LEERINK

MORNING ROUNDS

TODAY'S HIGHLIGHTS / JULY 14, 2015

TODAY'S RESEARCH:

PHARMACEUTICALS/ MAJOR, BIOPHARMA, MANAGED CARE, AZN, FPRX

INITIATIONS: NONE **/ RATING CHANGES:** NONE **/ PRICE TARGET CHANGES:** NONE **/ ESTIMATE CHANGES:** AZN **/ MEDACORP:** PHARMACEUTICALS/ MAJOR, PHARMACEUTICALS/ MAJOR, BIOPHARMA, BIOPHARMA, FPRX **/ PREVIOUS RESEARCH:** BIOPHARMA, CNC, MEDICAL DEVICES-CARDIOLOGY, DERM, WBA

REFERENCE TOOLS:

Catalyst Tracker | Earnings Rundown | Abbreviations & Acronyms
Calendar of Events | HC Conferences | Leerink Events

LEERINK EVENTS:

7/14: Corporate Access: Intra-Cellular Therapies, Inc: ITCI, Boston
7/14: Corporate Access: Ascendis Pharma A/S: ASND, New York
7/15: Corporate Access: Veracyte Inc.: VCYT, San Diego
7/15: Corporate Access: SAGE Therapeutics Inc.: SAGE, Boston
7/15: MEDACorp Pulse Call: Assessing LVAD Market Trends for HTWR, THOR with a U.S. and EU Doc, 11:00AM EDT
7/16: Corporate Access: Veracyte Inc.: VCYT, San Francisco
7/17: Corporate Access: Intra-Cellular Therapies, Inc: ITCI, MidAtlantic
7/21: Corporate Access: Zafgen Inc: ZFGN, London
7/22: Corporate Access: Zafgen Inc: ZFGN, London
7/23: Corporate Access: Zafgen Inc: ZFGN, Frankfurt

7/23: Corporate Access: Zafgen Inc: ZFGN, Zurich

TODAY'S HEALTHCARE EVENTS:

MEDICAL MEETINGS: American Veterinary Medical Association, American Society of Retina Specialists, American Society for Virology, American Association of Physicists in Medicine
CORPORATE EVENTS: Analyst Mtg: ARDX, ZGNX; **EPS BMO:** JNJ

TODAY'S RESEARCH (including notes post prior day's close):

PHARMACEUTICALS/ MAJOR / SEAMUS FERNANDEZ

Investment Insights from the Immuno-Oncology, CAR-T & TCR Panel

Outperform: BMY, FPRX, IPH FP / **Market Perform:** AMGN

- **Bottom Line:** We hosted two MEDACorp panelists at our Healthcare Insights Conference to discuss immune-oncology (IO), CAR-T and TCR therapeutics. Our panel discussed recent IO development, highlighted combination of PD1 agents with other IO assets and chemotherapies. Panelist suggested it would be unlikely to be used to withhold treatments based on PD-L1 status due to lack of standardized test. Panelist further pointed out the responsiveness of tumors to IO agents could extend beyond those with high mutational burden. On adoptive T-cell therapies, key takeaways from the panels are: (1) it is a promising way to bypass some of the difficulties associated with other IO therapies, but further work needs to be done before the technology is ready for tumors other than liquid tumors; (2) Improving persistence is an important step toward moving CAR-T therapies to other tumor types; (3) lower dosing regimen could be used to mitigate toxicities associated with CAR-T; (4) allogenic CAR-T is commercially interesting, but maintaining efficacy is key.
- Panelists highlighted busy activities across IO development landscape; cautioned against rushing into combinations with PD1 agents without sound preclinical/clinical data.
- Panelists believed most physicians would not withhold treatment based on current PD-L1 biomarker assays.

PHARMACEUTICALS/ MAJOR / SEAMUS FERNANDEZ

Investment Insights from Our CV Outcomes Trials & Heart Failure Panel

Outperform: LLY, NVS, REGN, SNY / **Market Perform:** AMGN, MRK, PFE

- **Bottom Line:** MEDACorp panelists were bullish on NVS' [OP] recently approved Entresto (LCZ), with one KOL highlighting that up to 50% of his HF-rEF (heart failure with reduced ejection fraction) patients could be on Entresto within 12 months. Expectations for Entresto in HF-pEF (preserved ejection fraction) in PARAGON-HF are mixed. Consistent with our recently published analysis of the PCSK9/CETP space (LINK), KOLs were uniformly enthusiastic on PCSK9 mAbs and believed the outcome studies of the three leading PCSK9 assets (AMGN's [MP] Repatha, SNY [OP]/ REGN [OP]'s Praluent, and PFE 's [MP]

bococizumab) are likely to achieve substantial reductions in CV events. On CETP inhibitors, panelists discussed the genetic evidence supporting CETP inhibition as a valid approach for CV risk improvement. MRK's [MP] anacetrapib and LLY's [OP] evacetrapib could meet the primary end point at their outcome studies based on LDL-C reduction. However, safety is an on-going concern with CETP inhibitors. One panelist noted recent genomic studies linking CETP gene variants with increased risk of age-related macular degeneration (AMD). Whether pharmacologic intervention could also have this risk is unknown.

- Strong Entresto uptake expected in HF-rEF.
- Panelists uniformly positive on PCSK9 CVOT trials; expect robust initial uptake in FH and statin intolerant pts.
- Genetic evidence suggests CETP inhibition could reduce CV risk, but safety remains a question.

BIOPHARMA / MICHAEL SCHMIDT, PH.D.

Investment Insights from the Gene Therapy & Genome Editing Panel

Outperform: QURE

- **Bottom Line:** At our 2015 Healthcare Insights Conference, we hosted a panel with four MEDACorp specialists in the areas of gene therapy and genome editing, two emerging categories that we think could potentially be transformative for the therapeutics space. Takeaways from the panel discussion with the key opinion leaders (KOLs) support our view that the field is still in early stages of the innovation cycle, but significant improvements in gene delivery technology, as well as ongoing or planned clinical trials for a range of diseases with a high probability-of-success are key reasons for optimism moving forward. In addition, the regulatory environment appears to be very positive according to the panelists, with the FDA supporting a science-driven, collaborative, and interactive approach. We believe investor interest in the gene therapy and genome editing space will continue to increase, driven by clinical and technological advances and an increasing level of engagement by larger biotechnology and pharmaceutical companies. Key takeaways include:
- KOLs optimistic about prospects for gene therapy at the current juncture; choice of indication remains key to success.
- In-vivo gene therapy: excitement in hemophilia, inherited retinal dystrophies (IRDs), and CNS applications
- Ex-vivo gene therapy: 20-30 monogenic diseases potentially addressable.
- Genome editing: emerging technology poised to play a more important role.

BIOPHARMA / JASON M. GERBERRY, JD

Investment Insights from the IP Controversies Panel

Outperform: BIIB, FWP, JNJ, REGN, SNY / **Market Perform:** AMGN, MRK

- **Bottom Line:** At Leerink's 2015 Healthcare Insights Conference, we moderated a panel with three MEDACorp patent specialists with expertise in patent interferences, patent prosecution and Hatch-Waxman litigation. Topics included the anti-PCSK9 antibody patent dispute (AMGN [MP] vs. SNY [OP] /REGN [OP]), ABBV's defense of Humira formulation patents vs. AMGN, and the ongoing patent challenges to BIIB's Tecfidera by FWP and Kyle Bass, respectively. Overall, specialist feedback left us incrementally more confident in FWP's likelihood of prevailing in its interference dispute with BIIB,

skeptical ABBV's formulation patents would withstand inter partes review [IPR] challenge, and AMGN's patents are unlikely to block SNY/REGN.

- Humira formulation IP look vulnerable to IPR challenge
- ABBV's best anti-biosimilar defense is likely to reside in high volume of patents
- Specialists point to recently released claim construction documents citing reasonable arguing points raised by REGN
- Specialists give advantage to FWP in the Tecfidera patent interference proceeding
- BIIB does face additional risk around Bass IPR of '514 patent

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MANAGED CARE / ANA GUPTE, PH.D.

2Q a Likely Positive Catalyst; Fundamentals Still Matter Amid Merger Mania

Outperform: AET, ANTM, CI, CNC, HUM, MOH, UNH, WCG / **Market Perform:** HNT, MGLN, UAM

- **Bottom Line:** We remain positive on Managed Care fundamentals and see 2Q serving as a positive catalyst with fundamentals still very important amid merger mania. Merger arbs have kept the spreads wide and multiples are weak despite strategically unprecedented combinations. UNH, ANTM and AET most likely to beat in our view with MOH and HNT also likely to surprise positively. We see good fundamentals across Medicare Advantage (MA), Commercial, and Medicaid as utilization remains stable, Obamacare funding headwinds in MA ease, pricing is conservative and the residual claims tail from flu and challenging weather comps wear off. Recent management commentary points to stable Commercial utilization despite bullish views on utilization upticks from the Hospital managements. With the SCOTUS ruling on Federal exchange subsidies now behind us, we expect Public Exchange margins to continue to normalize after early adverse selection & a continued backstop from the 3Rs while the top line remains solid. Medicaid margins should expand both sequentially and YoY as lives in recent contract implementations mature along with favorable margin mix shift to Medicaid expansion. We see Managed Care back in deep value territory and are positive on AET, HUM, ANTM, CI, and UNH in particular.
- We expect "Beats and Raises" in 2Q as pricing has been conservative, utilization stable, reserve strength is at a historically conservative high and SG&A efficiency improves with scale.
- MA margins should continue their trajectory of margin expansion, while HUM's mis-pricing is already in the stock post the recent guide-down.
- Commercial MLRs are poised for continued upside as pricing remains firm and utilization/capita stable despite bullish commentary from Hospitals on economic rebound of cost trend.
- With the SCOTUS ruling on Federal exchange subsidies now behind us, we expect Public Exchange margins to continue to normalize after early adverse selection & a continued backstop from the 3Rs while the top line remains solid.
- Medicaid margins should expand both sequentially & YoY as lives in recent contract implementations mature along with favorable margin mix shift to Medicaid expansion lives.
- Balance sheets remain strong, with companies ending 1Q15 with ~$2/share in parent cash. CFO/NI was strong at 4x.
- A number of event-driven catalyst updates should serve as catalysts during 2Q management commentary including:
- UNH (OP) (Leerink's 2QE EPS of $1.60 vs. Street's $1.59).
- HUM (OP) (Leerink's 2QE EPS of $1.63 vs. Street's $1.85).

- AET (OP) (Leerink's 2QE EPS $1.83 vs. Street's $1.81).
- ANTM (OP) (Leerink's 2QE EPS $2.73 vs. Street's $2.68).
- CI (OP) (Leerink's 2QE EPS $2.25 vs. Street's $2.23).
- HNT (MP) (Leerink's 2QE EPS $0.90 vs. Street's $0.89).
- CNC (OP) (Leerink's 2QE EPS $0.70 vs. Street's $0.69).
- MOH (OP) (Leerink's 2QE EPS $0.56 vs. Street's $0.55).
- WCG (OP) (Leerink's 2QE EPS $0.97 vs. Street's $0.96).
- MGLN (MP) (Leerink's 2QE EPS $0.41 vs. Street's $0.42).
- UAM (MP) (Leerink's 2QE EPS $0.05 vs. Street's $0.06).

ASTRAZENECA PLC (AZN) / SEAMUS FERNANDEZ

Model Update Reflects 2Q Fx & R&D spending; PT Remains $74

Market Perform / **Market Cap:** $84,982.7M / **Price:** $67.18 / **Price Target:** $74.00 / **Methodology:** DCF through 2026E at 8.25% discount with 2% terminal growth rate

- **Bottom Line:** We are updating our model for AZN [MP] ahead of 2Q15 earnings to account for relatively minor currency fluctuations vs. our last-published model and what we expect will be sustainably higher R&D spend in 2Q. As a result we are lowering our 2Q EPS by $0.04 from $1.08 to $1.04/shr but our sales forecast is largely unchanged. We estimate 2Q sales will be negatively impacted by ~12 percentage points y/y (~$675M in revenue), putting CER growth at +4%, or -3% excluding the $450M of externalization revenue from the CELG (OP) payment. Minor adjustments are made on full year COGS, SG&A, and R&D. Our new 2015 EPS estimate is now $4.20 from the previous estimate of $4.21. Our PT remains $74.00.
- **2015E EPS/REV:** $4.21 / $24.6 → $4.20 / $24.6
- **2016E EPS/REV:** $3.84 / $24.1 → $3.83 / $24.1

Revenues in $B.

FIVE PRIME THERAPEUTICS, INC. (FPRX) / MICHAEL SCHMIDT, PH.D.

FPA008 Dosing Initiated in Ultra-Rare PVNS; PD1 Combo Trials Key Value Driver

Outperform / **Market Cap:** $655.9M / **Price:** $26.13

- **Bottom Line:** FPRX initiated patient dosing in its Phase I/II trial evaluating FPA008 (anti-CSF1R) in ultra-rare pigmented villonodular synovitis (PVNS), a macrophage-driven tumor affecting joints. Whereas PVNS could represent an interesting proof-of-concept indication for FPA008, we view FPRX' planned solid tumor combination trial with Opdivo as key value driver for the program. Based on our recent MEDACorp KOL checks, we believe targeting tumor-associated macrophages (TAMs) via CSF1R represents an attractive mechanism of action in oncology, which could be synergistic w/ PD1 inhibition. We continue to recommend FPRX with an Outperform rating based on our thesis that the company's differentiated immuno-oncology (IO) target and antibody discovery platform provide the basis for long-term value creation.
- FPRX initiated patient dosing in PVNS Phase I/II trial, as expected.
- PVNS is ultra rare; we view the solid tumor oppt'y in combination with Opdivo as key value driver for FPA008.
- Opdivo-FPA008 combination trial on track to initiate near term.

- Several data points approaching in late 2015/early 2016.

PREVIOUS DAY NOTES:

BIOPHARMA / HOWARD LIANG, PH.D.

Investment Insights from Our Therapeutic Pricing & Access Panel

Outperform: ENTA, GILD, REGN, SNY, VRTX / **Market Perform:** AMGN, MRK

- **Bottom Line:** Last week during our Healthcare Insights Conference, we hosted a panel to discuss therapeutics pricing and access with 3 MEDACorp specialists including a hepatology key opinion leader (KOL) who has been actively involved in access issues, an oncology KOL who is a member of ASCO's task force in value in cancer care, and a payer representative who is the chief medical officer of a health insurance plan. Our panel discussed hepatitis C drug reimbursement as a case study for new payer initiatives such as exclusive contracting and broader implications for other therapeutic classes, outlook for biosimilars and trends in cancer care. Our takeaways include heightened payer focus on new drug launches prompted by their HCV experience, and therapeutic categories with a hard numerical endpoint being most amenable to the exclusive contracting approach with PCSK9 antibodies highlighted (although the envisioned pricing points appear quite good). In oncology, our impression is that there is less current payer focus on specific drug classes such as PD1 antibodies despite the high price tag while there are various efforts to change the payment model.
- Numerical hard endpoints could lend certain drug classes amenable to the exclusive contract approach; the lesson with Sovaldi has prompted payers to be more proactive in planning for new drug launches such as the PCSK9 mAbs, although the envisioned pricing points are higher than we modeled.
- In oncology, the payer representative noted a hands-off approach while there are various ongoing efforts to reform the payment model away from the current fee-for-service approach.
- For hepatitis C treatments, payer choice has not been based entirely on price despite apparent equivalent efficacy.
- Commercial plans appear to get meaningfully less discount on Harvoni than 46%.
- The hepatology KOL noted the “incredible” demand for HCV drugs, and the payer representative is seeing a 50% total dollar spend over the last year despite the substantial discount his plan has negotiated.

PREVIOUS NOTES:

MEDICAL DEVICES-CARDIOLOGY / DANIELLE ANTALFFY

TAVR Survey: Suggests Stronger-Than-Expected Market Growth in 2Q15

Outperform: EW / **Market Perform:** MDT

DERMIRA, INC. (DERM) / SEAMUS FERNANDEZ

Buy DERM for Compelling 2016 Catalysts & Attractive M&A Upside Optionality

Outperform / **Market Cap:** $450.0M / **Price:** $18.22 / **Price Target:** $34.00 / **Methodology:** DCF with 12% discount rate & 2% terminal growth rate

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WALGREENS BOOTS ALLIANCE, INC. (WBA) / DAVID LARSEN, CFA

AB Provides WBA With a Long-term Growth Platform

Outperform / **Market Cap:** $102,644.5M / **Price:** $93.11 / **Price Target:** $105.00 / **Methodology:** ~19.8x our F2017E EPS

RESEARCH PREVIEWS:

July 19-23 – BIIB037 (aducanumab) Phase Ib data at Alzheimer's Association International Conference

BIIB – OP – Joe Schwartz
Close: $391.23, **Mkt Cap: $92,028.8M**
· The 6mg/kg dose of BIIB037 should show a CDR-SB (clinical dementia rating) benefit of ~1.1 at 54 weeks, ~halfway between the effect size for the 3 and 10mg/kg dose.
· However, it is very unlikely this will be statistically significant, or even show a trend towards statistical significance, due to the very small patient numbers.
· We are more focused on the effect size magnitude that the p-value in Ph. Ib data since this magnitude of CDR-SB benefit is likely to be highly statistically significant in Ph. III due to much larger patient numbers (233 pts/arm vs 27-36 pts/arm) and longer treatment duration (18 mos. vs. 12 mos.).
· We believe the CDR-SB effect size could be as low as 0.5 in order for BIIB to hit statistical significance in Phase III.
· BIIB Data releases:
o BIIB037 efficacy/safety on Wed., July 22, 2-3:30 pm (oral)
o E2609 (BACE) single dose in cynmolgus monkeys on Wed., July 22, 9:30 am – 4:15 pm (poster)
o BIIB-sponsored symposium- Novel Therapeutic Approaches to Alzheimer's Disease: A Focus on Immunotherapy on Mon., July 20, 6-8 pm; Location: Marriott Marquis Hotel

July 22 – CSII MEDCAC Panel Meeting on scientific evidence supporting the use of existing therapies in lower extremity and peripheral arterial disease (PAD).

CSII—OP—Danielle Antalffy
Close: $30.81, **Mkt Cap: $977M**

· We believe the most likely outcome is a benign panel with no change to coverage based on precedent.
· CSII Chief Healthcare Policy Officer Bob Thatcher concurred with this view during our recent conference call on this topic.
· CSII is one of the few companies with clinical data available to address the general questions posed by the panel. Data includes a 2013 AHRQ technology assessment report, in addition to more robust data expected in the next 12-24 months from CSII's LIBERTY 360 clinical trial.
· According to Mr. Thatcher, a worst case scenario is likely to be less bad than feared.
· He highlighted the likeliest worst-case scenario as a National Coverage Decision (NCD) in the claudicant patient population that could require physicians to jump through a few more hoops.
· Link to our note on our call with Bob Thatcher (6/23) or call your Leerink representative for information on the replay of our call with Bob Thatcher, link to our note on MEDCAC questions (5/5), and link to MEDCAC panel site.
· While the shares could remain range-bound into the panel, we believe the shares should move meaningfully higher once the overhang is removed.

July – AGN Namenda (Alzheimer's) IR patent expiration

AGN—OP—Jason Gerberry
Close: $318.35, **Mkt Cap: $124,935M**
· AGN has converted ~43% of the market to Namenda XR (once-daily extended release) from Namenda IR patients as of 6/25.
· We estimate every 10 ppts. of lost Namenda conversion =30-35c or +/-1%.

By 7/31—ASND TransCon hGH (human growth hormone) Phase II top-line data

ASND—OP—Joe Schwartz
Close: $19.78, **Mkt Cap: $471M**
· 6 months height velocity n=50.
· We expect the readout on height velocity, IGF-1 and hGH levels to remain fairly consistent to what was presented previously from the first half of the patients—10 cm height velocity, and both IGF-1 and hGH levels comparable to daily human growth hormone (hGH) therapies.
· **Next up:** Full data presentation 10/1/2015-10/3/2015 at European Society for Pediatric Endocrinology in Barcelona, Spain.
· Our model assumes 80% probability of approval for TransCon hGH approval in Pediatric Growth Hormone Deficiency (PGHD) and a launch in 2020.

Mid-2015 – MicroCor Parathyroid Hormone (PTH) for osteoporosis Ph. IIa data presentation

CORI—OP—Jason Gerberry
Close: $13.85, **Mkt Cap: $250M**

· We believe CORI's transdermal technology may be able to deliver a faster onset of action and provide better tolerability than LLY's Fortero (osteoporosis).
· Fortero generated annual US sales of ~$500M.
· The second part of the Ph IIa study is a 28-day take home study where patients self dose.
· MicroCor currently accounts for ~55c of our price target.

Mid-2015 – SRPT Eteplirsen (Duchenne Muscular Dystrophy, DMD) NDA filing for accelerated approval

SRPT—MP—Joe Schwartz
Close: $30.90, **Mkt Cap: $1,281M**
· We remain conservative on the prospect of FDA approving Eteplirsen based on totality of the dataset.
· SRPT has generated more long-term Eteplirsen data as per FDA's guidance to SRPT's previous attempt to file in 2013, but FDA's skepticism on the dystrophin data and/or 6-minute walk test (6MWT) data remains an overhang.
· While additional safety/efficacy 192-wks Eteplirsen data on 6MWT and pulmonary function may be insightful, it may still not meet the compelling standards of data generated in a 3 pbo-controlled Ph III trial by RNA (BMRN [OP]).
· In Ph II, Eteplirsen showed a positive effect towards slowing the expected neuromuscular decline in DMD patients over two years of treatment.
· SRPT completed rolling NDA as of June 26, 2015 and has requested Priority Review.
We assume 50% Eteplirsen probability of approval at any point and 20% probability of accelerated approval, and attribute ~$6 of our price target to Eteplirsen.
· **Next Up**: FDA acceptance of the rolling NDA, enrollment in Eteplirsen confirmatory trials fall 2015.

August 2015—MYL shareholders to vote on PRGO acquisition

MYL/PRGO—OP/MP—Jason Gerberry
Close: $71.06/$184.02, **Mkt Cap: $34,822M/$26,915M**
· In its current form, we view the MYL-PRGO as unlikely to go through.
· The deal is dilutive to near term EPS in the first 2-3 years, and potentially much longer if the proposed $800M in deal synergies aren't achieved.
· MYL shareholders will be asked to give up ~40% of the company, potentially at a much lower price than is being offered by TEVA.
· We view a TEVA-MYL deal as the most logical combination, and highly accretive even at a higher deal price.

August 14 – RPTP Procysbi (delayed release Cysteamine) for pediatric cystinosis PDUFA

RPTP – OP – Joe Schwartz
Close: $14.58, **Mkt Cap: $1,173M**

· The Procysbi NDA for pediatric cystinosis is the label expansion element of RPTP's overall Procysbi expansion program.
· It is approved for nephropathic cystinosis (NC), and is being studied in pediatric nonalcoholic steatohepatitis (NASH), Huntington's Disease (HD), and Leigh syndrome.
· A new partnership with DaVita seeks to identify late-onset pts., another mgmt. strategy for label expansion. It is also seeking geographic expansion with 4 ongoing pricing negotiations in EU, and product shipments to Brazil.
· **Next Up:** RP103 Ph II 36-mos. data in Huntington's Disease (HD) shortly followed by regulatory clarity from FDA/EMA in 2H15; RP103 Ph II 52-mos. history endpoint (NASH resolution) in 2H15.

August 18 – SGEN Adcetris (Hodgkin's Lymphoma) PDUFA for sBLA – High Risk of Relapse Post-Transplant

SGEN – OP – Howard Liang
Close: $47.47, **Mkt Cap: $5,928M**
· Though the FDA had issues with the design of the AETHERA trial, it granted a priority review of Adcetris for use in post-autologous stem cell transplant (ASCT) consolidation treatment for Hodgkin's Lymphoma (HL) patients at high risk of relapse or progression.
· We believe the granting of priority review signals the agency believes there is a significant unmet need in this population.
· We estimate total US Adcetris sales at $209MM for 2015, going to $879MM in 2020.
· **Next Up:** Ph III ECHELON 1 enrollment complete, 2H15.

August 26 – ACOR Ampyra Inter Partes Review (IPR) institution decision

ACOR – MP – Paul Matteis
Close: $34.61, **Mkt Cap: $1,481M**
· Patent Trials and Appeal Board (PTAB) to issue a decision on Kyle Bass's IPR of ACOR's '685 patent.
· Based on our deep dive into the IPR and conversations with MEDACorp patent specialists, we believe the likelihood of IPR institution is <50%.
· While we remain somewhat cautious on Ampyra's life-cycle over the long-term given the looming threat in paragraph IV litigation, we believe the rejection of the '685 patent IPR could send ACOR shares to $40.
· We believe a positive risk/reward exists into PTAB's decision, with an up/down of ~20%/ ~12% on petition denial/institution, respectively.
· **Next Up:** Markman Hearing set for March 2016.

PREVIOUS NOTES:

UPDATED MODELS: DERM - Model; IVTY - Model; TAVR Market Model

HEALTHCARE INSIGHTS CONFERENCE

Biopharma/Investment Insights from the IP Controversies Panel
Biopharma/Investment Insights from the Gene Therapy & Genome Editing Panel
Biopharma/Investment Insights from Our Therapeutic Pricing & Access Panel
Biopharma/Investment Insights on the Neurology Panel: GWPH, SAGE, ZGNX, ACAD, ITCI
Biopharma/Investment Insights from Alzheimer's Panel, Ahead of AAIC'15 in Two Weeks
Pharmaceuticals/ Major/Investment Insights from Our CV Outcomes Trials & Heart Failure Panel

ALZHEIMER'S DISEASE

ACTION-Packed Summer: Alz./Stroke Data, Tc. IP & 2Q Results/Guide, PT to $512 (06/11/2015)
KOL Dinner at ADPD Highlights Implications of Groundbreaking Data (3/22/2015)
BIIB/MEDACorp Pulse Call Recap: Growing Interest in BIIB037's Upcoming Datasets/ Outperform
BIIB/Raising PT to $475 Following Deep Dive on BIIB037 and Its Development Strategy/ Outperform
BIIB037 Shows Strong Clinical Benefit & Target Engagement at ADPD15; PT to $532 (3/20/2015)
BIIB/MS Survey, Specialist Checks and LINGO/Pipeline Optionality Support OP/Outperform
Biotechnology/MS Survey Highlights Strong Growth Outlook for Tecfidera, RPC1063
LLY/Highlights from Leerink Leadership Series: PCSK9 & CETP with LLY Management/ Outperform

CV OUTCOMES SERIES

CV Outcomes Series: Big Pot'l for MRK & LLY's CETPi's but Conviction Low
Biopharma/CV Outcomes Series: Highlights from Our PCSK9 Conference Call
Biopharma/Highlights from Our MEDACorp Acute Heart Failure Conference Call
Biopharma/CV Outcomes Series: IMPROVE-IT Expected to Support the LDL Hypothesis
Biopharma/CV Outcomes Series: NVS's LCZ696 Poised to Transform Treatment of CHF

DIABETES

Pharmaceuticals/ Major/Takeaways From Our Post-ADA MEDACorp KOL Event
Pharmaceuticals/ Major/ADA Day 3: No Surprises in MRK's TECOS or SNY's ELIXA CV Studies
Pharmaceuticals/ Major/ADA Days 1 & 2: GLP-1/Basal Insulin Combos Continue to Show Well
Flash -- Pharmaceuticals/ Major/Baricitinib ADA Has Some Effect but Cost/Benefit Key
Pharmaceuticals/ Major/2015 ADA Itinerary Planner
Medical Devices/ADA Wrap-Up: Advances in Wireless Connectivity a Positive for All Players

EPILEPSY

Specialist Thoughts, Deep Dive on SAGE-547 in SRSE, Tremor, and PPD (6/09/2015)
Final Phase I/II SAGE-547 Data Corroborate Prior Promising Results (5/14/2015)
Fenfluramine Epilepsy History—Intriguing Pattern of Efficacy in Refractory Pts (4/29/2015)

GW KOL Breakfast Highlights High Level of Unmet Need in Pediatric Epilepsy (4/23/2015)
Deep Dive on the CBD Regulatory/IP Landscape Highlights Upside Drives for GW (2/5/2015)

IMMUNO-ONCOLOGY
IMGN/Raising PT to $15 on Impressive IMGN853 Activity/Market Perform
Biotechnology: ASCO 2015 Wrap Up—Days 3 and 4 Highlights from our Biotech Coverage Universe (6/3/2015)
Pharmaceuticals/Major: Takeaways from ASCO Investor Meetings: BMY, MRK, AZN (6/2/2015)
Pfizer Inc.: ASCO Investor Meeting: Large Ibrance/PALOMA-3; Early Days for IO (6/2/2015)
Pharmaceuticals / Major/ASCO Days 1 & 2: IO Steals the Show Again w/ No Shortage of Controversies (6/1/2015)
Biopharma/Takeaways from Our MEDACorp KOL Event at ASCO (6/1/2015)
ADAP/Leader in TCR Based Adoptive T Cell Therapy; Initiate at OP/Outperform
Flash -- BMY/Meeting with BMY Management Echoes Strong KOL Feedback at ASCO/ Outperform
Pharmaceuticals/ Major/Lung Cancer Survey Validates Our Bullish PD1/PD-L1 Uptake Assumptions
AFMD/Promising Preclinical AFM13 Data at ASCO Basis for PD1 Combination Trials/ Outperform
IMDZ/Complementary Immune Activation Supports Combo Approach; Sets Up 2H Catalysts/ Outperform
MDVN/Prostate Cancer Survey Points to Earlier Stage Patients As an Upside for Xtandi/ Outperform
JUNO/Recent Deals Keep JUNO on the Cutting Edge of CAR Technology/Outperform
ADRO/Highly Differentiated Immuno-Oncology Platform - Initiating at OP/Outperform
TRIL/Pursuing CD47, a New IO Target; Initiate With OP/Outperform
IPH FP/Second IO Deal for IPH; Major AZN Partnership Provides Addl. Validation/ Outperform
XNCR/MOR208 Development Updates Encouraging/Outperform
Biopharma/Phacilitate Forum Wrap-Up: The Next Leg of IO (& Immunotherapy) Development
MRK/More Credit for Keytruda Warranted in Lung Cancer; PT Now $66/Market Perform
BMY/$72 PT Reflects Heightened Confidence in Non-Squamous & Kidney Survival Studies/ Outperform
Flash -- BMY/'017 Stopped Early; Opdivo Kicks Off '15 with a Bang/Outperform
Biopharma/The $40B+ IO Market: How'd We Get Here & Where We're Headed in 2015
Pharmaceuticals/ Major/BMY vs. MRK: IO Reimbursement Likely Limited to Labels; A Pot'l Edge for BMY
Biopharma/SITC 2014 Highlights What's Next in Cancer Immunotherapy

P&A
ALXN/GEVA Acquisition to Add Multiple Long-term Value Drivers to ALXN/Outperform
AET-HUM Deal $230/Share; National Diversified Powerhouse: Raising PTs

Managed Care/CNC-HNT Combo: CA Entry; Govt. M&A Accelerates; Raising PTs for HNT, WCG, MOH
CVS/Target Accretion Will Come from Higher Volumes & Red Oak Purchasing Synergies/ Outperform
CVS/Omnicare Represents LT Value Creation Opportunity for CVS/Outperform
Healthcare IT & Distribution/Impact of Possible MCO M&A on the PBM Sector
HUM/HUM Sale: Comparison of AET, CI, ANTM as Possible Acquirers; Raising PT To $220/ Outperform
Flash -- CVS/OCR Acquisition Moves CVS into LTC, Expands Specialty Opportunity/ Outperform
CAH/Cardinal is Taking the Right Steps/Outperform
THC/USPI JV Offers Growth & Diversification; More Positive on THC; Raise PT To $56/ Market Perform
Flash -- CAH/Cordis a Good Long-Term Asset in Line with CAH's IDN Strategy/Outperform
Flash -- DPLO/BioRx Acquisition a Positive/Outperform
ACHN/JNJ Deal De-Risks HCV Program by Increasing Shots on Goal/Outperform
AZN/CELG Deal Makes Strategic Sense, but the Value is Questionable/Market Perform
Managed Care/Our Take on What Appears to Be a Consolidation Frenzy; Heading for a "Big 3"
Biotechnology/P&A VI - Partnerships and Acquisitions in Biopharma; Our New Top Ten List
Life Science Tools and Diagnostics/Consolidation to Continue as Industry Growth Driver
Life Science Tools and Diagnostics/Puts and Takes for Tools in 2015
Life Science Tools and Diagnostics/Quick Takes from Recent Management Meetings
Medical Supplies and Devices/2015 Outlook: We're Optimistic - M&A/Cash Deployment Still Likely Stock Drivers
Medical Devices-Orthopedics/Specialist Call Lends Perspective on Pending and Future Ortho Consolidation
Medical Supplies and Devices/Devices & DNA Bus Tour Wrap-Up
Specialty Pharmaceuticals/2015 Roadmap for Specialty/Generic Pharma
Specialty Pharmaceuticals/2015 Outlook: Selective M&A, Jockeying for Complex Gx's & Addressing Overhangs
Pharmaceuticals/ Major/2015 Outlook: Big Data, Decisions, Launches, Deals & Surprises
Biotechnology/Launches, Clinical Data, Emerging Therapeutic Areas Could Shape Biotech in '15
Healthcare/2015 Outlook: Key Drivers in Place for Continued Strong Performance
Healthcare IT & Distribution/2015 Outlook - Top 10 Trends, Themes and Surprises
Managed Care/Good Set-up in '15; Accelerated Growth in '16; Top Picks HUM & WCG
Managed Care/Investor Presentations Confirm Our View of a Good Set Up for MCOs in 2015

SURVEYS

Medical Devices-Cardiology/TAVR Survey: Suggests Stronger-Than-Expected Market Growth in 2Q15Pharmaceuticals/ Major/Post-ASCO Lung Cancer Survey Adds to Our Bullish PD1/PDL1 Uptake Assumptions

Pharmaceuticals/ Major/Lung Cancer Survey Validates Our Bullish PD1/PD-L1 Uptake Assumptions

MDVN/Prostate Cancer Survey Points to Earlier Stage Patients As an Upside for Xtandi/ Outperform

SAN FP/Dupilumab Ests Raised by Greater Than $1B Based on MEDACorp Survey; Increase PT to EUR 112/Outperform

REGN/Dupilumab Ests Raised by Greater Than $1B Based on MEDACorp Survey; Increase PT to $559/Outperform

LEERINK LEADERSHIP SERIES

CERN/Maintain OP Following Mgmt Call - Pop Health, DoD and Siemens are Tail Winds/ Outperform
IMPR/Highlights from Leadership Series: Incrementally More Positive on IMPR (OP)/ Outperform
LLY/Highlights from Leerink Leadership Series: PCSK9 & CETP with LLY Management/ Outperform
MCK/Key Takeaways from Call with CFO, James Beer - Still Positive on MCK/Outperform
Biopharma/Leerink Leadership Series Preview: Reviewing PCSK9 & CETP With LLY Mgmt
WMGI/"WMGI Week" Wraps Up with Upbeat CEO Call; PT to $31/Outperform

UPCOMING HEALTHCARE EVENTS:

REGULATORY EVENTS

7/22: CMS MEDCAC panel, CSII
7/24: PDUFA: REGN/SNY Praluent (cholesterol)
7/24: PDUFA: ALKS/JNJ Sustenna (schizophrenia)
7/26: PDUFA: AMGN Kyprolis (relapsed multiple myeloma)
8/11: PDUFA: EXEL Cobimetinib (BRAF + melanoma)

MEDICAL MEETINGS

7/16-18: American Orthopaedic Foot & Ankle Society
7/18-23: Alzheimer's Association International Conference

- BIIB037 efficacy/safety on Wed, July 22nd 2-3:30 pm (oral)

- E2609 (BACE) single dose in cynmolgus monkeys on Wed, July 22nd 9:30 am – 4:15 pm (poster)
- BIIB-sponsored symposium- Novel Therapeutic Approaches to Alzheimer’s Disease: A Focus on Immunotherapy on Mon, July 20th 6-8 pm Location: Marriott Marquis Hotel
- LLY EXPEDITION-EXT safety on Tues, July 21st 9:30 – 4:15 pm (poster)

- LLY EXPEDITION-EXT efficacy on Wed, July 22nd 8 – 9:30 am (panel discussion dedicate to discuss this data)
- LY3002813 (mAb) + LY3202626 (BACE) longitudinal effects of combo tx in aged transgenic mice.; on Wed, July 22nd 2-3:30 pm (oral)
- LLY-sponsored symposium: Disease Modification in AD - Clinical and Pathological Progression: Where Should the Focus Be? 6-8pm Location: Marriott

7/19-22: International AIDS Society
7/21-23: mHealth Summit
7/22-25: The Protein Society
7/22-28: World Association for Sexual Health
7/26-30: American Association for Clinical Chemistry
7/27-30: Society of NeuroInterventional Surgery
8/6-9: American Psychological Association

CORPORATE EVENTS

7/16: EPS BMO: UNH
7/21: EPS BMO: NVS; **EPS AMC:** CNMD, ILMN, ISRG
7/22: EPS BMO: ABT, STJ, TMO
7/23: EPS BMO: ABC, BMY, BSX, CELG, LLY, SHPG; **EPS AMC:** ATHN, BCR, CPHD, SYK
7/24: EPS BMO: BIIB
7/27: EPS BMO: MGLN
7/28: EPS BMO: CNC, MRK, OMI, PFE, WAT; **EPS AMC:** ATRC, CSLT, ESRX, EW, GILD, NUVA
7/29: EPS BMO: ANTM, HUM, MDCO; **EPS AMC:** AFFX, BAX, FMI, HOLX, MCK, MDAS, WMGI
7/30: EPS BMO: ALXN, AZN, CAH, CI, QGEN, SNY, TEVA, ZBH; **EPS AMC:** AMGN, GMED, MOH, PKI, PODD, SGEN, WBMD
7/31: EPS BMO: UHS
8/3: EPS AMC: LMNX
8/4: EPS BMO: AET, CYH, HNT, MNK, REGN, THC; **EPS AMC:** CERN, MDRX
8/5: EPS BMO: WCG

Disclosures Appendix

Analyst Certification

Each analyst certifies that the views expressed in this report accurately reflect their views and that no part of their compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

Distribution of Ratings/Investment Banking Services (IB) as of 06/30/15

Rating	Count	Percent	IB Serv./Past 12 Mos. Count	IB Serv./Past 12 Mos. Percent
BUY [OP]	165	73.66	66	40.00
HOLD [MP]	59	26.34	1	1.69
SELL [UP]	0	0.00	0	0.00

Explanation of Ratings

Outperform (Buy): We expect this stock to outperform its benchmark over the next 12 months.
Market Perform (Hold/Neutral): We expect this stock to perform in line with its benchmark over the next 12 months.
Underperform (Sell): We expect this stock to underperform its benchmark over the next 12 months.The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.
For the purposes of these definitions the relevant benchmark will be the S&P 600® Health Care Index for issuers with a market capitalization of less than $2 billion and the S&P 500® Health Care Index for issuers with a market capitalization over $2 billion.

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