility	Physician Adoption	Medicare ¹	Commercial Payers	Guideline Inclusion
DecisionDx MELANOMA Cutaneous Melanoma	✓	✓	✓	✓ 1 published study	✓ 11 published studies	✓ 7 published studies	✓ >3,000 ordering physicians (2018)	✓ LCD effective December 2018 Covered lives: 60 million	In process	
DecisionDx-UM Uveal Melanoma	✓	✓	✓	✓ 2 published studies	✓ 10 published studies	✓ 2 published studies	✓ >130 ordering physicians (2018)	✓ LCD effective July 2017 Covered lives: 60 million	✓ Covered lives: 83 million	✓
DecisionDx-SCC Squamous cell carcinoma	✓	✓	✓	✓	✓					
Suspicious Pigmented Lesion	✓	✓	✓							

¹Includes Medicare Advantage.

Customer Acquisition

Castle sells its testing services via a direct sales force of 35 individuals in 23 territories and also has a 'medical affairs group' which it uses to educate physicians and enhance its marketing efforts.

Below is a company-provided chart on the growth in number of genetic profiling reports in recent years:



Selling, G&A expenses as a percentage of revenue have been dropping as revenues have increased, as the figures below indicate:

Selling, G&A Period	Expenses vs. Revenue Percentage
To March 31, 2019	69.4%
2018	72.3%
2017	110.9%

Source: Company registration statement

The selling, G&A efficiency rate, defined as how many dollars of additional new revenue are generated by each dollar of selling, G&A spend, increased to 0.8x in the most recent period, indicating increased capital efficiency, as shown in the table below:

Selling, G&A Period	Efficiency Rate Multiple
To March 31, 2019	0.8x

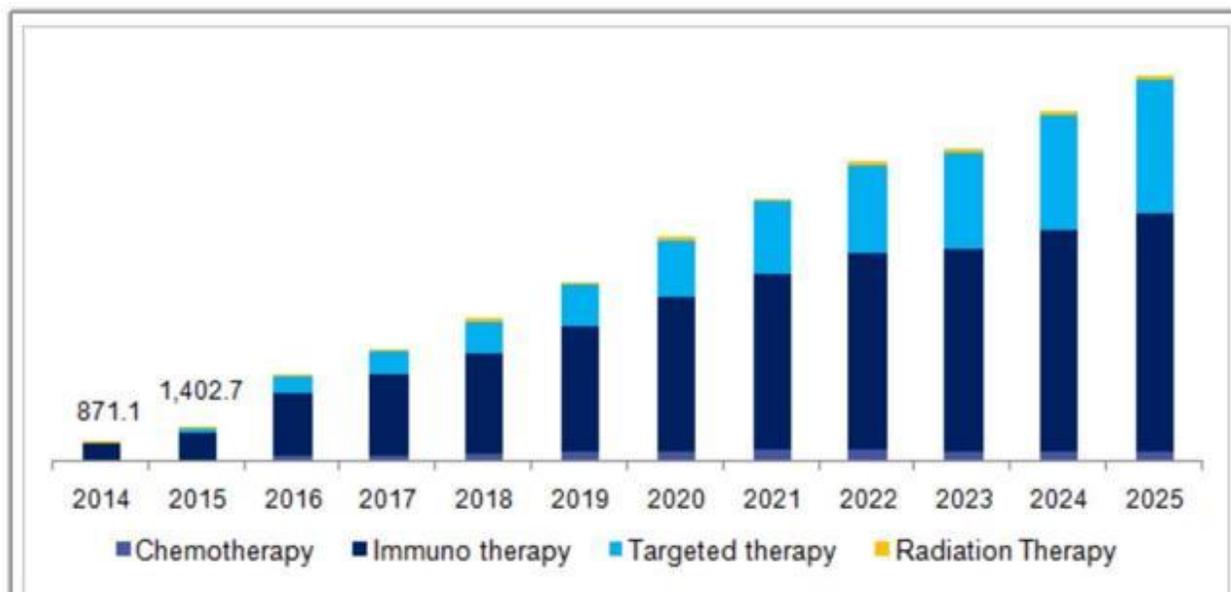
To March 31, 2019 0.8
2018 0.5

Source: Company registration statement

Market

Skin cancer is the most common form of cancer in the U.S. According to a 2017 market research report by [Grand View Research](#), the melanoma therapeutics market was \$4.2 billion in 2016.

The market was expected to grow at a CAGR of 11.21% from 2014 through 2025, as shown in the chart below:



Per the World Health Organization, 132,000 cases of skin cancer are diagnosed each year, with a forecasted increase of 4,500 cases worldwide as a function of the reduction of ozone levels in the years to come.

The Asia Pacific market will likely grow at a strong rate due to a rise in the incidence of skin cancer and increased demand for lower-cost solutions.

According to a [Medgadget](#) report, the melanoma skin cancer diagnostics market is expected to reach \$409 million by 2022 and grow at a rate of 7% from 2018 to 2022.

Financial Performance

CSTL's recent financial results can be summarized as follows:

- Growing topline revenue at an accelerating rate
- Increased gross profit and gross margin
- Narrowed operating loss and net loss
- A swing to positive cash flow from operations

Below are relevant financial metrics derived from the firm's registration statement:

Total Revenue

Period	Total Revenue	% Variance vs. Prior
To March 31, 2019	\$ 8,717,000	138.2%
2018	\$ 22,786,000	65.7%
2017	\$ 13,754,000	

Gross Profit (Loss)

Period	Gross Profit (Loss)	% Variance vs. Prior
To March 31, 2019	\$ 7,119,000	195.9%
2018	\$ 17,489,000	98.0%
2017	\$ 8,832,000	

Gross Margin

Period	Gross Margin
To March 31, 2019	81.67%
2018	76.75%
2017	64.21%

Operating Profit (Loss)

Period	Operating Profit (Loss)	Operating Margin
To March 31, 2019	\$ (322,000)	-3.7%
2018	\$ (3,835,000)	-16.8%
2017	\$ (10,900,000)	-79.2%

Net Income (Loss)

Period	Net Income (Loss)
To March 31, 2019	\$ (2,342,000)
2018	\$ (10,163,000)
2017	\$ (15,308,000)

Cash Flow From Operations

Period	Cash Flow From Operations
To March 31, 2019	\$ 1,288,462
2018	\$ (12,294,511)
2017	\$ (12,233,587)

Sources: Company registration statement

As of March 31, 2019, the company had \$16.2 million in cash and \$33.8 million in total liabilities.

Free cash flow during the twelve months ended March 31, 2019, was a negative (\$9.0 million).

IPO Details & Valuation Metrics

CSTL intends to sell 3.33 million shares of common stock at a midpoint price of \$15.00 per share to raise \$50 million in gross proceeds from an IPO.

Certain existing shareholders have indicated an interest to purchase shares of up to \$15.0 million in the aggregate at the IPO price. This is a positive signal for prospective IPO investors.

Assuming a successful IPO, the company's enterprise value at IPO would approximate \$239.2 million, excluding the effects of underwriter over-allotment options.

Management says it will use the net proceeds from the IPO as follows:

approximately \$17 million for selling and marketing activities, including expansion of our sales force to support the ongoing commercialization of our current products and future products;

approximately \$17 million for research and development related to the continued support of our current products as well as the development of our product pipeline; and

the remainder for working capital and other general corporate purposes, including the additional costs associated with being a public company.

Management's presentation of the company roadshow is [available here](#).

Listed bookrunners of the IPO are SVB Leerink, Baird, Canaccord Genuity, and BTIG.

Valuation Metrics

Below is a table of relevant capitalization and valuation figures for the company:

Measure [TTM]	Amount
Market Capitalization at IPO	\$231,835,965
Enterprise Value	\$239,237,634
Price / Sales	8.33
EV / Revenue	8.59
EV / EBITDA	-223.17

Earnings Per Share	-\$0.50
Total Debt To Equity	16.91
Float To Outstanding Shares Ratio	21.57%
Proposed IPO Midpoint Price per Share	\$15.00
Net Free Cash Flow	-\$8,989,306
Revenue Growth Rate	138.23%

Source: Company Prospectus

Commentary

CSTL is seeking public capital to both continue its sales & marketing efforts for its existing genetic testing products and continue development on new products.

The company's financials show accelerating revenue, gross profit and gross margin as well as reduced operating and net losses and a swing to positive cash flow from operations.

Sales and marketing expenses are dropping as a percentage of total revenue and the firm is becoming more efficient at generating additional revenue.

The market opportunity for skin cancer diagnostics is growing moderately but is still on the small side, at an estimated \$409 million by 2022. Still, Castle is growing far faster than the market, so appears to be taking market share or expanding the market in the process.

SVB Leerink is the lead left underwriter and IPOs led by the firm over the last 12-month period have generated an average return of a negative (18.1%) since their IPO. This is a lower-tier performance for all major underwriters during the period.

As to valuation, management is asking IPO investors to pay an EV / Revenue of 8.6x for its growth trajectory.

While the IPO isn't cheap, given the firm's growth prospects, investor support for the IPO, near-breakeven operating margin, and swing to positive cash flow from operations, my opinion on the IPO is a BUY at up to \$15.00 per share.

Expected IPO Pricing Date: July 24, 2019.

AMTD International Files For U.S. IPO

Quick Take

AMTD International ([AMTDI](#)) has filed to raise gross proceeds of up to \$200 million from a U.S. IPO, according to an [F-1 registration statement](#).

The firm provides investment banking, asset management, and strategic investment services in the Asia Pacific region.

AMTDI is a prominent financial services firm but faces an uncertain business environment in the primary regions it operates in.

Hong Kong-based AMTD was founded in 2003 to provide investment banking, asset management, and strategic investment services in the Asia region.

Management is headed by Chairman and CEO [Calvin Choi](#), who has been with the firm since 2016.

The company has developed the ‘AMTD SpiderNet’ ecosystem, which represents an interconnected network of company clients, shareholders, business partners, and investee companies, among which the firm actively advocates the exploration of business collaboration opportunities.

Additionally, AMTD provides financial solutions and additional resources that are required for such collaborations.

The company’s investment banking solutions include ‘equity underwriting, debt underwriting, advisory (on credit rating, financing, and mergers and acquisitions transactions), securities brokerage, institutional sales and distribution, and research, among others.’

The firm also provides professional investment management and advisory services to institutional clients.

Additionally, AMTD makes long-term strategic investments through which the company obtains access to unique opportunities and resources that complement its other businesses and augment its SpiderNet ecosystem.

AMTD’s primary customers include banks in China, privately-owned organizations with a focus on new economy sectors, as well as Hong Kong-based blue-chip corporations, among others.

Management claims that the company is the largest independent asset management firm in Asia in serving regional banks in China and new economy companies, in each case as measured by assets under management as of March 31, 2019, according to the CIC Report.

AMTD utilizes sales and channel teams that support product distribution activities across the company's business operations.

Additionally, the company's institutional sales team actively participates in its investment banking transactions by introducing institutional clients to the various products the firm offers and providing institutional investors with value-added corporate access services.

Staffing expenses as a percentage of revenue have been dropping as revenue has fluctuated in recent periods, per the table below:

Staff Period	Expenses vs. Revenue Percentage
To March 31, 2019	6.5%
2018	9.2%
2017	9.7%

Sources: Company registration statement

Market & Competition

According to a [2019 market research report](#) by Wise Guy Reports, investment banks across the globe are moving toward businesses requiring less regulatory capital due to regulatory changes that have made some investment banking activities more expensive than the others.

As a result, large players, such as Barclays, Deutsche Bank, and Credit Suisse have announced their plans to move from only traditional underwriting business to other activities, including mergers and acquisitions advisory as well as fundraising.

However, despite the regulatory change restricting the range of some banks and forcing them to specialize, others, such as Citibank and J.P. Morgan have continued to offer a complete range of investment banking services.

Major competitors that provide or are developing investment banking globally include:

- Barclays (LON:BARC)
- J.P. Morgan ([JPM](#))
- Goldman Sachs ([GS](#))
- Bank Of America ([BAC](#))
- Merrill Lynch ([BAC](#))
- Morgan Stanley ([MS](#))
- Deutsche Bank (DBK)
- Credit Suisse (SWX:CSGN)

Source: [Sentieo](#)

Management believes that the company's SpiderNet ecosystem and the expertise in the Asia regions to be the firm's core competitive strengths.

Financial Performance

AMTD's recent financial results can be summarized as follows:

- Fluctuating topline revenue
- Uneven operating profit and operating margin
- Reduced cash flow from operations

Below are relevant financial metrics derived from the firm's registration statement:

Total Revenue

Period	Total Revenue
To March 31, 2019	\$ 39,843,341
2018	\$ 96,020,458
2017	\$ 136,640,129

Operating Profit (Loss)

Period	Operating Profit (Loss)	Operating Margin
To March 31, 2019	\$ 36,609,826	91.9%
2018	\$ 89,184,784	92.9%
2017	\$ 122,136,915	89.4%

Net Income (Loss)

Period	Net Income (Loss)
To March 31, 2019	\$ 27,847,212
2018	\$ 68,266,332
2017	\$ 87,538,340

Cash Flow From Operations

Period	Cash Flow From Operations
To March 31, 2019	\$ 752,031
2018	\$ 10,284,507
2017	\$ 10,962,460

Sources: Company registration statement and IPO Edge

As of March 31, 2019, the company had \$20.0 million in cash and \$580.0 million in total liabilities. (Unaudited, interim)

Free cash flow during the twelve months ended March 31, 2019, was \$9.9 million.

IPO Details

AMTDI intends to raise \$200 million in gross proceeds from an IPO of ADSs representing underlying Class A shares.

The firm will be a controlled company and its controlling shareholder is L.R. Capital Group, which is possibly related to AMTDI's founding parent, CK Hutchison Holdings of Hong Kong.

Per the firm's latest filing, it plans to use the net proceeds from the IPO as follows:

approximately 50% to invest in our business and infrastructure expansion, which may include setting up new subsidiaries, acquiring new talents, and applying for new business licenses in other jurisdictions to provide global and more comprehensive financial services and solutions to our clients, although we have not decided on any particular locations for such plan as of the date of this prospectus;

approximately 30% to fund potential acquisitions of, and investments in, complementary businesses, although we do not have specific targets or commitments for such plan as of the date of this prospectus; and

the remainder for general corporate purposes, which may include working capital needs, branding and marketing activities, upgrading technology infrastructure, and other general administrative matters.

Management's presentation of the company roadshow is not available yet.

Listed underwriters of the IPO are AMTD Global Markets and Tiger Brokers.

Commentary

AMTD is attempting to raise public investment at a difficult time for Chinese companies in the U.S.

Chinese firms have generally disappointed U.S. investors in the wake of U.S. China trade tensions and for other reasons as well.

The firm's financials have been variable in recent periods, with a topline revenue reduction due to changes in net fair value on financial assets. Staffing expenses as a percentage of total revenue have been dropping in recent periods, resulting in greater capital efficiency.

The market opportunity for Asia Pacific investment banking is difficult to determine as the region is undergoing a period of uncertainty as supply chains adjust to U.S. China trade relations challenges.

The wealth management service sector is a bright spot as the region continues to accumulate assets and individuals and businesses seek a greater range of options for investing their assets.

However, competition is heating up, with international firms looking to increase their access and a more amenable China reducing regulatory barriers to encourage foreign investment.

AMTD Global Markets is the lead left underwriter and there is no data on IPOs led by the firm over the last 12-month period in the U.S.

AMTD is operating in a somewhat volatile market environment with uncertain growth prospects in the years ahead.

I'll provide an update when we learn more details.

Expected IPO Pricing Date: To be announced.

Rapt Therapeutics Begins U.S. IPO Process

Quick Take

Rapt Therapeutics ([RAPT](#)) has filed to raise gross proceeds of \$75 million from a U.S. IPO, according to an [S-1/A registration statement](#).

The firm is focused on developing small-molecule drugs for patients with high unmet clinical needs in oncological and inflammatory diseases.

RAPT is preparing to enter Phase 2 trials so the IPO may be more appropriate for long-term investors with a multi-year hold timeline.

Company & Technology

San Francisco, California-based Rapt Therapeutics was founded in 2005 to develop immunology-based small-molecule drugs [SMDs] for oncological and inflammatory diseases.

Management is headed by President, CEO and Director [Brian Wong](#), who has been with the firm since 2015 and has previously served in various positions at Five Prime Therapeutics, including Senior Vice President, Research and Head of Immuno-Oncology.

Rapt has developed a proprietary technology platform that combines computationally-driven disease targeting and biomarker identification, data-driven patient selection, rapid clinical execution, and identification of efficient designs of small molecule drug properties to enable the discovery and development of highly selective SMDs that target the underlying disease cause.

The company's lead drug candidate FLX475 is being developed for the treatment of a range of "charged" tumors, which the company uses as a reference to tumors associated with immune suppression or high concentrations of CCR4 ligands, Treg and CD8+effector cells.

Various cancers the company refers to as "charged" include non-small cell lung cancer, triple-negative breast cancer, head and neck squamous cell carcinoma, nasopharyngeal cancer, gastric cancer, certain Hodgkin and non-Hodgkin lymphomas, and cervical cancer.

FLX475 is a 'CCR4 antagonist designed to block the migration of Treg specifically into tumors, but not healthy tissues, without depleting Treg throughout the body, which [management] believe may decrease the likelihood of side effects.'

The company has completed a Phase 1 clinical trial of FLX475 in 104 healthy volunteers that showed tolerability and 'demonstrated dose-dependent inhibition of CCR4 with no observed immune-related adverse events or significant clinical adverse events.'

Rapt's secondary drug candidate RPT193 is a CCR4 antagonist that blocks the recruitment of inflammatory immune cells type 2 T helper [Th2] cells, which are clinically implicated in allergic inflammatory diseases.

Below is the current status of the company's drug development pipeline:



Source: Company registration statement

Investors in Rapt Therapeutics include Topspin Partners, The Column Group, Regents of the University of California, Kleiner Perkins Caulfield & Byers, Celgene ([CELG](#)), and GV. Source: [Crunchbase](#)

Market & Competition

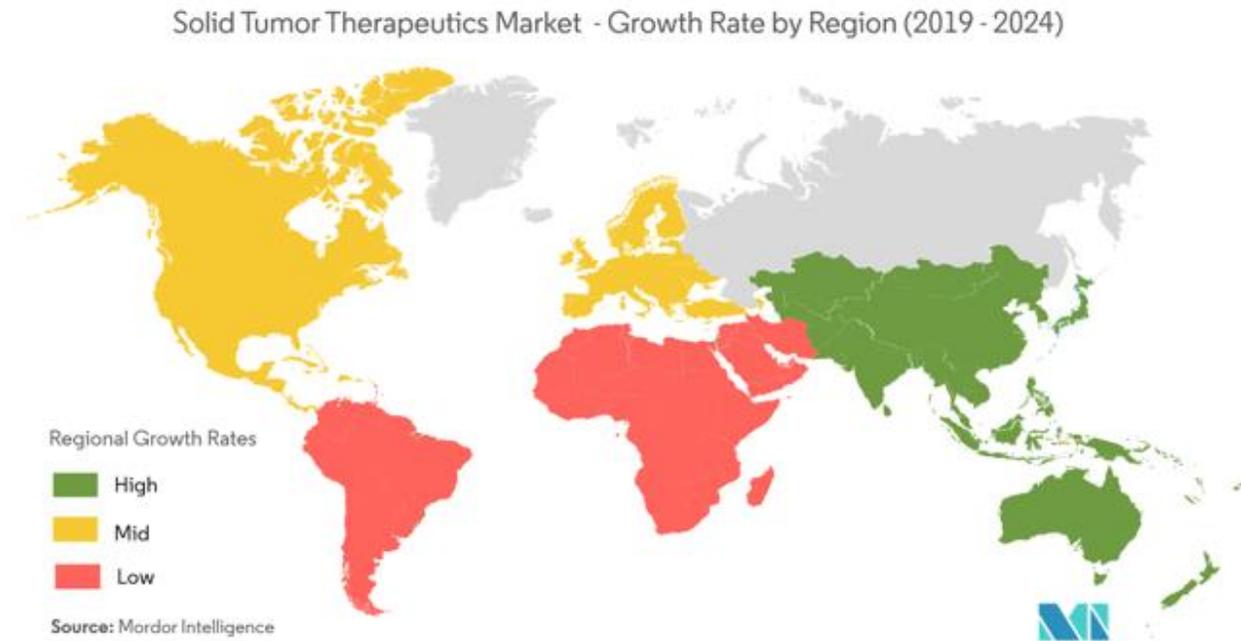
According to a [2018 market research report](#) by Mordor Intelligence, the global CAGR for solid tumor treatments is expected to be 15% between 2019 and 2024.

The main factors driving forecasted market growth are increased government initiatives, new product approvals in ovarian, pancreatic, and prostate cancers, as well as a growing incidence of cancer.

The research states that “cancer rates could further increase by 50%, to 15 million new cases by 2020, as per the World Cancer Report.”

Most common cancers for 2016 were breast, lung and bronchus, prostate, colon, and rectum, as well as bladder cancers, melanoma of the skin, non-Hodgkin lymphoma, thyroid cancer, kidney, and renal pelvis cancer, leukemia, endometrial cancer, and pancreatic cancer.

During the forecast period, the North American region is projected to dominate the market due to the high incidence of cancer, but the Asia-Pacific region will grow the fastest, as shown in the graphic below:



Major firms that provide or are developing solid tumor treatments include:

- Merck ([MRK](#))
- Bristol-Myers Squibb ([BMY](#))
- Novartis ([NVS](#))
- AstraZeneca ([AZN](#))
- Pfizer ([PFE](#))
- Genentech ([ROG](#))
- Incyte ([INCY](#))
- AbbVie ([ABBV](#))
- AnaptysBio ([ANAB](#))
- Dermira ([DERM](#))

Source: [Sentieo](#)

Financial Status

RAPT's recent financial results are typical of development stage biopharma firms in that they feature no revenue and significant R&D and G&A costs associated with advancing its treatment candidate pipeline through trials.

Below are the company's financial results for the past two and ¼ years (Audited PCAOB for full years):

	Year ended		Three months ended	
	December 31,	December 31,	March 31,	March 31,
	2017	2018	2018	2019
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Operating costs and expenses:				
Research and development	\$ 25,618	\$ 31,767	\$ 7,306	\$ 7,870
General and administrative	3,713	5,180	1,057	1,674
Total operating expenses	29,331	36,947	8,363	9,544
Loss from operations	29,331	36,947	8,363	9,544
Other (income), net	(216)	(800)	(132)	(356)
Net loss	\$ 29,115	\$ 36,147	\$ 8,231	\$ 9,188
Net loss per share, basic and diluted ⁽¹⁾	\$ 67.45	\$ 58.09	\$ 15.10	\$ 13.28

Source: Company registration statement

As of March 31, 2019, the company had \$61.8 million in cash and \$5.5 million in total liabilities. (Unaudited, interim)

IPO Details

RAPT intends to raise \$75.0 million in gross proceeds from an IPO of five million shares of its common stock at a midpoint price of \$15.00 per share, not including customary underwriter options.

Certain existing shareholders have indicated an interest to purchase shares of up to \$25.0 million in the aggregate at the IPO price. This is typical of successful life science IPOs and is a positive signal as to valuation for prospective IPO investors.

Assuming a successful IPO, the company's enterprise value at IPO would approximate \$279.5 million.

Per the firm's latest filing, it plans to use the net proceeds from the IPO as follows:

approximately \$20.0 million to \$25.0 million to fund the development of FLX475 beyond PoC results from our Phase 1/2 clinical trial;

approximately \$20.0 million to \$25.0 million to fund the development of RPT193 beyond our Phase 1 trial in healthy volunteers and patients with AD; and

the remaining proceeds for continued development of an RPT-GCN2i or other future drug candidate, continued refinement of our proprietary drug discovery and development engine, hiring of additional personnel, capital expenditures, costs of operating as a public company and other general corporate purposes.

Management's presentation of the company roadshow is [available here](#).

Listed underwriters of the IPO are BofA Merrill Lynch, Wells Fargo Securities, BMO Capital Markets, and UBS Investment Bank.

Commentary

RAPT is an early-stage biopharma seeking funding to advance its lead programs into and through Phase 2 trials.

The firm is currently evaluating its FLX475 lead candidate as a monotreatment as well as in collaboration with Merck's Keytruda (pembrolizumab) treatment.

The market opportunities for the firm's technologies could be quite large and broad as its cancer cell suppression capability may have application across numerous cancer types.

BofA Merrill Lynch is the lead left underwriter and IPOs led by the firm over the last 12-month period have generated an average return of 38.2% since their IPO. This is a top-tier performance for all major underwriters during the period.

Phase 2 trials are quite expensive, so the IPO proceeds plus existing cash on hand may provide enough funds for 12 - 18 months.

The next potential milestone is likely not until late 2020 or 2021 at the earliest, so the IPO would only be relevant for long-term holders.

Expected IPO Pricing Date: July 31, 2019.