Annual General Meeting

CEO Presentation

29th November 2010

Dr Greg Collier CEO

www.chemgenex.com

ASX:CXS

Safe Harbor Statement and Recognition of Trademarks

Certain statements made herein that use the words “estimate”, “project”, “intend”, “expect”, “believe,” and similar expressions are intended to identify forward-looking statements within the meaning of the US Private Securities Litigation Reform Act of 1995. These forward-looking statements involve known and unknown risks and uncertainties which could cause the actual results, performance or achievements of the company to be materially different from those which may be expressed or implied by such statements, including, among others, risks or uncertainties associated with the development of the company’s technology, the ability to successfully market products in the clinical pipeline, the ability to advance promising therapeutics through clinical trials, the ability to establish our fully integrated technologies, the ability to enter into additional collaborations and strategic alliances and expand current collaborations and obtain milestone payments, the ability of the company to meet its financial requirements, the ability of the company to protect its proprietary technology, potential limitations on the company’s technology, the market for the company’s products, government regulation in Australia and the United States, changes in tax and other laws, changes in competition and the loss of key personnel. These statements are based on our management’s current expectations and are subject to a number of uncertainties that could change the results described in the forward looking statements. Investors should be aware that there are no assurances that results will not differ from those projected.

CHEMGENEX PHARMACEUTICALS

Overview

- Biopharmaceutical company delivering novel solutions to cancer patients with unmet needs
  - Expertise in hematologic malignancies
  - Small molecule drugs with novel mechanisms of action
- Lead asset OMAPRO™ (omacetaxine mepesuccinate) effective in TKI Resistant Chronic Myeloid Leukemia (CML)
- Completed two pivotal trials;
  - T315I+ CML patients
  - Multi-TKI resistant CML patients

CHEMGENEX PHARMACEUTICALS

OMAPRO: A Potential New Treatment for Hematologic Cancers

- A first-in-class cetaxine
- Clinical activity as a single agent in CML, AML and MDS
- A unique mechanism of action
  - Specifically binds the ribosomal A-site cleft inhibiting protein translation[1]
  - Selectively reduces the levels of short-lived oncoproteins such as Mcl-1 and c-Myc that are up-regulated in leukemic cells[2]
  - Demonstrated, *in vitro*, to kill human CML stem cells and peripheral leukemic cells[3]

[1]Gurel, G. *et al.* J. Mol Biol. (2009), doi:10.1016/j.jmb.2009.04.005; [2]Robert F *et al.* 2009) PLoS ONE 4(5): e5428 doi:10.1371/journal.pone.0005428; [3]Allan, E. et al. EHA Annual Congress 2009

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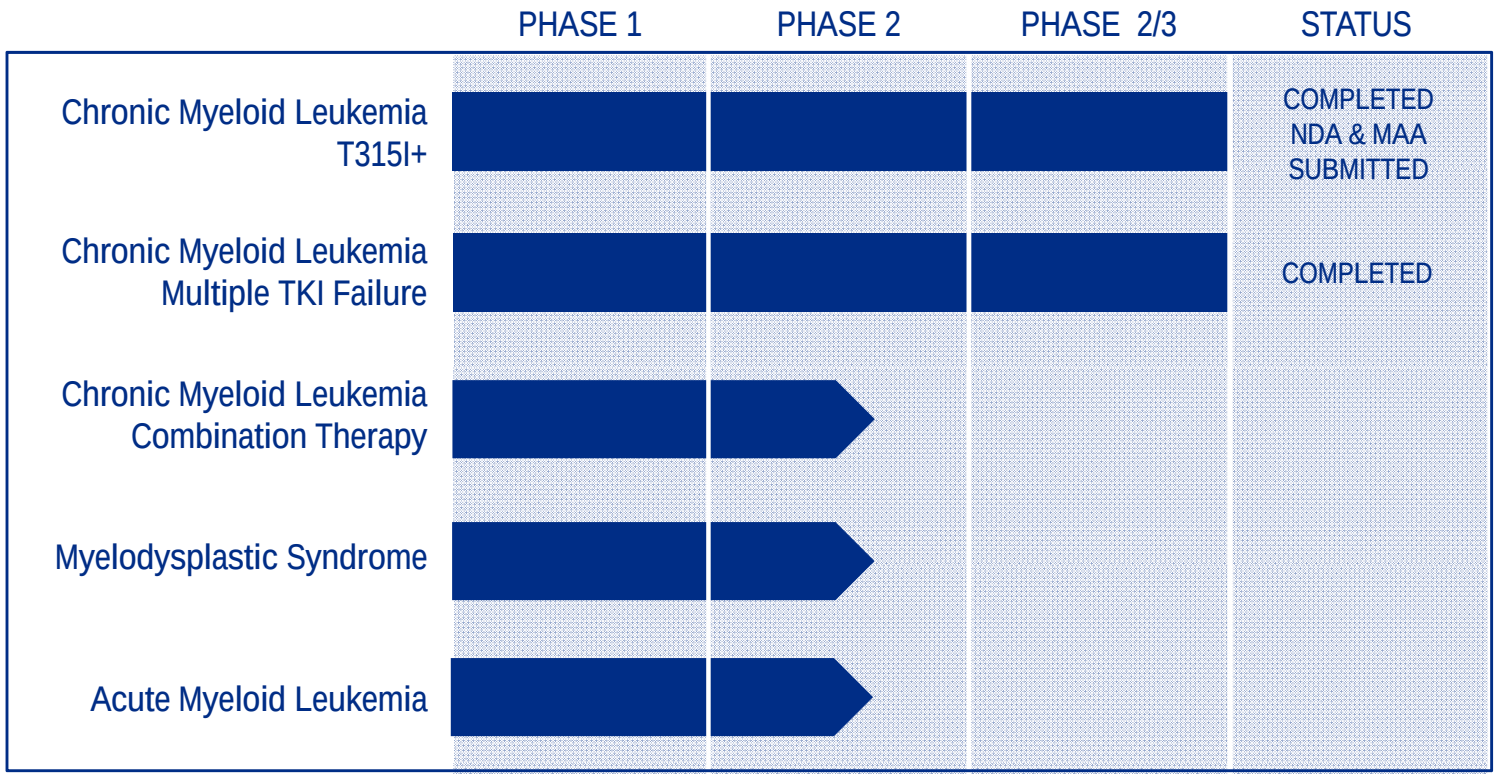
OMAPRO Clinical and Regulatory Status



CHEMGENEX PHARMACEUTICALS

The CML Market &

Current Treatment Options

Paradigm Shift in the Management of CML

- Chronic Myeloid Leukemia (CML)
  - Malignancy of the bone marrow
  - 5,000 new cases per annum in the U.S.
  - Worldwide prevalence > 100,000 patients and growing
- First Line Therapy: Two approved TKIs
  - Imatinib approved in 2001
    - Global sales of US$2.1 billion in 1H 2010[1]
  - Nilotinib approved in June 2010
- Second Line Therapy: Two approved TKIs
  - Dasatinib approved in June 2006 (US$265M in 2010 1H sales)[2]
  - Nilotinib approved in October 2007 (US$164M in 2010 1H sales)[3]

[1,3]Novartis June 2010 Finance Report www.novartis.com ;
[2] Bristol-Myers Squibb June 2010 10Q

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Multiple TKI Resistance represents an increasing unmet medical need in CML

- Patients who have failed imatinib and subsequent therapy with nilotinib or dasatinib due to:
  - Emergence of Bcr-Abl mutations
  - Bcr-Abl over-expression

- 45% of patients fail second generation TKIs within the first year[1]
- No approved treatments available for patients who have multiple TKI resistance

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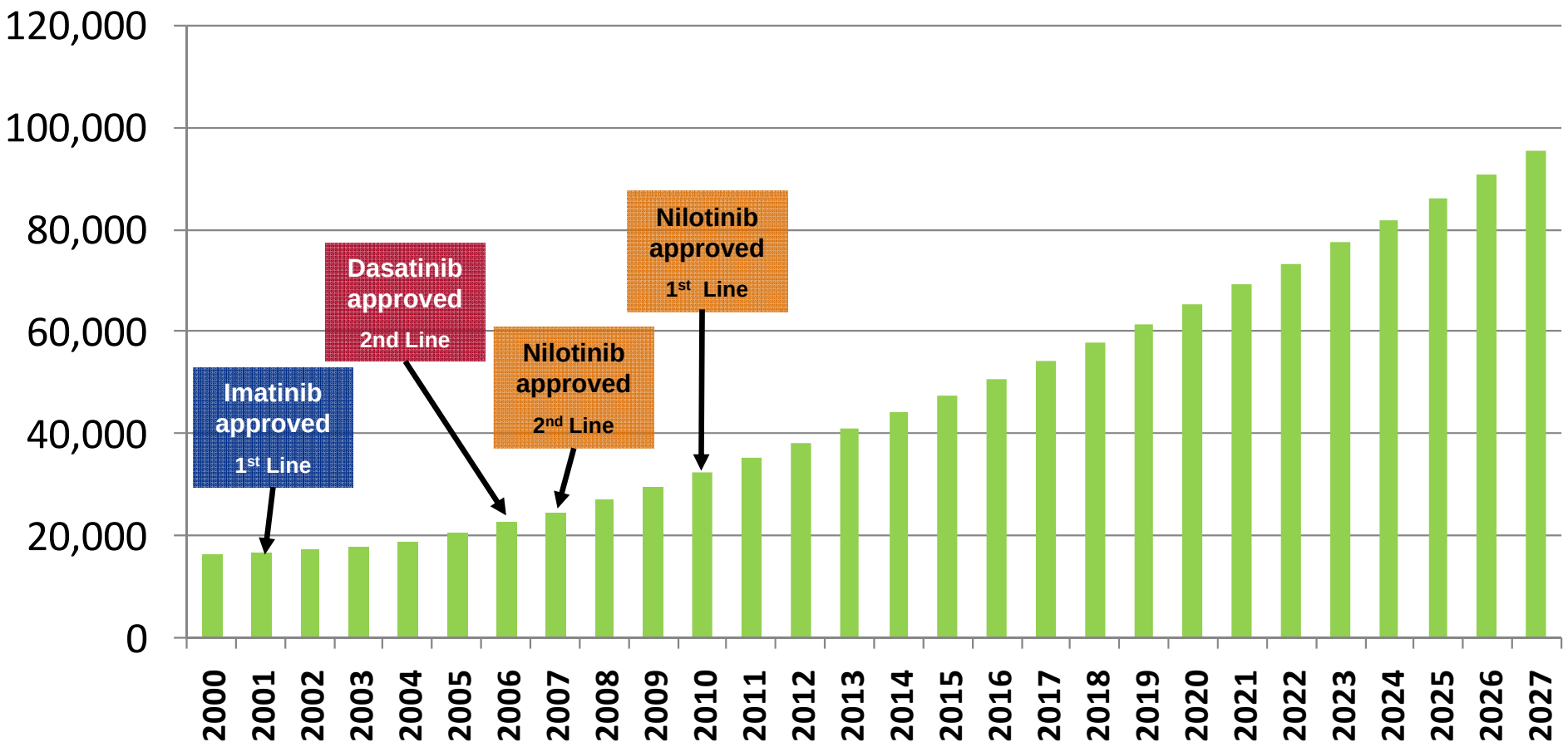
[1]Hochhaus *et al.* Dasatinib induces notable hematologic and cytogenetic responses in chronic-phase CML after failure of imatinib therapy, Blood 2007. 109, 2303-2309

Reductions in Mortality Increase CML Prevalence



ChemGenex estimates of growth rates in CML prevalence are more conservative than others c.f. 200,000 - 300,000 patients surviving in the USA by 2027; Jabbour. E et al Oncology. Vol. 21, No. 6, May 1, 2007); 2006 Prevalence: Leukemia & Lymphoma Society "Facts 2009-2010" P.7 Table 2; Incidence and Deaths due to CML: Novartis publication (ref to SEER); ASCO 2008 abstract 7088

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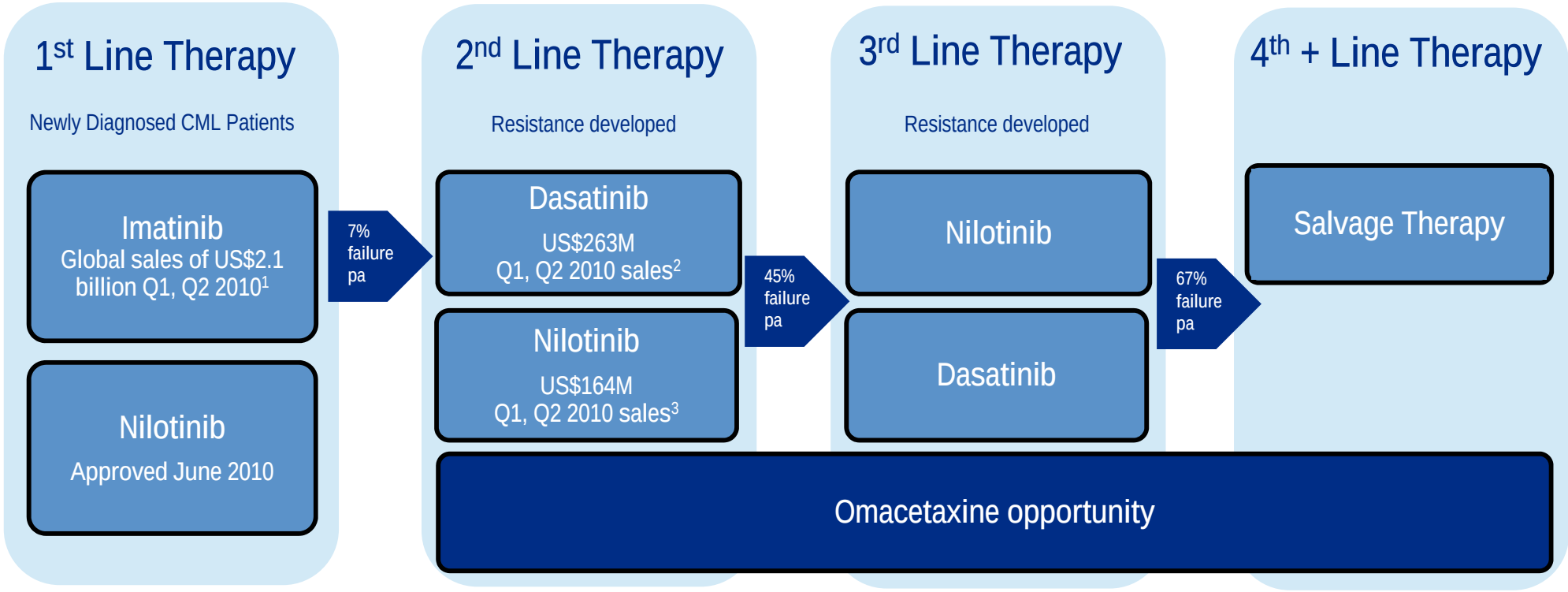
Multiple TKI Resistance Represents an Increasing Unmet Medical Need in CML



Treatment Source: NCCN Clinical Practice Guidelines In Oncology™ – Chronic MyelogenousLeukemia V.2.2010.
[1,3]Novartis 30 June 2010 Finance Report; www.novartis.com[2] Bristol-Myers Squibb June 2010 Finance Report . Imatinib, dasatinib and nilotinib are approved agents. Omacetaxine is in development for above treatment areas.

CHEMGENEX PHARMACEUTICALS

OMAPRO™

for the treatment of CML

CHEMGENEX PHARMACEUTICALS

OMAPRO Addresses Unmet Medical Needs

- OMAPRO™ (omacetaxine mepesuccinate) for subcutaneous injection
- Convenient and safe BID self-administration
  - Induction – up to 14 days per month
  - Maintenance – up to 7 days per month
- Strong safety profile
  - Myelosuppression is the most common side effect and is normally manageable and reversible
  - Infrequent grade 3/4 non-hematologic events experienced
  - Adverse events easily manageable with dose adjustments
  - Minimal injection site reactions
- Initial indications in multi-TKI resistant CML

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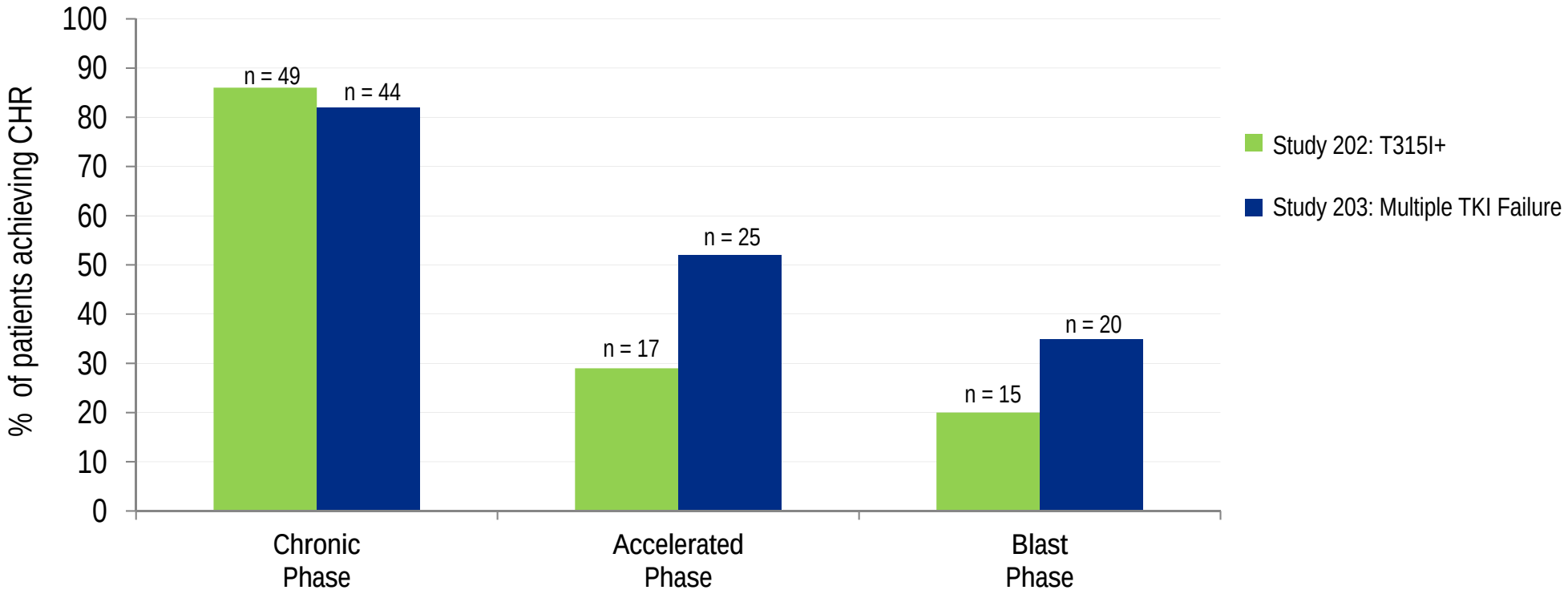
Enrollment Completed in Two Phase 2/3 Clinical Trials

	STUDY 202 CML T315I+ Patients	STUDY 203 Multiple TKI Failure CML
Design	Open label, Single arm	Open label, Single arm
Patients	Enrollment complete 103 patients	Enrollment complete 100 patients
Sites	35 in US, EU, Asia Pacific	35 in US, EU, Asia Pacific
Inclusion criteria	Patients who have failed imatinib and have T315I+ Bcr-Abl mutation	Patients who have failed two or more tyrosine kinase inhibitors
Dose (subcutaneous injection)	▪ Induction: 1.25 mg/m^2 two times a day for 14 days, every 28 days; up to 6 cycles ▪ Maintenance: as per induction phase, but 7 days treatment every 28 days	▪ Induction: 1.25 mg/m^2 two times a day for 14 days, every 28 days; up to 6 cycles ▪ Maintenance: as per induction phase, but 7 days treatment every 28 days
Primary endpoints	▪ Cytogenetic response ▪ Hematologic response (chronic, accelerated, blast phase)	▪ Cytogenetic response ▪ Hematologic response (chronic, accelerated, blast phase)
Status	Completed	Completed

Hematologic Responses in Patients Treated with OMAPRO



Median response duration (months)	Chronic Phase	Accelerated Phase	Blast Phase
Study 202: T315I+	9.1 (0.7 – 30.)	6.6 (0.9 – 14.8)	2 (0.5 – 4.7)
Study 203: Multiple TKI Failure	4.8 (1.15 – 19.38)	3.1 (0.72 – 10.53)	2.5 (0.66 – 10.95)

Data independently adjudicated by Data Monitoring Committee.

Sources: Cortes, J.E. *et al.* 2009 ASH Annual Meeting Abstract No: 644. Blood 114: 22, 2009; Cortes, J.E. *et al.* 2009 ASH Annual Meeting Abstract No: 861. Blood 114: 22, 2009

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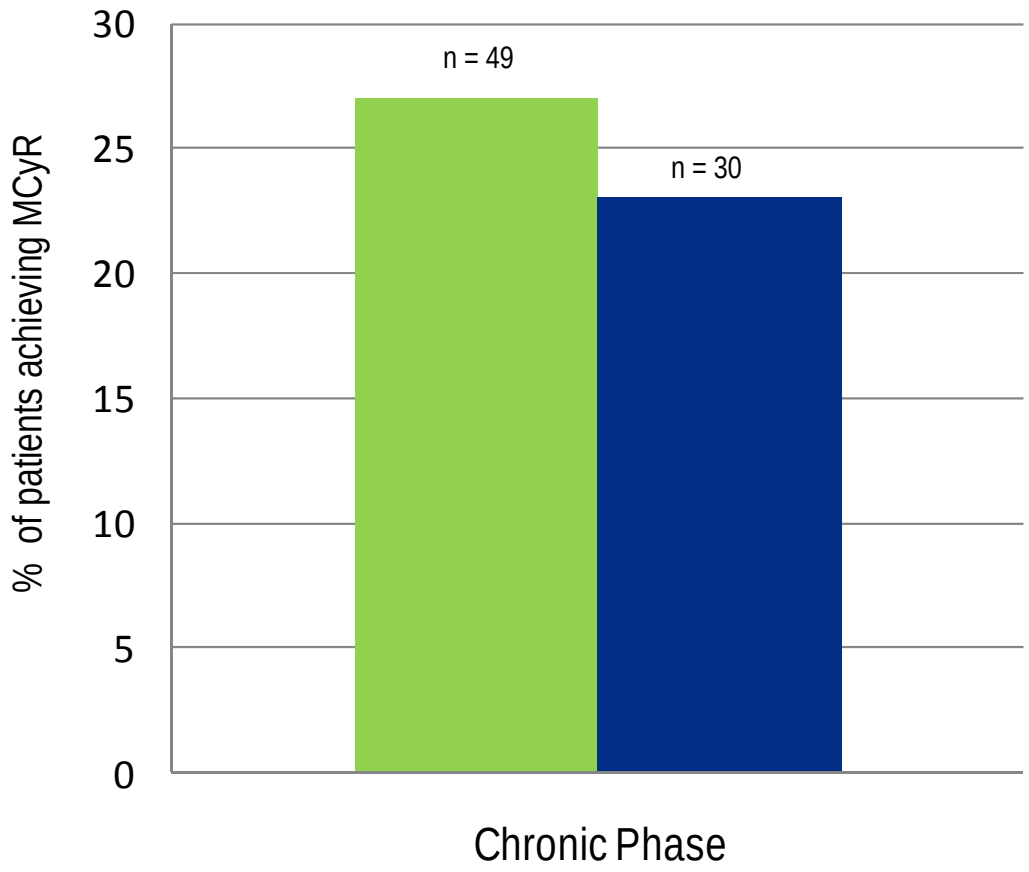
Cytogenetic Responses in Patients Treated with OMAPRO



Study 202: T315I+

Study 203: Multiple TKI Failure

Median response duration (months)

Study 202	4.7 (0.1 – 14.1)
Study 203	2.3 (0.03 – 9.34)

Data independently adjudicated by Data Monitoring Committee.

Sources: Cortes, J.E. *et al.* 2009 ASH Annual Meeting Abstract No: 644. Blood 114: 22, 2009; Cortes, J.E. *et al*. 2009 ASH Annual Meeting Abstract No: 861. Blood 114: 22, 2009

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OMAPRO Regulatory Status

- Robust efficacy and safety database
- Regulatory filings in process and/or under review
  - U.S. NDA (multi-TKI resistance)
    - Data collection and analysis underway
  - European MAA (T315I+ mutation)
- Individual patients treated globally under compassionate use scheme

CHEMGENEX PHARMACEUTICALS

Corporate Overview

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Corporate Strategy

- U.S. commercialization planned
- Partnered with Hospira in Europe, the Middle East, parts of Africa
  - Upfront payment of A$17.5 million
  - Potential for an additional €74.1 million based on development and sales milestones plus royalties (CML only)
  - Further milestones and royalties possible with future indications
  - Strong alignment of strategic intent
- ChemGenex retains ROW product rights including North America

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Recently Secured Capital Position

- Convertible note with Cephalon Inc.
  - A$15 million in two tranches
  - Convertible at A$0.50 per share (13% premium to VWAP)
  - Two conditions
    - Shareholder approval – in accordance with Corporations Act item 7, section 611 by 31 December 2010
    - Completion of clinical data collection by 31 March 2011
- Cephalon Inc. option agreements
  - Options to buy 19.9% of common stock for A$0.70 per share prior to 31 March 2011 or completion of data collection
- Adequate capital to fund operations into Q4 2011

CHEMGENEX PHARMACEUTICALS

Strong Board and Senior Management Team

Management

Greg Collier, PhD*	Chief Executive Officer and Managing Director
Adam Craig, MD, PhD, MBA	Senior Vice President and Chief Medical Officer
James Campbell, PhD, MBA	Chief Financial Officer and Chief Operating Officer
Tom O'Neil, BA, MBA	Vice President of Finance and Administration
Katie Cairati, MS	Senior Director of Regulatory Affairs

Board of Directors

Brett Heading, LLB (Chairman)	McCullough Robertson Lawyers
Dan Janney, BA, MBA	Alta Partners
Geoff Brooke, MBBS, MBA	GBS Venture Partners
ElmarSchnee, BComMkting	CEO, Merck Serono
George Morstyn, MBBS, PhD	Former SVP and CMO, Amgen
Jean-Luc Tétard	President, StragenPharma

*Also Board Member

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Financial Snapshot

Financial Parameter	
Shares (ASX: CXS)	283 million
Market capitalization*	A$ 124 million
Cash held	A$ 12.8 million (as of 30 June 2010) A$ 10 million – Cephalon convertible note drawn down A$ 5 million – Cephalon convertible note pending
Significant Shareholders	Alta Partners (15%), Stragen Pharma (13%), Orbis Investments (13%), Merck Serono (9%), GBS (8%)

*Effective 26 Nov 2010
USD/AUD approximately 1.01

CHEMGENEX PHARMACEUTICALS

Summary

- OMAPRO is an active drug with a different mechanism of action than current TKIs
- Multiple TKI Resistance represents an increasing unmet medical need
- Completed two pivotal trials offering a potential new treatment option for CML patients
- Commercial strategies in place
  - Omacetaxine partnered in Europe, the Middle East and parts of Africa with Hospira
  - U.S. commercialization planned by ChemGenex
- Strong leadership team and blue chip investors

ChemGenex Pharmaceuticals

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