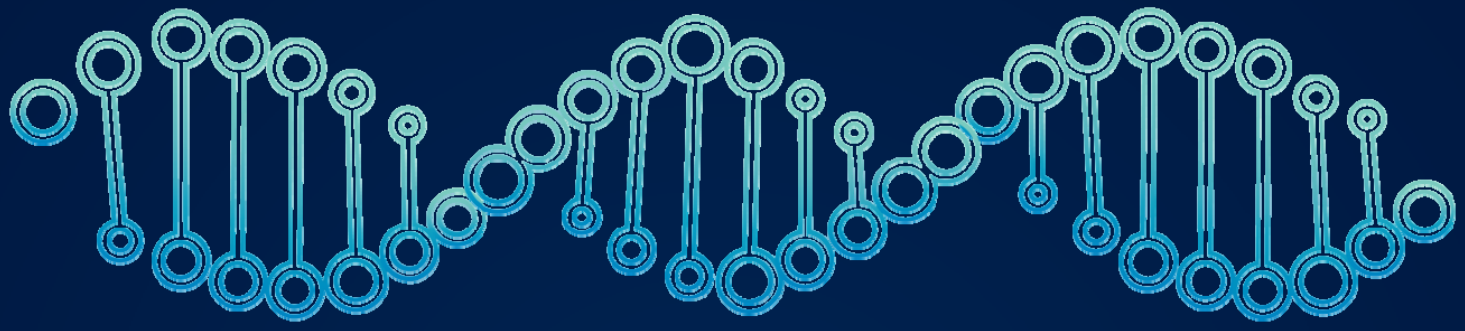


INVESTOR PRESENTATION

AUGUST J. TROENDLE

PRESIDENT & CEO

JESSE J. GEIGER

CFO & COO, LABORATORY OPERATIONS

KEVIN M. BRADY

EXECUTIVE DIRECTOR, FINANCE

JUNE 2020

MEDPACE

FORWARD LOOKING STATEMENTS & NON-GAAP FINANCIAL MEASURES

Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this presentation that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation statements regarding our anticipated financial results and effective tax rate used for non-GAAP adjustment purposes. In this context, forward-looking statements often address expected future business and financial performance and financial condition, and often contain words such as “expect,” “anticipate,” “intend,” “plan,” “believe,” “seek,” “see,” “will,” “would,” “target,” “forecast,” “may,” “could,” “likely,” “anticipate,” “project,” “goal,” “objective,” similar expressions, and variations or negatives of these words.

These forward-looking statements are based on management’s current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our financial condition, actual results, performance (including share price performance), or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, the following: the potential loss, delay or non-renewal of our contracts, or the non-payment by customers for services we have performed; the failure to convert backlog to revenue at our present or historical conversion rate; fluctuation in our results between fiscal quarters and years; decreased operating margins due to increased pricing pressure or other pressures; failure to perform our services in accordance with contractual requirements, government regulations and ethical considerations; the impact of underpricing our contracts, overrunning our cost estimates or failing to receive approval for or experiencing delays with documentation of change orders; our failure to successfully execute our growth strategies; the impact of a failure to retain key executives or other personnel or recruit experienced personnel; the risks associated with our information systems infrastructure, including potential security breaches and other disruptions which could compromise our information; our failure to manage our growth effectively; adverse results from customer or therapeutic area concentration; the risks associated with doing business internationally, including the effects of tariffs and trade wars; the risks associated with the Foreign Corrupt Practices Act and other anti-corruption laws; future net losses; the impact of changes in tax laws and regulations; the risks associated with our intercompany pricing policies; our failure to attract suitable investigators and patients to our clinical trials; the liability risks associated with our research and development services; the risks related to our Phase I clinical services; inadequate insurance coverage for our operations and indemnification obligations; fluctuations in exchange rates; the risks related to our relationships with existing or potential customers who are in competition with each other; our failure to successfully integrate potential future acquisitions; potential impairment of goodwill or other intangible assets; our limited ability to utilize our net operating loss carryforwards or other tax attributes; the risks associated with the use and disposal of hazardous substances and waste; the failure of third parties to provide us critical support services; our limited ability to protect our intellectual property rights; the risks associated with potential future investments in our customers’ business or drugs; general economic conditions in the markets in which we operate, including financial market conditions; the impact of a natural disaster or other catastrophic event; negative outsourcing trends in the biopharmaceutical industry and a reduction in aggregate expenditures and research and development budgets; our inability to compete effectively with other CROs; the impact of healthcare reform; the impact of consolidation in the biopharmaceutical industry; failure to comply with federal, state and foreign healthcare laws; the effect of current and proposed laws and regulations regarding the protection of personal data; our potential involvement in costly intellectual property lawsuits; actions by regulatory authorities or customers to limit the scope of or withdraw an approved drug, biologic or medical device from the market; failure to keep pace with rapid technological changes; the impact of industry-wide reputational harm to CROs; the effect of the U.K.’s withdrawal from the EU, which could have implications on our research, commercial and general business operations in the U.K. and the EU; changes in U.S. generally accepted accounting principles, including the impact of the changes to the revenue recognition standards; risks related to internal control over financial reporting; our ability to fulfill our debt obligations; the risks associated with incurring additional debt or undertaking additional debt obligations; the effect of covenant restrictions under our debt agreements on our ability to operate our business; our inability to generate sufficient cash to service all of our indebtedness; fluctuations in interest rates; the risks and uncertainties related to disruptions to or reductions in business operations or prospects due to pandemics, epidemics, widespread health emergencies, or outbreaks of infectious diseases such as coronavirus disease COVID-19; and our dependence on our lenders, which may not be able to fund borrowings under the credit commitments, and our inability to borrow.

These and other important factors discussed under the caption “Risk Factors” in our Annual Report on Form 10-K filed with the Securities and Exchange Commission, or SEC, on February 25, 2020, and our other reports filed with the SEC could cause actual results to differ materially from those indicated by the forward-looking statements made in this presentation. These factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included in this release and in our filings with the SEC. Any such forward-looking statements represent management’s estimates as of the date of this presentation. We cannot guarantee that any forward-looking statement will be realized. Achievement of anticipated results is subject to substantial risks, uncertainties and inaccurate assumptions. Should known or unknown risks or uncertainties materialize or should underlying assumptions prove inaccurate, actual results could vary materially from past results and those anticipated, estimated or projected. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this presentation.

Non-GAAP Financial Measures

Certain financial measures presented in this presentation, such as EBITDA, EBITDA margin, and Free Cash Flow, are not recognized under generally accepted accounting principles in the United States of America, or U.S. GAAP. Management uses EBITDA, EBITDA margin, and Free Cash Flow or comparable metrics as a measurement used in evaluating our operating performance on a consistent basis, as a consideration to assess incentive compensation for our employees, for planning purposes, including the preparation of our internal annual operating budget, and to evaluate the performance and effectiveness of our operational strategies.

We believe that EBITDA and EBITDA margin are useful to provide additional information to investors about certain material non-cash and non-recurring items. While we believe these financial measures are commonly used by investors to evaluate our performance and that of our competitors, because not all companies use identical calculations, this presentation of EBITDA and EBITDA margin may not be comparable to other similarly titled measures of other companies and should not be considered as an alternative to performance measures derived in accordance with U.S. GAAP. EBITDA is calculated as net income (loss) attributable to Medpace Holdings, Inc. before income tax expense, interest expense, net, depreciation and amortization. EBITDA margin is calculated by dividing EBITDA by Revenue, net for each period. Our presentation of EBITDA and EBITDA margin should not be construed as an inference that our future results will be unaffected by unusual or non-recurring items.

We utilize Free Cash Flow as a measure of profitability and an assessment of our ability to generate cash. Free Cash Flow is a commonly utilized metric that companies provide to investors, although the calculation of Free Cash Flow may not be comparable to other similarly titled metrics of other companies and should not be considered as an alternative to cash flow measures derived in accordance with U.S. GAAP. We define Free Cash Flow as net cash provided by operating activities, less capital expenditures and the principal portion of payments related to campus leases classified for accounting purposes as deemed landlord liabilities.

EBITDA, EBITDA margin, and Free Cash Flow have important limitations as analytical tools and you should not consider them in isolation, or as a substitute for, analysis of our results as reported under U.S. GAAP. See the condensed consolidated financial statements included elsewhere in this prospectus for our U.S. GAAP results. Additionally, for reconciliations of EBITDA to our closest reported U.S. GAAP measures, refer to the appendix of this presentation.

THE MEDPACE WAY:
SCIENTIFICALLY-DRIVEN, FULL-SERVICE CRO

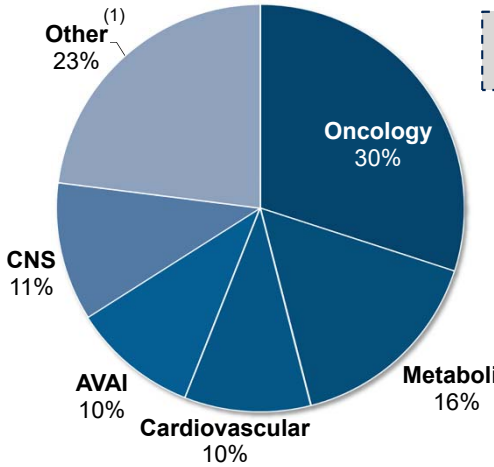
- ✓ **Disciplined and Integrated Full-Service Operating Model**
  - Full-service approach (avoids functional or partial outsourcing services) delivers timely, efficient, and high-quality results for our customers, enabling us to maintain robust margins
- ✓ **High-Science Approach with Deep Therapeutic Expertise**
  - Our therapeutic expertise encompasses areas that are among the largest, most complex, and fastest growing in pharmaceutical development, and our therapeutic leads are embedded into every aspect of a clinical trial process
- ✓ **Diversified Customer Base**
  - Top ten customers represented 29% of 2019 revenue
  - Strong track record of serving our core customer base of small and mid-sized biopharma companies, which we believe represents an attractive growth opportunity
- ✓ **Partner of Choice for Biopharmaceutical Customers**
  - Established reputation as a partner of choice to our core customer segment based on our differentiated approach, which yields timely and efficient trial execution
- ✓ **Global Platform with Scalable Infrastructure**
  - Scale to compete for global trials provided by ~3,400 employees in 37 countries with centralized operations and integrated technology(1)

(1) As of April 30, 2020.

HIGH-SCIENCE APPROACH WITH DEEP THERAPEUTIC EXPERTISE

- Entry into, and growth within, target areas hinges on team and training built around highly-qualified physician leads with strong clinical, scientific, and regulatory expertise
- Therapeutic leads are embedded into every aspect of the project to position clinical trials for success
- Demonstrated durable success across multiple therapeutic areas

2019 Revenue by Therapeutic Area(3)



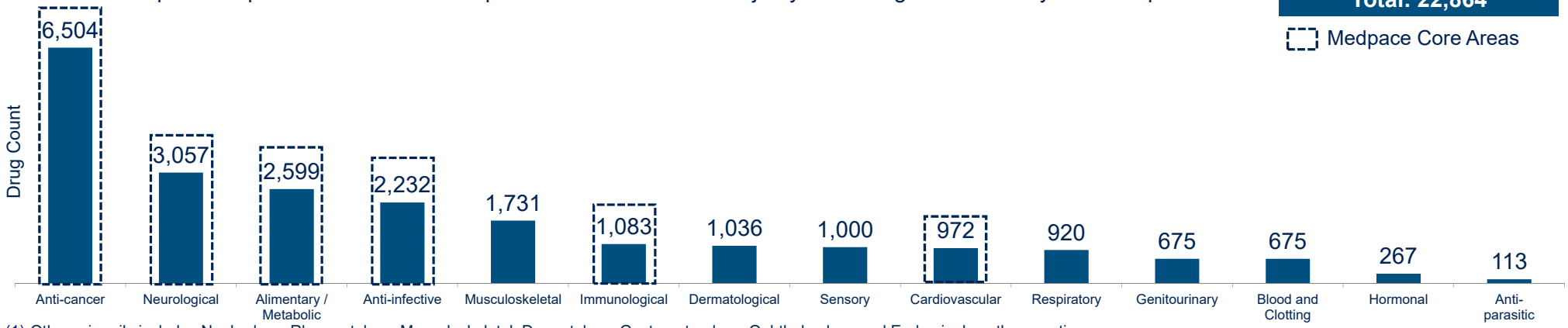
2019 Revenue
$861.0 million

Industry Snapshot – 2020 R&D Pipeline by Therapeutic Area(2)

- Core therapeutic expertise covers the therapeutic areas where the majority of all drugs are currently in development

Total: 22,864

Medpace Core Areas

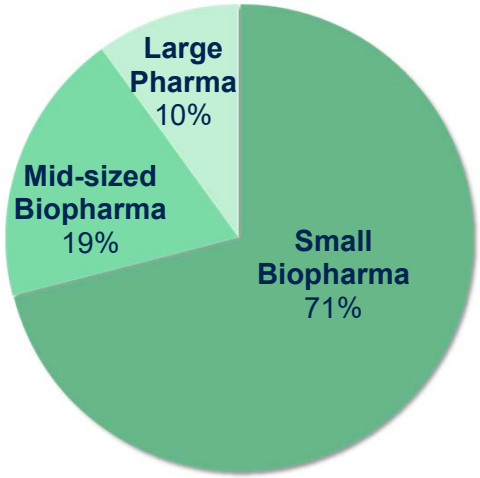


(1) Other primarily includes Nephrology, Rheumatology, Musculoskeletal, Dermatology, Gastroenterology, Ophthalmology and Endocrinology therapeutic areas.
(2) Source: Pharmaprojects Pharma R&D Annual Review 2020 as of May 2020. Note that some pipeline drugs fall into multiple categories.
(3) 2019 percentages have been adjusted to reclassify 3% related to CNS indications that had previously been classified as Other.

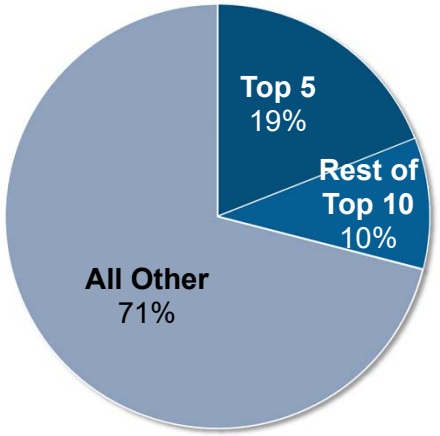
DIVERSIFIED CUSTOMER BASE

- Focus on customers utilizing a full-service outsourcing model (more prevalent outside top 20 pharma)
  - These customers often do not have required development expertise and infrastructure in-house
  - These customers represent an attractive R&D growth segment
- Customer Diversification
  - No single customer represented more than 10% of revenue; top ten customers accounted for 29% of 2019 revenue

Attractive Customer Mix[1][2]



Low Customer Concentration[1]



(1) As a percent of 2019 revenue.
(2) See appendix to this presentation for definitions of large pharmaceutical, mid-sized biopharmaceutical and small biopharmaceutical companies.

ATTRACTIVE CORE ADDRESSABLE MARKET

Addressable Phase I-IV Clinical Development Spend
$91 billion

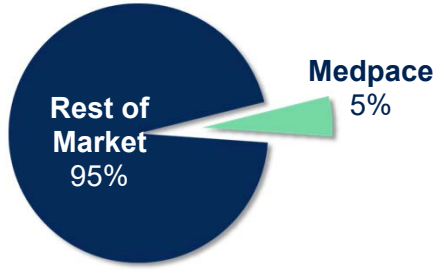
Core Addressable Market[2]
$45 billion

Large Pharmaceutical CRO Addressable Market[1][2]
$29 billion

Medpace Core Market

Small- and Mid-sized Biopharmaceutical CRO Addressable Market[1][2]
$16 billion

Estimated Medpace Small and Mid-Sized Biopharmaceutical Market Share[3]



Source: Company estimates based on industry sources, including analyst and other industry reports, and management's knowledge. Market sizing estimates derived from an April 2019 industry research report.
Note: Market sizing estimates represent 2019E. Addressable market includes investigator / pass-through costs and excludes non-addressable development spend and non-phase I-IV and lab spend.

(1) See appendix to this presentation for definitions of large pharmaceutical, mid-sized biopharmaceutical and small biopharmaceutical companies.
(2) Assumes 68% and 44% outsourcing percentage of addressable market for small-and mid-sized biopharmaceutical companies and large pharmaceutical companies, respectively.
(3) Medpace market share based off of 2019 net revenue of small and mid-sized biopharma customers.

SMALL AND MID-SIZED BIOPHARMACEUTICAL FOCUS

Risks

- **Funding challenges** could result in uncertain timing of award decisions and ultimately revenue
- **Potential bad debt exposure**
- High **customer turnover**; frequently one product companies
- **Customer consolidation/acquisition**

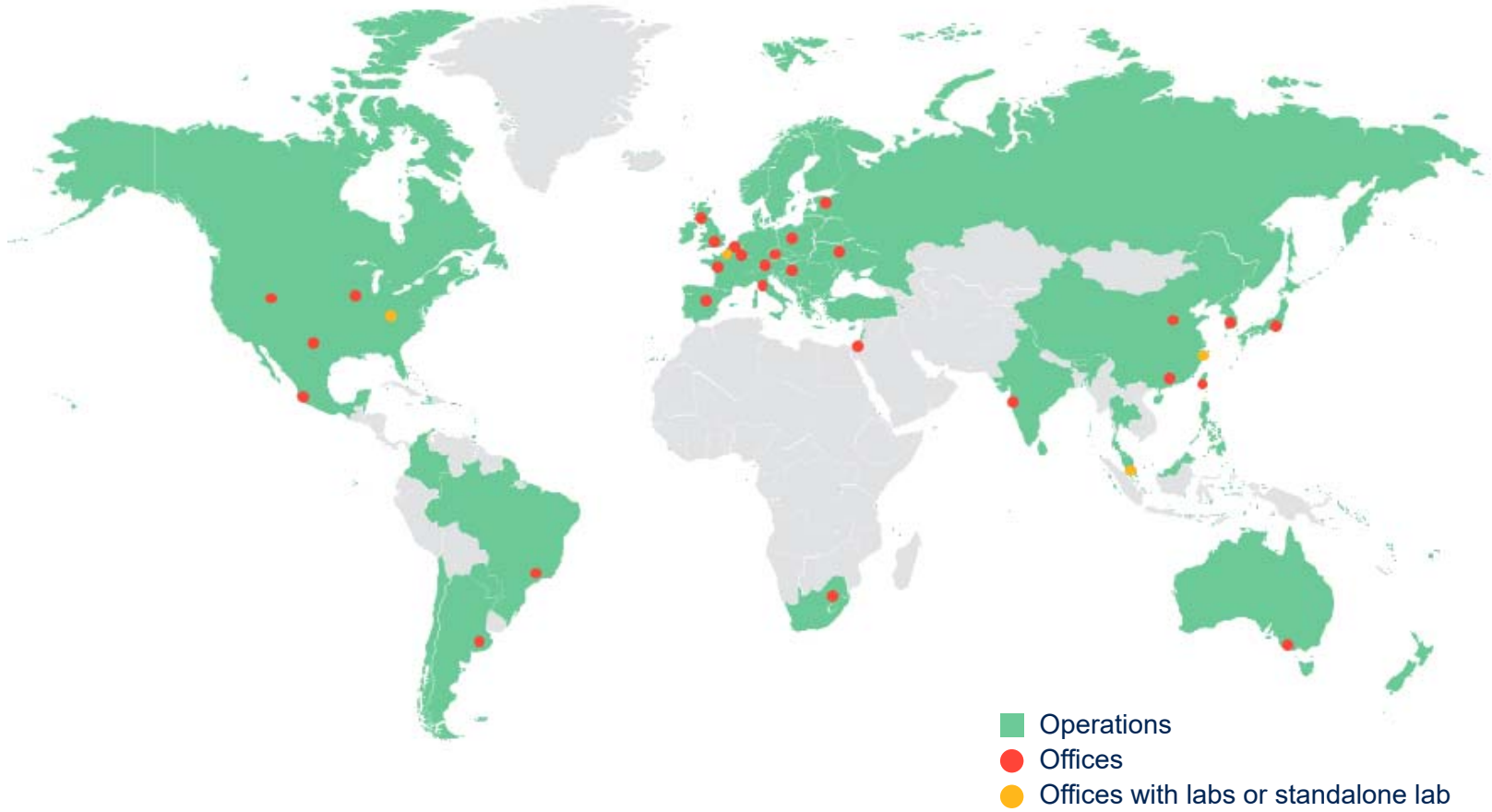
Rewards

- Attractive **opportunity for continued growth**
- Core customer segment firmly at the forefront of **medical innovation**
- Generally higher margin **full-service business model**
- **Diversified mix** of customers
- Value our input and our **reputation for therapeutic expertise**

Focused on serving our core small and mid-sized customers which represents a segment of the market where we see robust opportunities

GLOBAL PLATFORM WITH SCALABLE INFRASTRUCTURE

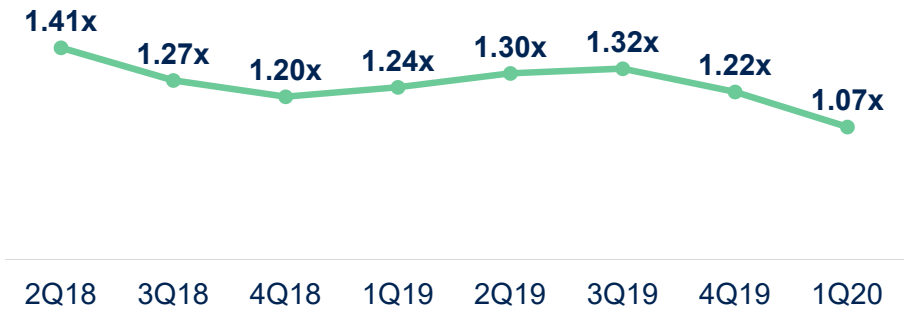
- Global, full-service CRO with requisite scale to support large, multi-national studies
- Operations in 37 countries, 32 offices in 25 countries(1)



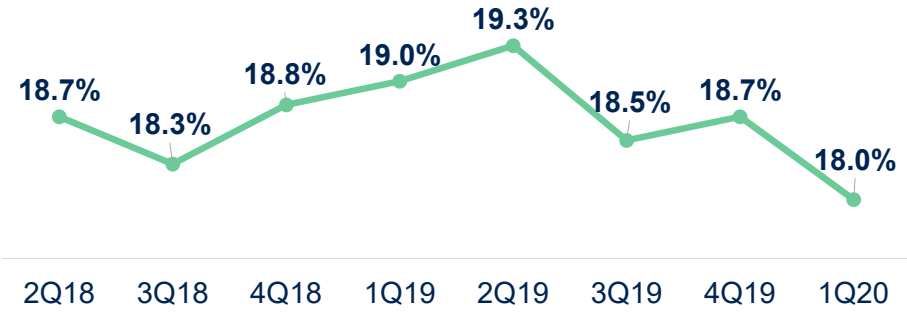
(1) As of March 31, 2020.

BACKLOG AND NEW AWARD TRENDS

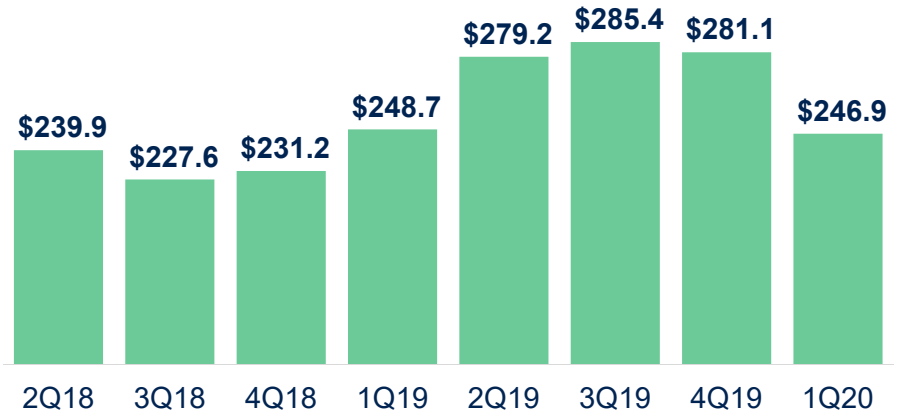
Net Book-to-Bill



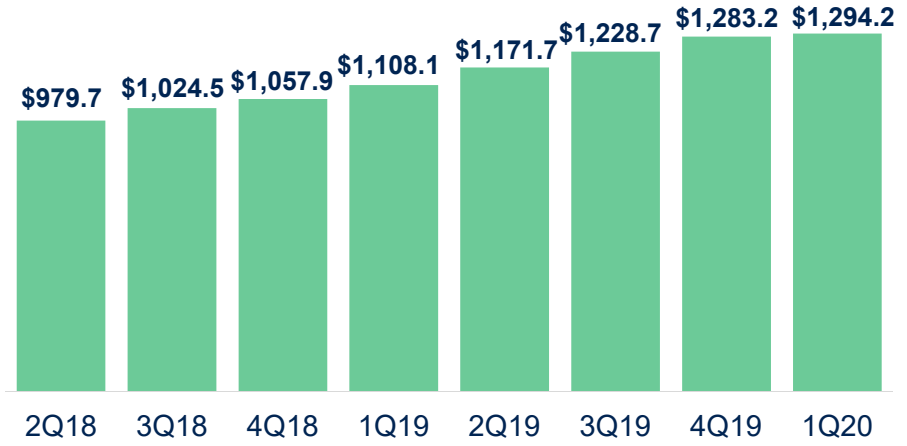
Backlog Conversion Rate



Net New Business Awards

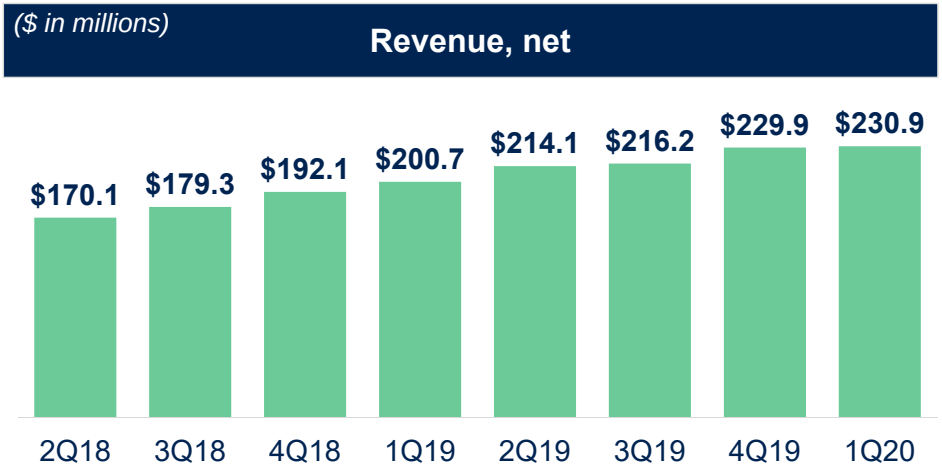


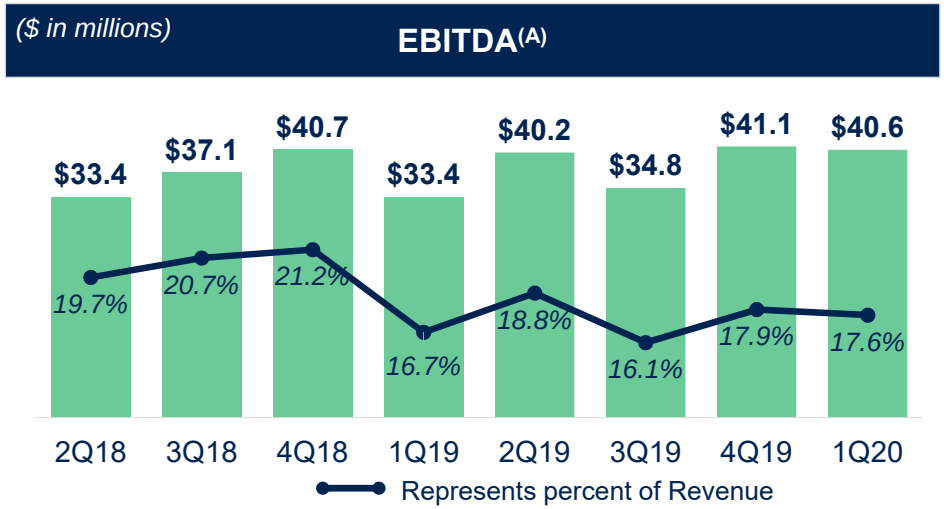
Ending Backlog

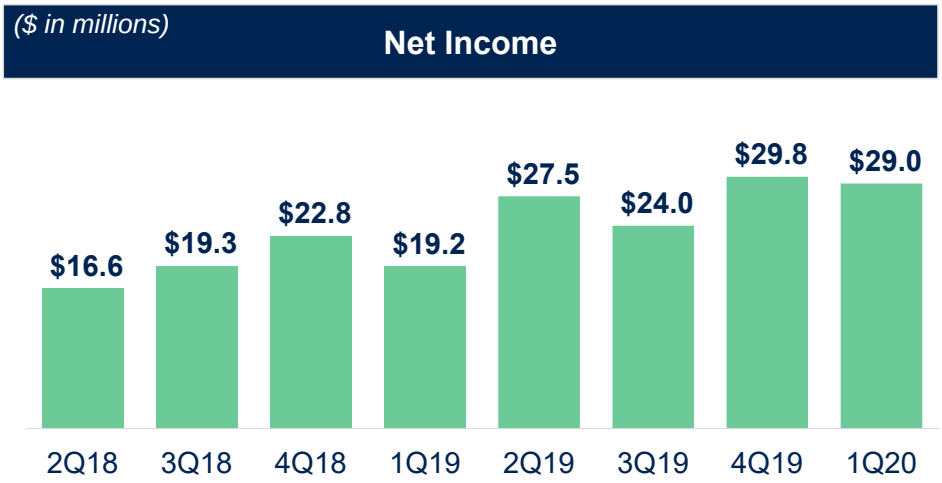


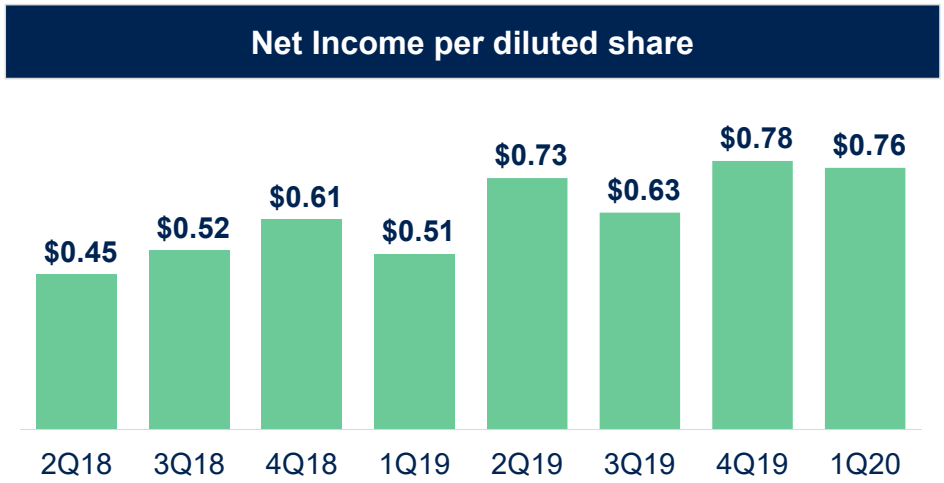
($ in millions)

KEY FINANCIAL TRENDS





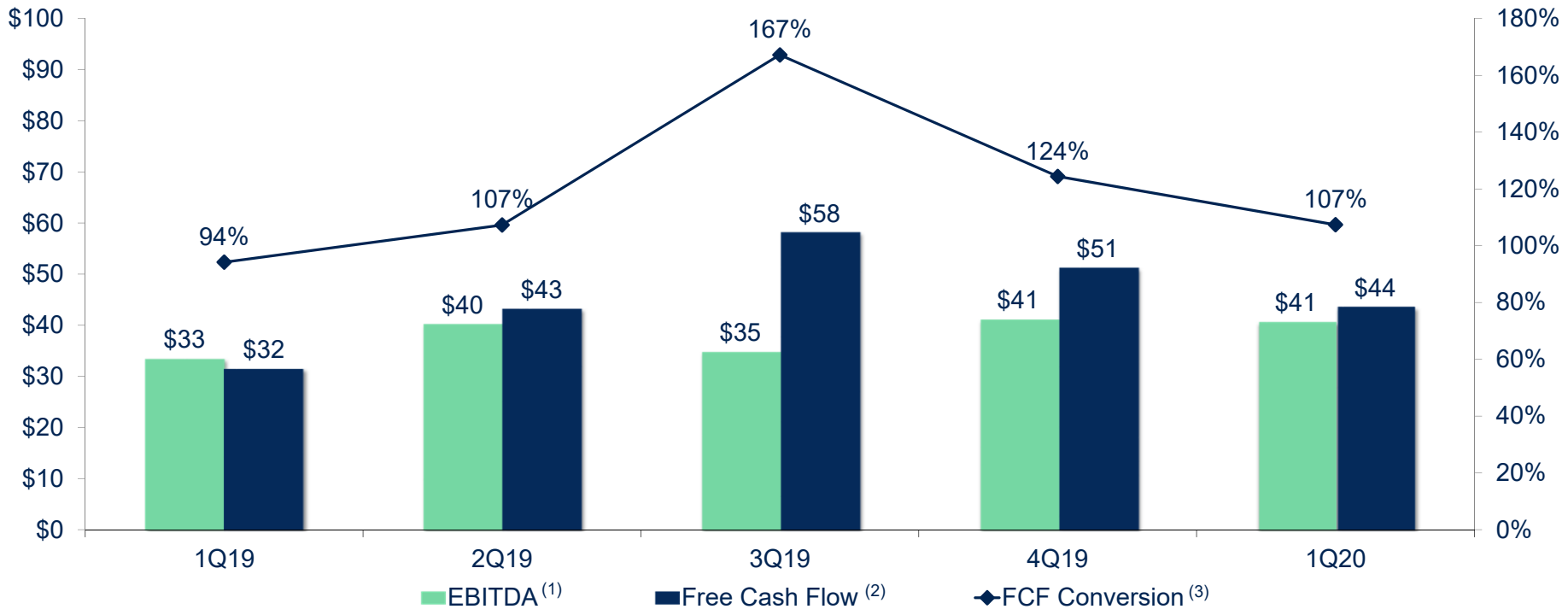




A. See the appendix for the non-GAAP reconciliation of the EBITDA calculations. In each quarter throughout 2018, EBITDA excluded $1.0 million of corporate campus lease payments. 2Q18 and 3Q18 EBITDA also included transaction-related expenses of $0.4 million and $0.3 million, respectively.

ATTRACTIVE FREE CASH FLOW PROFILE

($ in millions)



Capital Expenditures	$2.5	$3.5	$6.2	$5.8	$5.6
% of Revenue	1.3%	1.6%	2.8%	2.5%	2.4%

(1) See appendix to this presentation for a reconciliation of EBITDA to net income.
(2) See appendix to this presentation for a reconciliation of Free Cash Flow.
(3) FCF Conversion equals Free Cash Flow divided by EBITDA.

CONFIDENCE IN FUTURE GROWTH

1. **Small and Mid-Sized Biopharma continues to be a growing and innovative segment of the market**

2. **We have a good reputation in this segment as a leader in drug development**

3. **Our full-service approach positions us well to add value to our customers' programs**

APPENDIX

EBITDA RECONCILIATION

($ in millions)	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20
Net income as reported (GAAP)	$ 16.6	$ 19.3	$ 22.8	$ 19.2	$ 27.5	$ 24.0	$ 29.8	$ 29.0
Income tax provision	4.9	6.2	6.6	5.5	7.0	5.5	6.4	7.5
Interest (income) expense, net	2.3	1.9	1.6	1.0	0.7	0.3	(0.4)	(0.4)
Depreciation	2.2	2.3	2.4	2.0	2.0	2.1	2.3	2.5
Amortization	7.4	7.4	7.4	5.8	3.0	3.0	3.0	2.0
EBITDA (non-GAAP)	$ 33.4	$ 37.1	$ 40.7	$ 33.4	$ 40.2	$ 34.8	$ 41.1	$ 40.6
Net income margin (GAAP)	9.7%	10.8%	11.8%	9.6%	12.8%	11.1%	13.0%	12.5%
EBITDA margin (non-GAAP)	19.7%	20.7%	21.2%	16.7%	18.8%	16.1%	17.9%	17.6%

Note: Numbers may not sum due to rounding

FREE CASH FLOW RECONCILIATION

($ in millions)		1Q19	2Q19	3Q19	4Q19	1Q20
Operating Cash Flow (GAAP)		$ 34.0	$ 46.6	$ 64.3	$ 56.9	$ 49.1
Less: CAPEX		(2.5)	(3.5)	(6.2)	(5.8)	(5.6)
Free Cash Flow (non-GAAP)		$ 31.5	$ 43.2	$ 58.1	$ 51.2	$ 43.6
EBITDA - (non-GAAP)		$ 33.4	$ 40.2	$ 34.8	$ 41.1	$ 40.6
Free Cash Flow Conversion % (non-GAAP)	(A)	94.2%	107.3%	167.2%	124.4%	107.4%

A. Free Cash Flow Conversion % is equal to Free Cash Flow divided by EBITDA.

GLOSSARY

1) **Backlog** represents anticipated future revenue from net new business awards that have not commenced or are currently in process but not complete.
2) **Backlog conversion** is defined as Revenue, net, for the quarter divided by beginning backlog. Year-end backlog conversion figures represent the average historical backlog conversion for all quarters in the relevant year-end periods.
3) **Free Cash Flow** is defined as net cash provided by operating activities, less capital expenditures.
4) **Large pharmaceutical companies** represent the top 20 pharmaceutical companies by worldwide prescription drug sales in the year ended December 31, 2018.
5) **Mid-sized biopharmaceutical companies** represent biopharmaceutical companies with at least $250 million in sales in the year ended December 31, 2018, based on publicly available data and management's knowledge, that are not classified as a top 20 pharmaceutical company.
6) **Net book-to-bill** is defined as net new business awards divided by Revenue, net, for a given period.
7) **Net new business awards** are new business awards net of award modifications and cancellations that had previously been recognized in backlog during the period. New business awards represent the value of anticipated future revenue that has been awarded during the period that is recognized in backlog. This value is recognized upon the signing of a contract or receipt of a written pre-contract confirmation from a customer that confirms an agreement in principle on budget and scope. New business awards also include contract amendments, or changes in scope, where the customer has provided written authorization for changes in budget and scope or has approved us to perform additional work as of the measurement date. Awards may not be recognized as backlog after consideration of a number of factors, including whether (i) the relevant net revenue is expected only after a pending regulatory hurdle, which might result in cancellation of the study, (ii) the customer funding needed for commencement of the study is not believed to have been secured or (iii) study timelines are uncertain or not well defined. In addition, study amounts that extend beyond a three-year timeline are not included in backlog.
8) **Small biopharmaceutical companies** represent biopharmaceutical companies that have less than $250 million in sales in the year ended December 31, 2018, based on publicly available data and management's knowledge.