Prohost BioTechnology
Biotechnology Research and Investment

PROHOST LETTER # 364 JUNE 19, 2014

CANCER

AN UNPRECEDENTED DECISION THAT COULD MAKE A BIG DIFFERENCE IN THE MANAGEMET OF CANCER

The National Cancer Institute And Research Partners Help Accelerate Development Of Personalized Treatment Approaches For Squamous Cell Lung Cancer.

IT IS ONLY THE BEGINNING

A protocol is called Lung-MAP Trial Already in Action will Test Five Drugs belonging to 5 Biotechnology and Pharmaceutical Firms

Lung-MAP (Lung Cancer Master Protocol) is being conducted in collaboration with the National Cancer Institute (NCI), part of the National Institutes of Health; SWOG Cancer Research; Friends of Cancer Research (Friends); the Foundation for the National Institutes of Health (FNIH) and five drug developers, including, **Amgen; Genentech; Pfizer; AstraZeneca and MedImmune**, Contributing also are **AstraZeneca's global biologics R&D arm and Foundation Medicine**.

Lung-MAP is a groundbreaking new clinical trial program that will use **biomarker-driven research and genomic profiling to match squamous cell lung cancer patients to investigational treatments based on their individual cancer profiles**.

Lung-MAP is the first trial of its kind to study a large number of rare lung cancer subsets under one trial protocol.

Around 500 to 1,000 patients will be screened each year for more than 200 cancer-related genes, and the screenings will inform trial arm selection.

The collaboration is expected to significantly speed the scientific community's understanding of targeted approaches for this complex and underserved form of lung cancer. In the meantime, it would demonstrate how genomic testing **can drive the evolution of clinical trial design**. It may ultimately tell the clinical trial strategists more about how best to match patients to the right treatments.

Lung-MAP is a biomarker-driven, multi-drug, multi-arm Phase 2/3 registration clinical trial for patients with squamous cell lung cancer.

The trial will use genomic sequencing to assign enrolled patients to the treatment arms expected to provide benefit. Patients will be randomized into one of five sub-studies where they will receive either standard of care (docetaxel or erlotinib) or biomarker-driven targeted therapy with an investigational agent.

Every patient in the study will be screened for mutations in more than 200 cancer-related genes, rather than a single mutation as in conventional studies. The candidates will be assigned to one of the five groups based on what tumor biomarkers show. Each group will test a particular experimental medicine. The initial round of testing involves Amgen, Genentech, Pfizer, AstraZeneca PLC, and AstraZeneca's global biologics partner, MedImmune. Up to 1,000 patients a year can be enrolled in the study.

It will cost about $150 million. The National Cancer Institute is paying $25 million, and the rest will come from foundations, charities and others in the public-private partnership.

The phase II/III trial program using began recruiting patients with advanced squamous cell lung cancer on June 16, 2014.

"Lung-MAP represents the first of several planned large, genomically driven treatment trials that will be conducted by NCI's newly formed National Clinical Trials Network (NCTN)," Dr. Jeffrey S. Abrams, associate director of NCI's Cancer Therapy Evaluation Program, said in a press release announcing the trial launch. "The restructuring and consolidation of NCI's large trial treatment program, resulting in the formation of the NCTN, is quite timely, as it now can offer an ideal platform for bringing the benefits of more precise molecular diagnostics to cancer patients in communities large and small, " he said. "Nothing like this has ever been done before," where such comprehensive testing will be done to match patients to experimental drugs, he said.

As we said, the future has begun now. Is it not what we expected the biotech sector to accomplish? Is this not all brought by the young biotech industrial sector?

PROHOST PORTFOLIO #1

See Date of latest Stocks' Prices

FIRMS & SYMBOLS	Price & Date Stocks Picked	6/18/14 Price	Market Cap.	Dec 2014 Targets	Dec. 2016 Targets	DECISIONS
TOP-TIER FIRMS. GENERAL DRUG DEVELOPING FIRMS						
GILEAD (GILD)	$20.75 On 3/18/11	$79.47	122.04B	$100	$200	TARGETS UNCHANGED WE ACCUMULATE ON WEAKNESSES
AMGEN (AMGN)	$52.94 On 3/18/11	$117.49	88.94 B	$150	$200	TARGETS UNCHANGED We ACCUMULATE IN CASE
REGENER. (REGN)	$38.81 On 03/18/11	$305.30	30.14 B	$350	$500	TARGETS UNCHANGED NO SELLING UNDER THE 2014 TARGET
VERTEX (VRTX)	$44.39 On 03/18/11	$65.08	15.37 B	$85	$160	2014 TARGET ULOWERED Unsubstantiated Negative Speculations Causing a Stock Selloff. CAUTION
ILLUMINA (ILMN)	$62.11 On 03/18/11	$171.01	21.96 B	$200	$500	TARGETS UNCHANGED APPRECIATION OF ILMN IS RISING.
JAZZ (JAZZ)	$29.2 On 03/18/11	$152.03	8.03 B	$200	$250	TARGETS UNCHANGED ACCUMULATE ON WEAKNESSES
CANCER COMPANIES. EACH WITH ONE MARKETED PRODUCT						
PHARMAC. (PCYC)	$15.25 On 11/5/11	$91.80	6.89 B	$100	$150	2014 TARGET STILL $100.
INCYTE (INCY)	$14.29 On 03/18/11	$56.21	9.42 B	$75	$120	TARGETS UNCHANGED On The rise For upcoming Good news
IMMUNOG (IMGN)	$8.50 On 03/18/11	$13.15	1.13 B	$25	$40	TARGETS UNCHANED Sales Of Breast Cancer Drug Increasing
ARIAD ARIA)	$6.40 On 03/18/11	$6.55	1.22 B	$14	$28	TARGETS UNCHANGED Upward Stock Moves expected Soon
Seattle Gen. (SGEN)	$14.28 On 03/18/11	$39.70	4.89 B	$70	$120	TARGETS UNCHANGED Undervalued
DIVERSIFIED DRUG DEVELOPER						
Theravance (THRX)	$24.03 On 03/12/13	$28.43	3.2 B	$50	$70	TARGETS UNCHANGED Undervalued We Buy Now.
Theravance B (TBPH)	$22	$30.66	---------	$50	$70	RALLIED SINCE CREATED Profit taking On wednesday
ANTISENSE PRODUCTS						
ISIS (ISIS)	$8.62 On 03/18/11	$30.19	3.55 B	$55	$125	TARGETS UNCHANGED Expecting Good News
ALNYLAM (ALNY)	$10.80 On 01/25/12	$62.68	4.7 B	$80	$150	2014 TARGET STILL $80 Expecting Good News
SAREPTA (SRPT)	$28.33 On 11/21/12	$34.92	1.42 B	$40	$60	TARGETS UNCHANGED Abide By The Target
SANGAMO (SGMO)	$7.19 On 3/18/11	$13.58	922.59.M	$22	$35	TARGETS UNCHANGED Brings Hope In Cures
PLEURISTEM (PSTI): HAS NOT YET BEEN SELECTED FOR INVESTMENT. STILL CONSIDERED THOUGH.						

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PORTFOLIO #2

Firms and Symbols	Date Picked and Price	Price 6/18/14	Market Cap	1st Target	2016 Target	Observations and Decisions
			NEWELY PICKED FIRMS			
PORTOLA (PTLA)	$26.65 On 2/22/2014	$21.16	870.10 M	$40	$80	TARGETS UNCHANGED ONE OF OUR TOP PICKS * * * * *
NEKTAR	$12.84 On 1/27/14	$11.83	1.5 B	$!6	$35	TARGETS UNCHANGED See End of the week Prohost Letter
ENANTA (ENTA)	$20.75 On 11/25/13	$39.50	732.26. M	$45	$55	TARGETS UNCHANGED HCV oral drug will be approved at the end of the year.
BIOCRYST (BCRX)	$9.40 On Jan. 8 2014	$9.01	589.23 M	$18	$32	TARGETS UNCHANGED. EXPECT APPROVAL OF ITS FLU VACCINE
COMPUGEN CGEN	$10 On Jan. 8, 2014	$8.44	366.81 M	$18	$28	TARGETS UNCHANGED Has Good News about Discovery See End of the week Prohost Letter
			DEVELOPMENT STAGE CANCER COMPANIES			
EXELXIS (EXEL)	$11.35 On 3/18/11	$3.45	671.89 M	$10	$35	TARGETS UNCHANGED Read breakthrough changes in CA treatment P.1
ARRAY (ARRY)	$3.00 On 3/18/11	$408	$15.27 M	$12	$15	TARGETS UNCHANGED Stock undervalued Read Below.
ENDOCYTE (ECYT)	$17.45 On 8/05/13	$6.47	268.92 M	$40	$60	Bad News Stay Away Now.
SUNESIS (SNSS)	$2.48 On 3/29/12	$5.10	306.50 M	$12	$20	TARGETS UNCHANGED Has Good News.
			GENERAL DRUG DEVELOPERS AND DRUG DELIVERY			
XOMA (XOMA)	$4.51 On 3/18/11	$4.14	442.02 M	$10	$22	TARGET UNCHANGED AT $10
HALOZYME (HALO)	$6.57 On 3/25/13	$7.96	946,76 M	$12	$35	TARGET Raised from $12 To $15 for 2014
			THERAPEUTIC VACCINES FOR CANCER AND OTHER DISEASES			
CELLDEX (CLDX)	$25.65 On 11/11/13	$14.66	$1.31 B	$20	$40	WARNING: 1st target lowered to $20 We SOLD most of the stock and kept some stock to accumulate if and when concrete data would surface. WE BUY SOME MORE STOCK AS PRICE IS BELOW TARGET NOW.
DENDREON (DNDN)	$7.56 On 1/3/12	$2.22	344.33 M	$6-$7	$9	READ END OF THE WEEK CONTINUATION AND EXPLANATION OF THE TABLES. HOLD UNTIL THE FINAL ANALYSIS IS MADE.
AGENUS (AGEN)	$5.64 On 3/18/11.	$2,67	166.17 M	$10	$30	TARGETS UNCHANGED. WE ACCUMULATE SLOWLY
			PRENATAL DIAGNOSIS FIRMS			
SEQUENOM (SQNM)	$5.92 On 3/18/11	$3.03	352.37 M	$4	$6	WON PATENT INFRINGEMENT SALES ARE MOUNTING See Continuation of this letter at the ens of the week issue.

TO BE CONTINUED ON SUNDAY. UNTIL THEN

WE KEEP OUR EYES ON THE TARGETS.

(TO BE CONTINUED)

NOTES

FORWARD-LOOKING: Material presented here is for informational purposes only. Nothing in this article should be taken as a solicitation to purchase or sell securities. Before buying or selling any stock you should do your own research and reach your own conclusion. Further, these are our 'opinions' and we may be wrong. We may have positions in securities mentioned in this article. You should take this into consideration before acting on any advice given in this article. If this makes you uncomfortable, then do not listen to our thoughts and opinions. The contents of this article do not take into consideration your individual investment objectives so consult with your own financial adviser before making an investment decision. Investing includes certain risks including loss of principal.