
Life Sciences -- Biotechnology

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CANACCORD GENUITY ONCOLOGY BRIEF

February 18, 2011 – March 4, 2011

- **BAYN, ONXX: Nexavar Phase III MBC trial initiated**
- **ROG: FDA grants hearing on Avastin in MBC**
- **ROG: EU backs Avastin in MBC**
- **SGEN: BLA filed for SGN-35 in HL and ALCL**
- **CELG: NICE recommends Vidaza in MDS, CMML, and AML**
- **GSK: NICE recommends Votrient in RCC**
- **ROG: NICE wants more data on MabThera for NHL**
- **Oncology Deal Brief**
- **Canaccord Genuity OncoTrack**
Onco stocks continue outperformance, beating NBI 6.0 points over 12 months.
- **Selected upcoming events**
- **Upcoming conferences**

NEXAVAR PHASE III MBC TRIAL INITIATED

Bayer (XETRA : BAYN | Not Rated)

Onyx Pharmaceuticals (NASDAQ : ONXX \$36.00 | BUY)

February 23: Bayer and Onyx announced initiation of patient enrollment in the Phase III RESILIENCE trial comparing Nexavar (sorafenib) plus capecitabine versus capecitabine alone for the treatment of patients with locally advanced or metastatic HER2-negative breast cancer who have failed prior taxane and anthracycline treatment. The trial is a randomized, double-blind study planned to enroll 519 patients in over 20 countries. The primary endpoint is progression-free survival, and secondary endpoints include overall survival, time to progression, and safety.

FDA GRANTS HEARING ON AVASTIN IN MBC

Roche (SIX : ROG | Not Rated)

February 24: The FDA has granted a hearing on June 28-29 for Roche to present its case for continued FDA approval of Avastin in HER2-negative metastatic breast cancer. The hearing was requested by Roche following an FDA decision to remove the MBC indication from the Avastin label. Recall that a June 2010 ODAC panel voted 12-1 against Avastin use in MBC based on its view that its clinical benefit did not outweigh its risks.

EU BACKS AVASTIN IN MBC

Roche (SIX : ROG | Not Rated)

March 2: Roche announced that the European Commission is continuing to support Avastin use in combination with paclitaxel for front-line treatment of metastatic breast cancer (MBC) in Europe. The decision follows a recommendation from the EU's CHMP supporting use of Avastin+paclitaxel for MBC that cited positive PFS benefits and a favorable risk/benefit profile. Conversely, CHMP also recommended against Avastin use in combination with docetaxel for treatment of MBC. Accordingly, the European Commission is removing this latter combination from the Avastin label.

BLA FILED FOR SGN-35 IN HL AND ALCL

Seattle Genetics (NASDAQ : SGEN : \$14.92 | SELL)

February 28: Seattle Genetics announced filing of a Biologics License Application (BLA) for SGN-35 (brentuximab vedotin) in relapsed/refractory (r/r) Hodgkin's Lymphoma (HL) and r/r systemic anaplastic large cell lymphoma (ALCL). The filing is based on pivotal trial data showing a 75% objective response rate (ORR) and 34% complete response rate (CRR) in HL and 86% ORR and 53% CRR in ALCL, with common adverse events observed including peripheral neuropathy, fatigue, respiratory tract infection, nausea, and fever. An approval decision is expected in the second half of 2011.

NICE RECOMMENDS VIDAZA IN MDS, CMML, AND AML

AstraZeneca (NYSE : AZN | Not Rated)

February 18: The UK's NICE issued final draft guidance recommending Vidaza (azacitidine) for treatment of myelodysplastic syndromes (MDS), chronic myelomonocytic

leukemia (CMML), and acute myeloid leukemia (AML). The decision comes after Celgene made undisclosed adjustments to its patient access scheme, providing a discount and improving the drug's cost/benefit analysis. Prior to Celgene's proposed adjustments, NICE had ruled Vidaza was not cost-effective and had issued a recommendation against its use in MDS, CMML, and AML.

NICE RECOMMENDS VOTRIENT IN RCC

GlaxoSmithKline (NYSE : GSK | Not Rated)

February 23: The UK's NICE issued final guidance recommending GSK's Votrient (pazopanib) for front-line treatment of advanced renal cell carcinoma (RCC). NICE ruled positively on the cost-effectiveness of a two-part patient access scheme, which offers Votrient at a 12.5% discount and offers an undisclosed rebate dependent upon results from a Phase III trial comparing Votrient to Sutent standard-of-care.

NICE WANTS MORE DATA FOR MABTHERA IN NHL

Roche (SIX : ROG | Not Rated)

February 28: The UK's NICE is requesting additional cost-effectiveness data prior to a recommendation decision for MabThera (rituximab) in front-line maintenance treatment of advanced follicular non-Hodgkin's lymphoma (NHL). Recall that a prior positive preliminary recommendation given in December was contingent upon Roche's addressing of uncertainties in their cost/benefit analysis. NICE is requesting a revised analysis by March 22.

ONCOLOGY DEAL BRIEF

February 16: AVEO Pharmaceuticals (NASDAQ : AVEO : \$13.51 | BUY) signed an agreement with **Astellas Pharma** (TSE: 4503) for the development and commercialization of tivozanib, a VEGFR inhibitor in Phase III development for renal cell carcinoma. AVEO received \$125M upfront and is eligible for up to \$1.3B in potential milestone payments. In North America (NA) and Europe (EU), profits and development costs will be split 50/50, with NA commercialization led by AVEO and EU commercialization led by Astellas. Ex-NA/EU/Asia, AVEO will receive tiered, double-digit royalties on sales, and development costs will be paid by Astellas. In Asia, rights to tivozanib are held by Kyowa Hakko Kirin under a license agreement with AVEO.

February 22: Calistoga Pharmaceuticals agreed to acquisition by **Gilead Sciences** (NASDAQ: GILD) for \$375M upfront, with a potential \$225M in additional milestone payments. Calistoga's portfolio includes lead candidate CAL-101, a PI3K-delta inhibitor in Phase II studies for treatment of patients with refractory indolent non-Hodgkin's lymphoma and chronic lymphocytic leukemia. Closing of the deal is expected in Q2/11.

February 28: Plexxikon agreed to acquisition by **Daiichi Sankyo** (TSE: 4568) for \$805M upfront and \$130M in potential milestone payments. Plexxikon's portfolio includes lead program PLX4032, an inhibitor of mutant BRAF, which in a Phase III trial met overall survival and progression-free survival endpoints in patients with previously untreated metastatic melanoma. Daiichi Sankyo will retain Plexxikon's US co-promotion rights for PLX4032, while partner Roche retains an exclusive license for worldwide development and

commercialization of the drug. US and European regulatory filings for PLX4032 are expected this year.

CANACCORD GENUITY ONCOTRACK

Our market capitalization-weighted OncoTrack indices are designed to provide a snapshot of the stock performance of mid- and small-cap biotechnology companies that focus on the development of cancer therapeutics. OncoTrack (n=43) includes all oncology stocks fitting criteria below. OncoTrack-A (abridged; n=34) excludes companies with marketed products and removes the weighted impact of higher market-cap companies (e.g., DNDN, ALXN, and CEPH). We believe comparisons of both indices relative to the broader NASDAQ Biotech Index (NBI) capture risk appetite in biotech companies involved in such a speculative area as oncology product development.

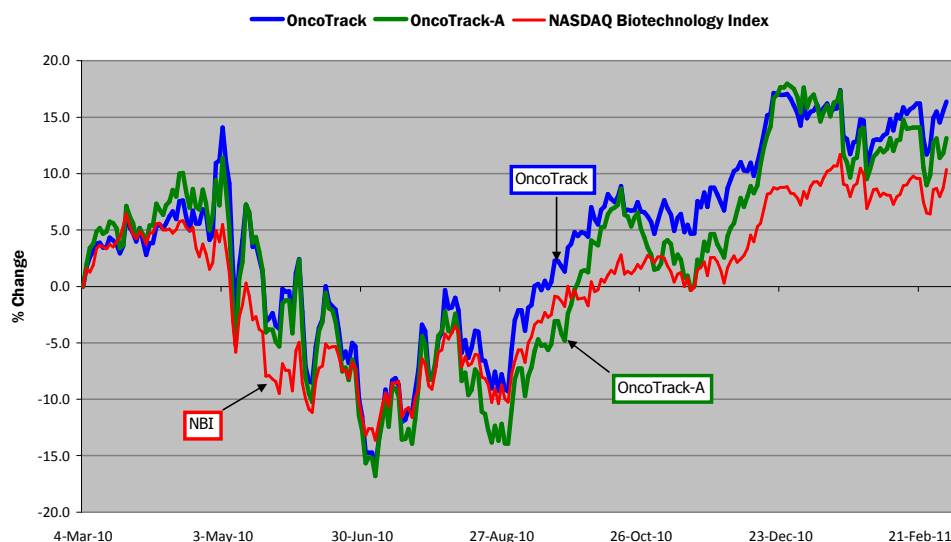
OncoTrack inclusion criteria include:

- pipelines of all clinical stages – Phase I to commercial
- market capitalizations sustained on average between \$100M and \$10B (rebalanced every quarter)
- listing on US exchanges only
- 100-day average trading volumes of at least 10,000

OncoTrack-A (abridged):

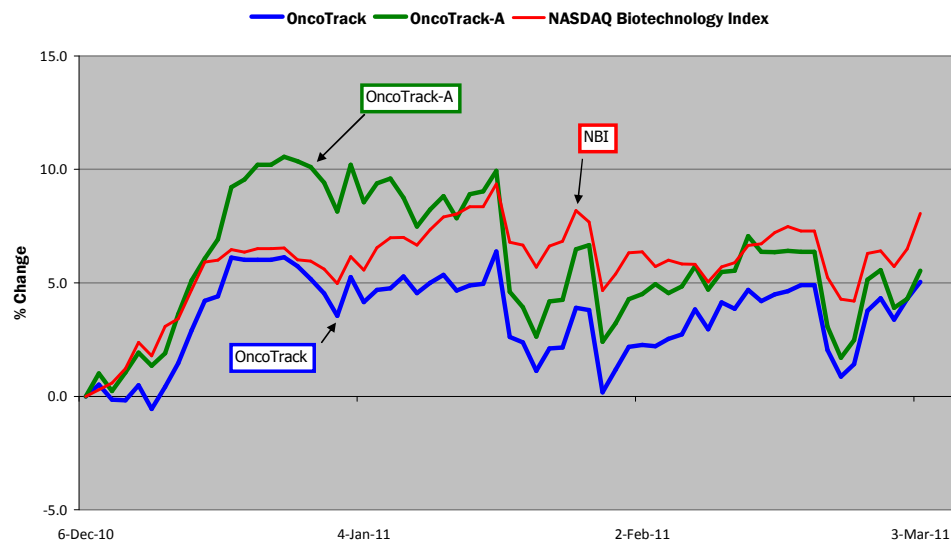
- excludes companies with marketed products

Figure 1: OncoTrack vs. NBI: 12-month performance



Source: Canaccord Genuity, CapIQ data. Past performance does not predict future results.

4 March 2011

Figure 2: OncoTrack vs. NBI: 3-month performance

Source: Canaccord Genuity, CapIQ data. Past performance does not predict future results.

Figure 3: Canaccord Genuity OncoTrack components

Company Name	Ticker	Market Cap (\$M)	Price	Volume, 100d (M)	OT	OT-A	Company Name	Ticker	Market Cap (\$M)	Price	Volume, 100d (M)	OT	OT-A
Alexion Pharma	ALXN	9,083	\$99.47	0.7	x		Allos Therapeutics	ALTH	327	\$3.10	1.2	x	
Dendreon Corp.	DNDN	4,769	\$32.77	2.7	x		Pharmacyclics	PCYC	300	\$5.00	0.4	x	x
Cephalon	CEPH	4,369	\$57.69	1.4	x		YM Biosciences	YMI	286	\$2.60	0.1	x	x
Regeneron Pharma	REGN	3,373	\$37.49	0.5	x	x	Immunomedics	IMMU	270	\$3.58	0.4	x	x
Onyx Pharma	ONXX	2,263	\$35.90	0.7	x		Cell Therapeutics	CTIC	252	\$0.28	4.1	x	x
Incyte	INCY	1,720	\$13.94	1.6	x	x	Keryx BioPharma	KERX	236	\$3.84	1.0	x	x
Seattle Genetics	SGEN	1,700	\$15.01	1.0	x	x	Curis	CRIS	227	\$3.00	0.7	x	x
Exelixis	EXEL	1,296	\$11.84	2.1	x	x	Synta Pharma Corp.	SNTA	218	\$5.19	0.2	x	x
Nektar Therapeutics	NKTR	1,012	\$8.90	1.2	x	x	Ligand Pharma	LGND	216	\$11.00	0.1	x	
PDL Biopharma	PDLI	830	\$5.94	3.0	x		Progenics Pharma	PGNX	192	\$5.82	0.2	x	x
Ariad Pharma	ARIA	752	\$5.93	2.3	x	x	BioCryst Pharma	BCRX	188	\$4.18	0.3	x	x
Halozyne Therapeutics	HALO	681	\$6.78	0.4	x	x	SuperGen	SUPG	176	\$2.92	0.4	x	
Geron	GERN	637	\$4.95	2.1	x	x	Vical	VICL	159	\$2.22	0.5	x	x
Enzon Pharma	ENZN	632	\$10.74	0.4	x	x	Array BioPharma	ARRY	158	\$2.82	0.2	x	x
ImmunoGen	IMGN	631	\$9.27	0.5	x	x	Infinity Pharma	INFI	152	\$5.75	0.0	x	x
Medivation	MDVN	590	\$17.06	0.4	x	x	Gentium	GENT	141	\$9.40	0.0	x	x
Micromet	MITI	541	\$5.95	0.6	x	x	Celldex Therapeutics	CLDX	132	\$4.12	0.3	x	x
Aveo Pharma	AVEO	484	\$13.59	0.1	x	x	Cel-Sci	CVM	132	\$0.64	1.2	x	x
Oncolytics Biotech	ONCY	443	\$6.34	0.2	x	x	Rexahn	RNN	128	\$1.53	1.1	x	x
Ziopharm Oncology	ZIOP	382	\$5.95	0.7	x	x	GTx	GTXI	123	\$2.37	0.1	x	x
Spectrum Pharma	SPPI	351	\$6.81	0.8	x		Sunesis	SNSS	89	\$2.00	0.6	x	x
ArQule	ARQL	331	\$6.24	0.3	x	x							

OT: OncoTrack Index inclusion; OT-A: OncoTrack-A inclusion

Source: Canaccord Genuity and CapIQ market data

Priced at the close of March 3, 2011

SELECTED UPCOMING EVENTS

BMS: March 26, 2011 – PDUFA date for ipilimumab (Yervoy) for treatment of metastatic melanoma

AZN: April 7, 2011 – PDUFA date for vandetanib (Zactima) in thyroid cancer

NVS, PFE: April 7, 2011 – ODAC panel on everolimus (Afinitor) and sunitinib (Sutent) for treatment of neuroendocrine tumors

JNJ: October 20, 2011 – PDUFA date for abiraterone for post-docetaxel treatment of metastatic prostate cancer

UPCOMING CONFERENCES

American Association for Cancer Research: April 2-6, 2011 – Orlando, FL

International Myeloma Workshop: May 3-6 – Paris, France

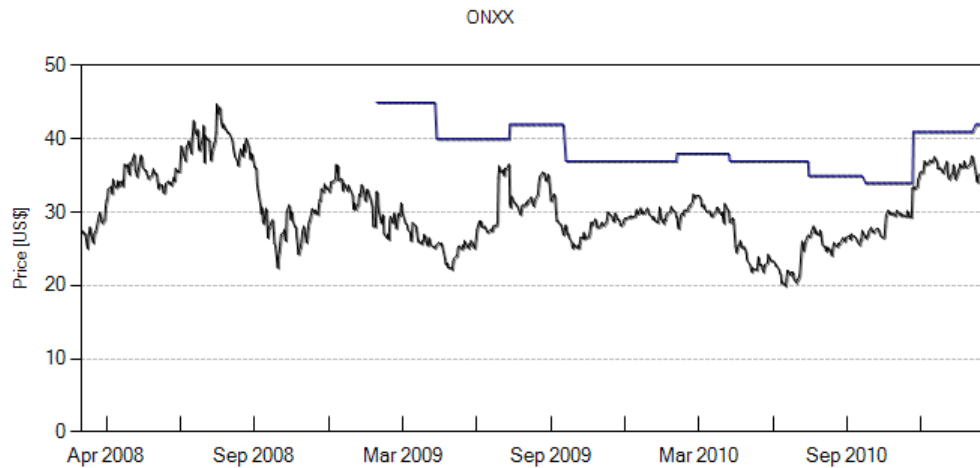
American Society of Clinical Oncology Annual Meeting: June 3-7, 2011 – Chicago, IL

European Hematology Association Congress: June 9-12, 2011 – London, UK

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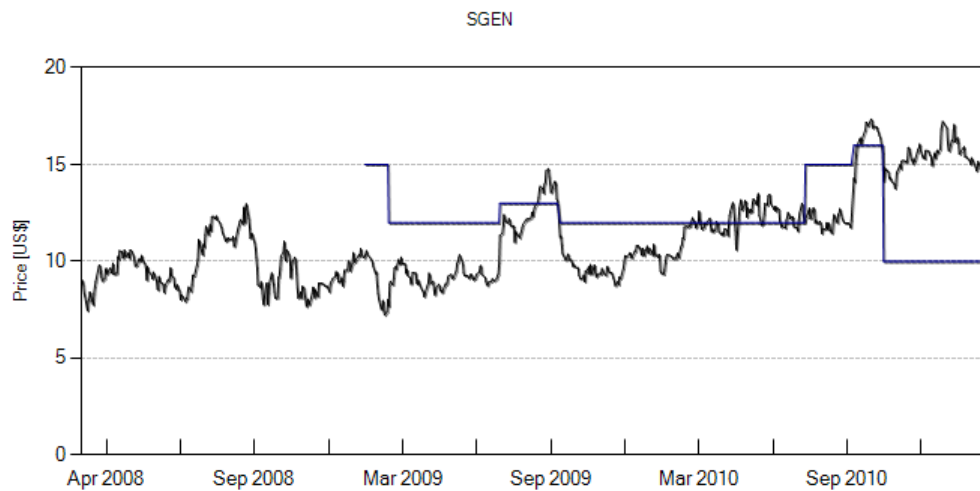
Price Chart:*



— Market Price
— Target Price

Date	Analyst	Rating	Target Price	Date	Analyst	Rating	Target Price
1) 02/24/2009	Farmer	Buy	45.00	6) 04/29/2010	Farmer	Buy	37.00
2) 05/07/2009	Farmer	Buy	40.00	7) 08/03/2010	Farmer	Buy	35.00
3) 08/05/2009	Farmer	Buy	42.00	8) 10/08/2010	Farmer	Buy	34.00
4) 10/12/2009	Farmer	Buy	37.00	9) 12/08/2010	Farmer	Buy	41.00
5) 02/24/2010	Farmer	Buy	38.00	10) 02/22/2011	Farmer	Buy	42.00

*Price charts assume event 1 indicates initiation of coverage or the beginning of the measurement period.



— Market Price
— Target Price

Date	Analyst	Rating	Target Price	Date	Analyst	Rating	Target Price
1) 02/10/2009	Farmer	Buy	15.00	5) 07/30/2010	Farmer	Buy	15.00
2) 03/11/2009	Farmer	Buy	12.00	6) 09/27/2010	Farmer	Buy	16.00
3) 07/24/2009	Farmer	Buy	13.00	7) 11/02/2010	Farmer	Sell	10.00
4) 10/05/2009	Farmer	Buy	12.00				

*Price charts assume event 1 indicates initiation of coverage or the beginning of the measurement period.

Distribution of Ratings: Global Stock Ratings (as of 2 February 2011)

Rating	Coverage Universe		IB Clients	
	#	%	#	%
Buy	437	57.7%	36	36.6%
Speculative Buy	65	8.6%	52	52.3%

Hold	236	31.1%	17.8%
Sell	20	2.6%	5.0%
	758	100.0%	

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Company	Disclosure
AVEO Pharmaceuticals	1A, 2, 3, 5, 7
Onyx Pharmaceuticals	5, 7
Seattle Genetics	5, 7

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