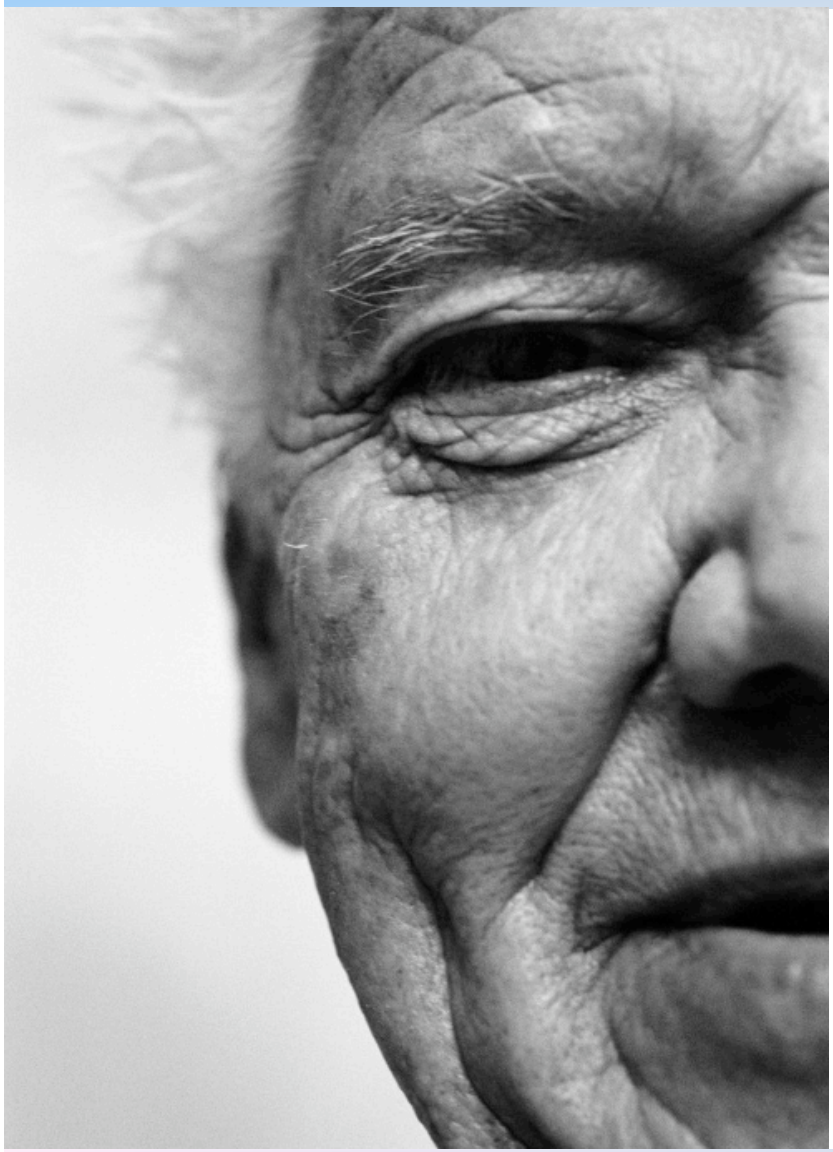


VION PHARMACEUTICALS, INC

June 2006

Forward Looking Statements

Statements included in this presentation, which are not historical in nature, are forward-looking statements made pursuant to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements regarding the Company's future business prospects, plans, objectives, expectations and intentions are subject to certain risks, uncertainties, and other factors that could cause actual results to differ materially from those projected or suggested in the forward-looking statements, including, but not limited to the Company's ability to secure external sources of funding to continue its operations, the inability to raise capital on favorable terms, continued operating losses and the inability to continue operations as a result, the Company's dependence on regulatory approval for its products, the possibility that any or all of the Company's products or procedures are found to be ineffective or unsafe, the possibility that third parties hold proprietary rights that preclude the Company from marketing its products, the possibility that third parties will market a product equivalent or superior to the Company's product candidates and the possibility the preclinical results may not be indicative of results in human clinical trials and that results achieved in early clinical trials are not necessarily indicative of the results that will be achieved in subsequent or expanded clinical trials, and additional risks contained in Vion Pharmaceuticals' 2005 Form 10-K (file no. 000-26534). This presentation shall not constitute an offer to sell nor the solicitation of an offer to buy the common stock nor shall there be any sale of securities in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities law of any such state.

Mission Statement

Vion is committed to extending the lives and improving the quality of life of cancer patients worldwide by bringing innovative cancer treatments to market

Corporate Strategy

Rapidly advance Cloretazine® to NDA filing and product approval

Maintain diversified preclinical and clinical oncology pipeline

Maximize commercialization opportunity and shareholder value

Cash and Capitalization

Cash and Investments (as of 3/31/06):	**$46.6 Million**
Market Capitalization (as of 6/06/06):	**$112 Million**
Shares Outstanding:	**68 Million**
Warrants Outstanding:	**9.2 Million**
Options Outstanding:	**5 Million**
Fully Diluted Shares Outstanding:	**82.2 Million**

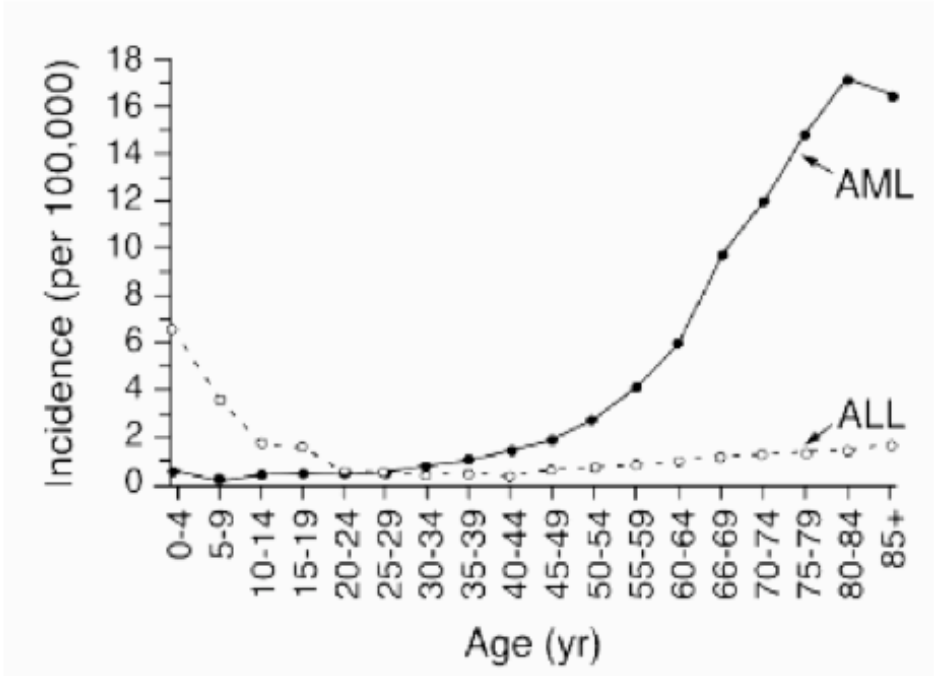
Cloretazine®
Early Phase Experience

Cloretazine® Phase I Trials

Study	Pt Population	N	Dose Range	Schedule	DLT	Activity
Single agent	**Solid tumor**	**26**	**3-305 mg/m²**	**q4w → q6w**	**Thrombocytopenia**	**CA-125 decrease in ovarian CA**
Single agent	**Solid tumor**	**23**	**80-155 mg/m²**	**w x 3 q4w → w x 3 q6-8w**	**Thrombocytopenia and neutropenia**	**SD with regression in head and neck, small B-cell lymphoma**
Single agent	**Advanced heme**	**38**	**220-708 mg/m²**	**q4-8w**	**Prolonged myelosuppression**	**CR MDS; CR AML**
+IVCI HDAC	**Advanced heme**	**41**	**200-600 mg/m²**	**AraC d1-4 or d1-3 Cloretazine® d2**	**Ileus, colitis and prolonged myelosuppression**	**At doses ≥400 mg/m², CR/CRp 32%**

Registration pathway in AML

Figure 2: Age related incidence of AML and ALL



Source: Appelbaum *et al.*, 2005

DATAMONITOR

Incidence/Prevalence

- **6-15 per 100,000 in elderly**
- **Median age ~65 yrs**
- **Rapidly aging world population**
- **Treatment has changed little over past 20 years**

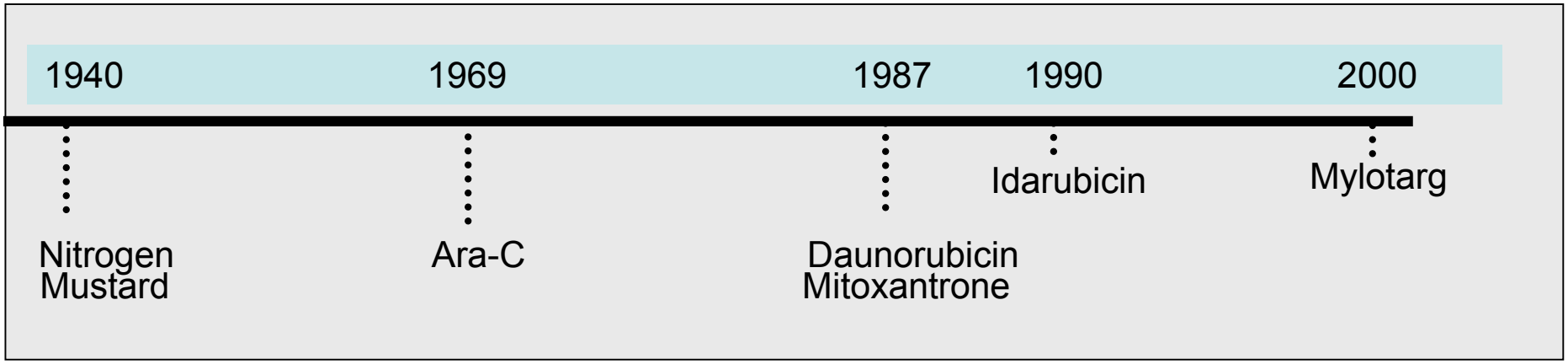
Risk Factors

- **Little is known except for environmental and chemo exposure**
- **Age**

Prognosis

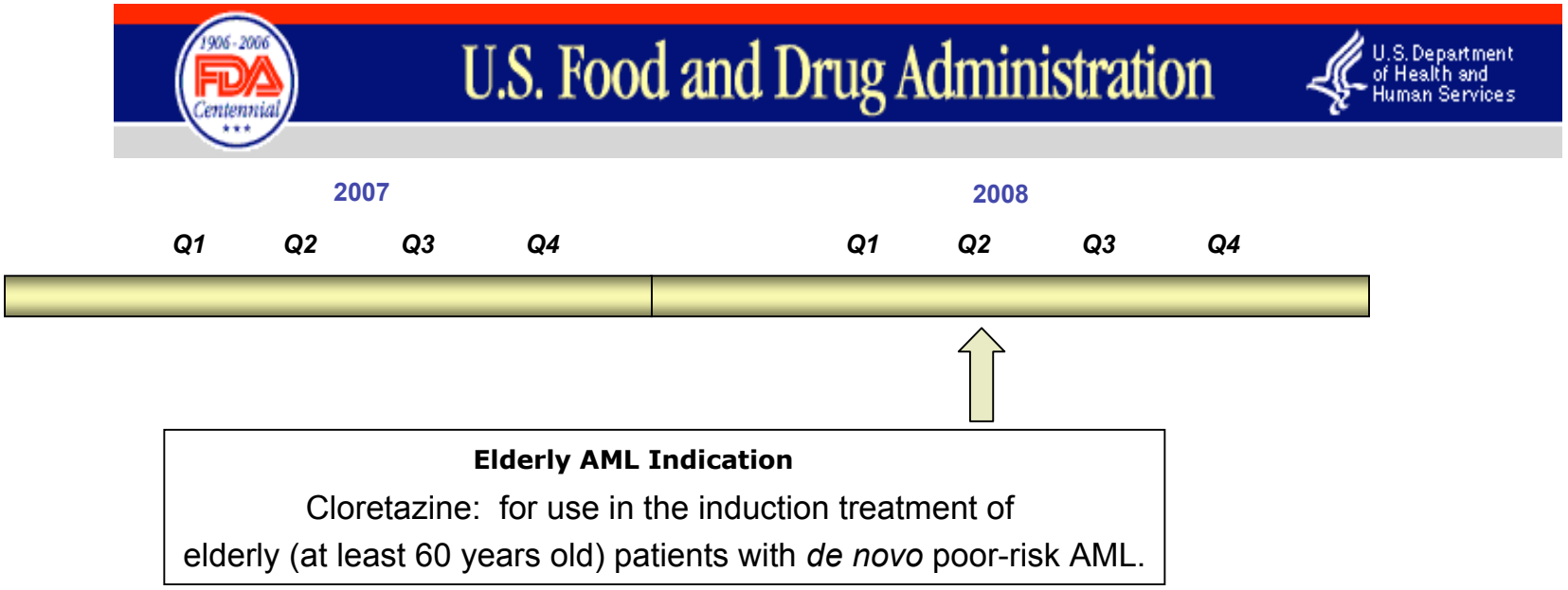
- **Age**
- **Cytogenetics**

History of AML Treatment Options



- **Lack of progress and innovation in AML drug approval**
- **Current guidelines recommend investigational agents for elderly AML**
- **No standard regimen for relapsed AML**

Initial Cloretazine Labels- 2008



- **Fast track status attained October 2005**
- **Orphan drug designation attained October 2004**
- **Earliest potential product launch 1H08**

Registration Indication
Elderly AML Induction

Current Treatment Patterns:

- **70% of patients best supportive care/palliation**

- **10-20% pts receive standard "3+7" anthracycline/cytarabine**

- **Investigational therapy for patients ≥60 years according to NCCN/ESMO guidelines**

Treatment Challenges:

- **Leukemia Biology**
  - **Unfavorable cytogenetics**
  - **Increased MDR expression**
  - **Increased secondary AML**

- **Clinical Baseline**
  - **Increased Age**
  - **Decreased functional status (ADL)**
  - **Medical Comorbidities (cardiac, hepatic, pulmonary)**

CLI-033 Cloretazine®
Phase II AML/MDS

- **Cloretazine® 600 mg/m² IV** *Day 1*

- **Stratum A**
  - Elderly AML (no prior cytotoxic treatment)
    - No currently accepted standard treatment
  - High Risk MDS ≥ 60 yrs (no prior cytotoxic treatment)
    - IPSS ≥ 1.5
    - No currently accepted standard treatment

- **Stratum B**
  - First relapse AML (any age), first CR < 12 months
    - No approved treatments

CLI-033: Cloretazine® Phase II AML
Clinical Sites

Site Name	City	Principal Investigator
MD Anderson	Houston	S. O'Brien
Duke	Durham	D. Rizzieri
Indiana Oncology	Indianapolis	M. Cooper/K.Kahn
St. Francis Hospital	Hartford	S. Bilgrami
Cornell	New York	E. Feldman
John Hopkins	Baltimore	J. Karp
Cleveland Clinic	Cleveland	A. Advani
King's College	London	G. Mufti
Academisch Ziekenhuis Groningen	Groningen	S. Daenen
Stichting Ziekenhuis Leyenburg	Den Haag	P. Wijermans
Universitaire Ziekenhuis Gasthuiberg	Leuven	G. Verhoef
Cliniques Universitaires Saint-Luc	Brussels	A. Ferrant
Medway Maritime Hospital	Gillingham	M. Aldouri
Institut Paoli-Calmettes	Marseille	N. Vey

CLI-033: Cloretazine® Phase II AML Stratum A Demographics

Patient Characteristics		
Total patients entered	-	107
Patients treated (evaluable)		105 (104)
Age (median, range)	-	72 (60-84)
Diagnoses N (%)		
de novo AML	-	44 (42)
Secondary AML		45 (43)
High risk MDS	-	15 (15)
Cytogenetics (n=102 available)		
Favorable risk	-	0
Intermediate (normal, +8, -Y)	-	56 (55)
Unfavorable	-	46 (45)

CLI-033: Cloretazine® Phase II AML Stratum A: Clinical Outcome

Clinical Response		
Disease	CR/CRp	Overall Response (% within group)
de novo AML (44)	**20/2**	**22 (50%)**
Secondary AML (45)	**5/0**	**5 (11%)**
MDS (16)	**4/2**	**6 (40%)**
Total (105)	29/4	33 (32%)

Cytogenetics: De Novo Patients (n=22 responders)

14 patients intermediate cytogenetics 52% CR

8 patients unfavorable cytogenetics 47% CR

CLI-033: Cloretazine® Phase II AML
Stratum A: Analysis of Response by Age and PS

	Age 60-69			
	All patients	%	Responders	%
PS 0	**9**	**25**	**2**	**22**
PS 1	**20**	**56**	**10**	**50**
PS 2	**7**	**19**	**2**	**29**
Total	36		14	39

	Age 70+			
	All patients	%	Responders	%
PS 0	**15**	**22**	**5**	**33**
PS 1	**27**	**43**	**5**	**17**
PS 2	**24**	**35**	**9**	**38**
Total	68		19	28

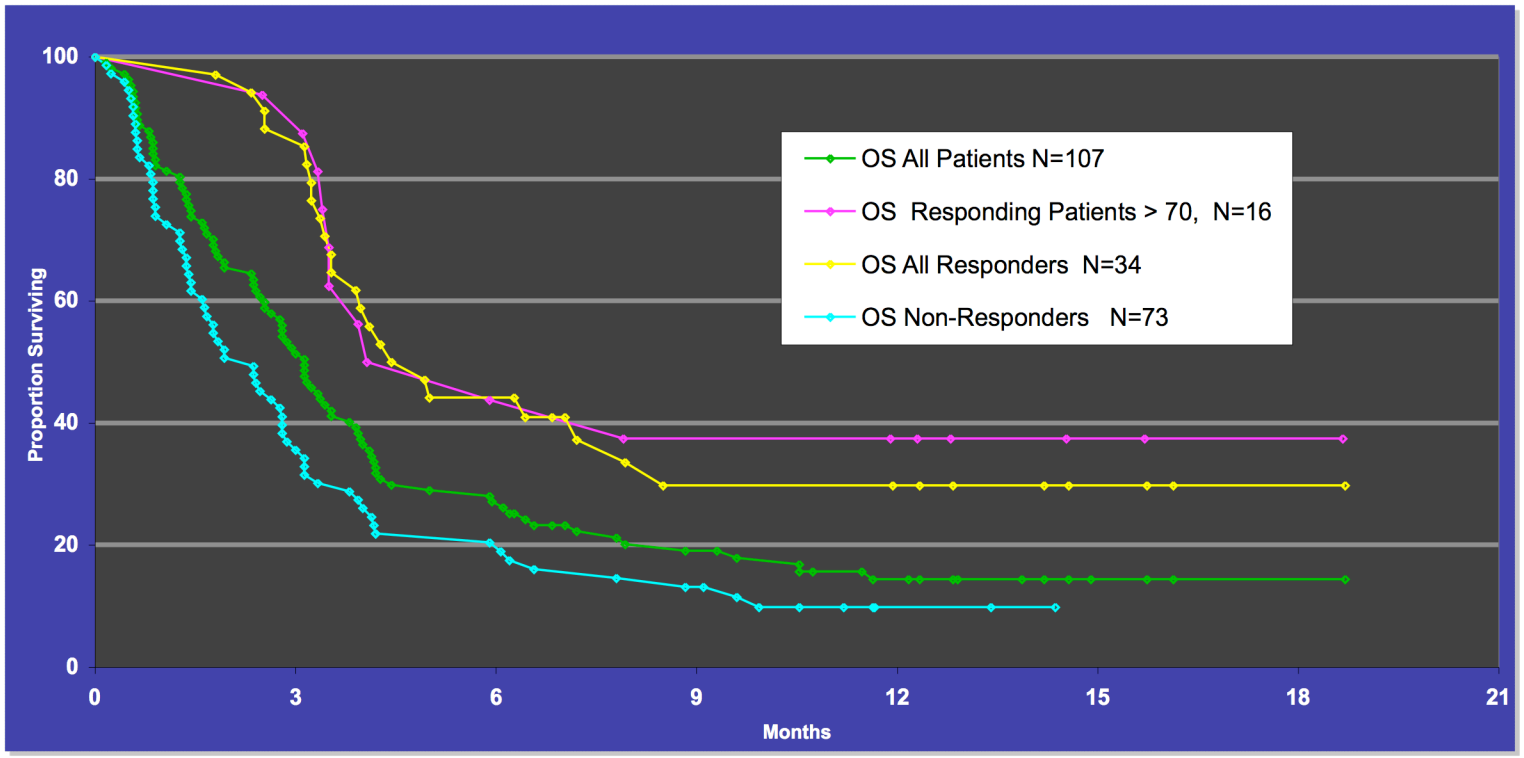
CLI-033: All Adverse Events

	Worst Grade per Patient (N=104 pts)					
EVENT	1-2	3	4	5	Total N	(%)
Infusion-related symptoms	60	4	1	0	65	63%
Gastrointestinal disorders	53	4	0	0	57	55%
Non-infectious pulmonary disorders	20	7	2	0	29	28%
Infection including febrile neutropenia	7	14	6	1	27	26%
Constitutional Disorders	19	4	1	0	24	23%
Skin/Rash	14	3	0	0	17	16%
Cardiac disorders	7	0	1	1	8	8%
Neurologic dysfunction	6				8	8%
Metabolic changes	5				7	7%
Eye Disorders	5				5	5%
Hepatic disorders	0				4	4%
Renal dysfunction	1	2	1	0	4	4%
Vascular Disorders	3	0	0	0	3	3%
Musculoskeletal Disorders	2	0	0	0	2	2%
N Events	202	44	14	2	260	
%	78%	17%	5%	1%	100%	

Majority of toxicity was grade 1-2.

Grade 3/4 toxicity: myelosuppression -induced infection.

CLI-033: Cloretazine® Phase II AML
Overall Survival



CLI-033: Cloretazine®
Phase II AML: Observations

- **Limited single agent activity observed in first relapse patients with AML**
- **Excellent toxicity profile**
  - Minimal non-heme organ toxicity
- **17% induction death mortality**
- **No early deaths attributed to direct drug effect**
- ***Activity demonstrated in poor prognosis elderly patients with AML and high-risk MDS***
  - *Encouraging response rate for patients with de novo AML*

CLI-043:
Study of Cloretazine® for Elderly Patients with de novo Poor Risk Acute Myeloid Leukemia

Cloretazine®CLI-043: Phase II
Elderly Poor Risk de novo AML

- **Initiated May 2006; to be conducted in ~*25* sites worldwide**

- **Study Design**
  - Cloretazine® 600mg/m^2 IV induction therapy D1, repeat induction if necessary
  - AraC consolidation post remission

- **Patient Eligibility**
  - ≥ 60 years old with at least one additional risk factor
    - Adverse cytogenetics
    - ECOG PS=2
    - Age ≥70
    - Cardiac or Pulmonary or Hepatic Dysfunction

CLI-043: Phase II Trial of Cloretazine®
Elderly Patients poor-risk de novo AML

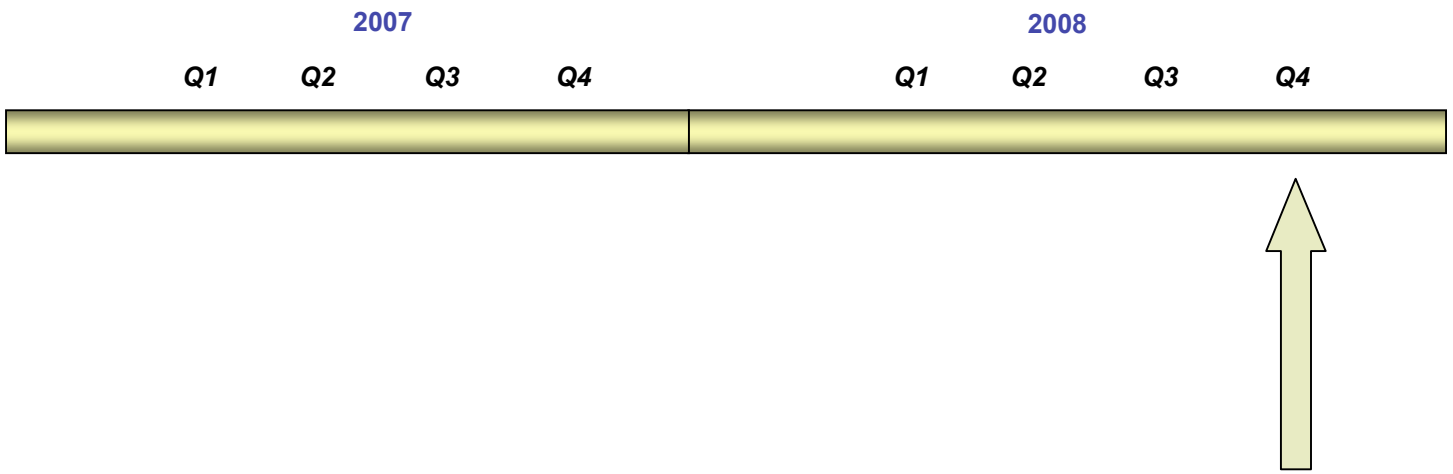
- **Primary objective:**
  - Complete Response

- **Secondary objectives:**
  - Progression-free survival
  - Leukemia-free survival
  - Overall survival
  - Toxicity Spectrum
- **Statistical Design**
  - N=85
  - 2 stage optimal min max
  - 8/42 CRs to open 2nd stage

Initial Cloretazine Labels- 2008

U.S. Food and Drug Administration

U.S. Department of Health and Human Services



- **Fast Track attained February 04**
- **Orphan Drug attained October 04**
- **Estimated launch 2H08**

Relapse Indication

Cloretazine: for use in combination with Ara-C in patients for the treatment of relapsed or refractory AML.

CLI-037: Cloretazine: Phase III AML 1st Relapse

- **SPA January 2005**

- **Study Treatment**
  - **Cloretazine® 600 mg/m² + araC 1500 mg/m²/d CIV x 3d**
    vs.
    placebo + araC 1500 mg/m²/d CIV x 3 d

  - **Second induction allowed; consolidation after response**

- **Eligibility**
  - **First CR ≥ 3 and < 24 months duration**
  - **Age ≥18 years old**
  - **ECOG performance status 0-2**
  - **Serum creatinine ≤2.0mg/dL**
  - **Total bilirubin ≤1.5x ULN**
  - **AST, ALT ≤3x ULN**

CLI-037: Cloretazine®: Phase III AML 1st Relapse

Study Design

- **Randomized double-blind, placebo-controlled trial**
  - **2:1 randomization**
  - **Primary endpoint - CR/CRp**
  - **Secondary endpoints- response duration, PFS, survival**
  - **Stratified for duration CR1 and age**
  - **Designed to show 15% improvement over control**
- **60+ sites in North America and Europe**
- **Target accrual 420 patients over 30 months**
  - **First patient enrolled March, 2005**
  - **Over 140 patients enrolled as of June 1, 2006**
  - **Interim analysis at 210 patients 1Q07**
  - **Full accrual expected 2007**

Cloretazine®
Small Cell Lung Cancer

CLI-O39: Cloretazine®
Phase II Small Cell Lung Cancer

- **Objectives**
  - Determine complete and partial response rate in sensitive relapse and resistant SCLC patients
- **Eligibility**
  - Recurrent/refractory SCLC after first line cytotoxic therapy
- **Dosing**
  - Cloretazine® 125mg/m2 weekly x 3 weeks

- **Experience to date**
  - Objective responses seen to date

Triapine

- **Ribonucleotide reductase targeting M2 subunit**
- **65-5000X more potent than hydroxyurea**
- **Under development as a single agent, combination therapy, and radiosensitizer**
- **5 trials underway with NCI, 5 trials to be commenced, 8 trials completed**
- **Clinical study in metastatic pancreatic cancer with gemcitabine yielded 8mo median survival**
- **Phase I evaluation of oral formulation September 2006**

VNP40541

- **VNP40541 is sulfonylhydrazine activated under hypoxic conditions**
- **Releases same active agent (90CE) as Cloretazine**
- **Phase I trial in patients with refractory metastatic solid tumors 2Q06**
- **Planned development in solid tumors**
  - **pancreatic, lung, brain, head and neck**
- **IND to be filed by June 2006**

Cloretazine® Clinical Differentiation

- **Established efficacy of alkylators in multi-drug regimens in heme malignancies and solid tumors**
- **Minimal non-hematologic toxicity**
  - Spares liver, lung, mucosal lining
- **Dose and schedule advantages**
  - May allow for outpatient administration
  - Potential to combine with other agents at full effective dose

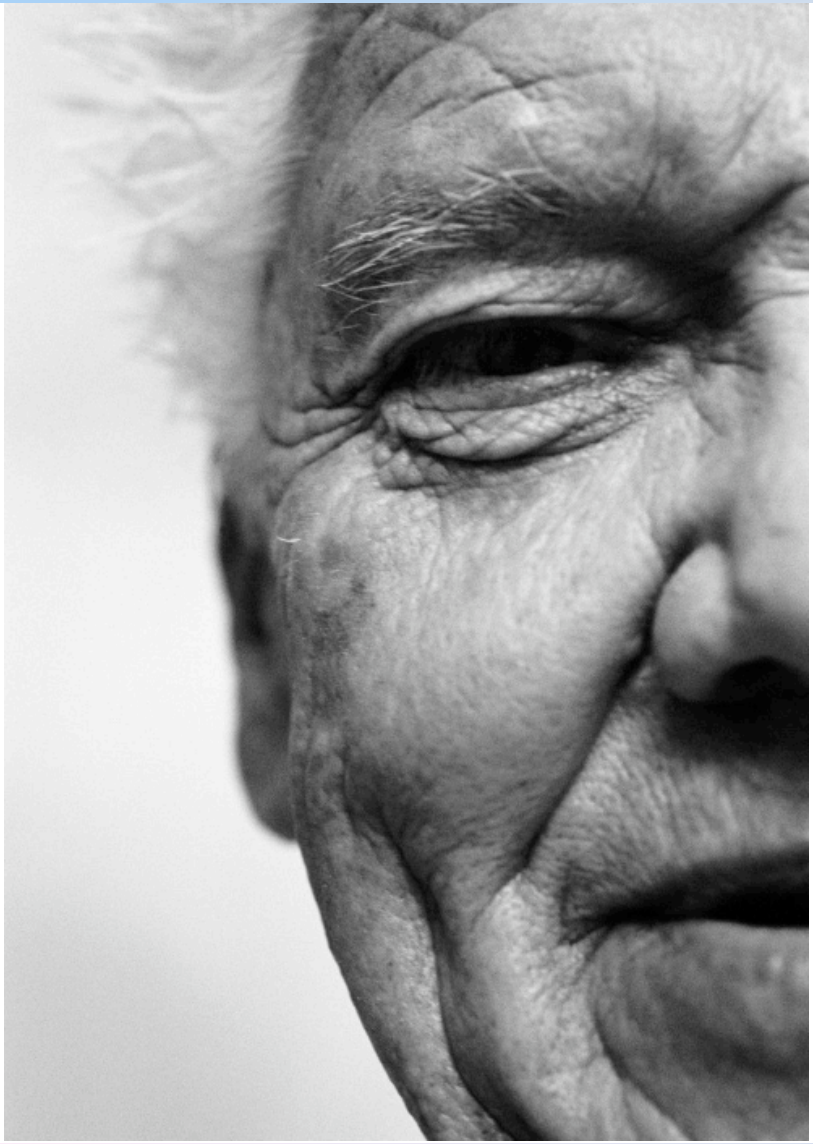
Cloretazine® Market Opportunity

- **AML Market in U.S.**
  - Estimated to be 11,960 frontline patients each year
  - Patients over 60 years of age represent over half of the frontline population
  - Estimated to be 8,000 relapsed patients each year
- **High-risk MDS: Some estimates are that this population could represent an additional 5,000 patients**
- **Use in both frontline and relapsed AML settings**
- **Opportunity in solid tumors (adult and pediatric gliomas and small cell lung cancer trials underway)**
- **Opportunity in other settings where alkylating agents have been used in the past (preparative regimens in SCT)**

Sources:

1. **American Cancer Society, Cancer Facts and Figures 2005**
2. **Industry research reports and company filings**

Cloretazine®: Active drug fulfilling a high unmet need



It Is Our Responsibility to:

Advance the development of Cloretazine®

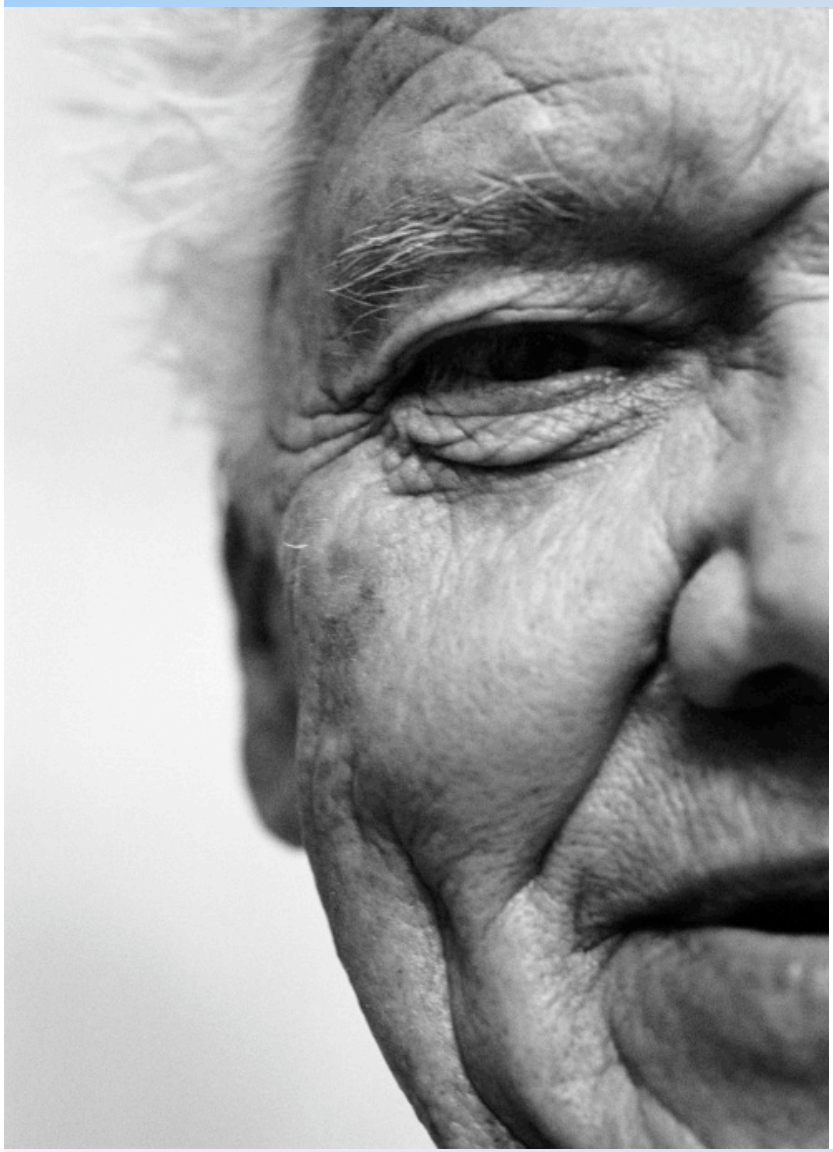
Make It Available to Leukemia Patients as Soon as Possible

Ensure rapid market acceptance and uptake in Leukemia

Confirm Clinical Benefit in Other Tumor Types

Corporate Overview

- **Diversified and advanced product candidates**
- **Cloretazine® is lead product**
  - **Phase III trial initiated in relapsed AML**
  - **Pivotal Phase II trial in elderly poor-risk AML initiated**
  - **Fast Track status in two AML indications**
  - **Orphan Drug status for treatment of AML (US and EU)**
  - **Additional activity in small cell lung cancer and brain tumors**
- **Multiple clinical trials of Triapine® ongoing under NCI sponsorship**
- **Promising preclinical data for VNP40541; IND to be filed first half 2006**
- **All commercialization rights retained by Company in major markets**



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