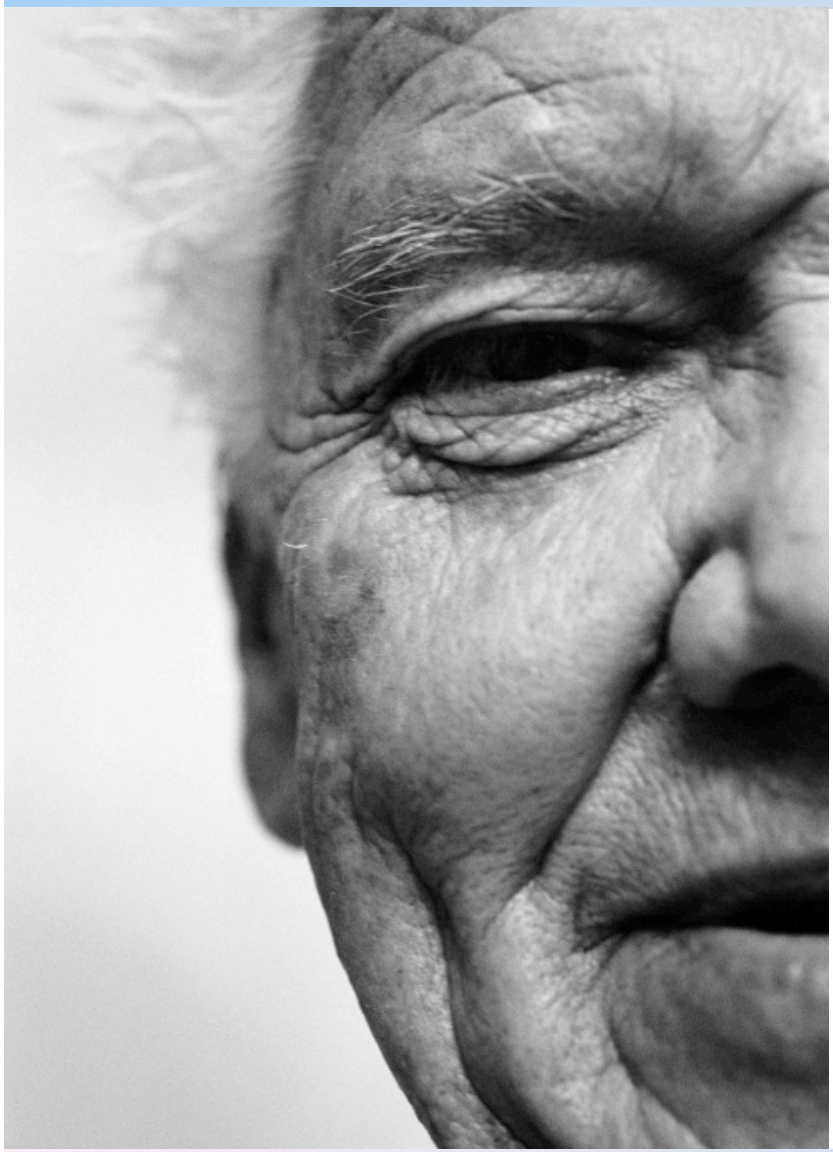


VION PHARMACEUTICALS, INC

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

Rodman & Renshaw Healthcare Conference

November 2006

Forward Looking Statements

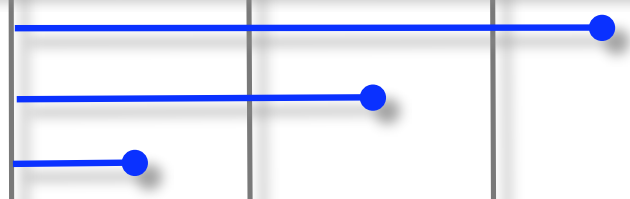
Statements included in this presentation, which are not historical in nature, are forward-looking statements made pursuant to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements regarding the Company's future business prospects, plans, objectives, 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.

Corporate Overview

- **Cloretazine® is lead product**
  - **Registration focus is in AML**
  - **Phase III trial in relapsed AML underway**
  - **Pivotal Phase II trial in elderly *de novo* poor-risk AML underway**
  - **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**
- **Clinical trials of second clinical compound Triapine® ongoing under NCI sponsorship**
- **Resubmission of IND for third clinical compound VNP40541 planned for 2007**
- **All commercialization rights retained by Company in major markets**
- **Patents for Cloretazine® provide coverage through 2015**
- **Management team has significant collective experience in pharmaceutical management at large pharmaceutical companies**

Ongoing Clinical Development

Cloretazine® Hematologic Malignancies		Phase I	Phase II	Phase III
First Relapse AML	Combination with cytarabine			
Elderly *de novo* Poor-Risk AML	Single Agent			
Relapsed/Refractory Leukemia	Combination with temozolomide			
Cloretazine® Solid Tumors		**Phase I**	**Phase II**	**Phase III**
Small Cell Lung Cancer	Single Agent			
Pediatric Glioma*	Single Agent			
Vion Pipeline		**Phase I**	**Phase II**	**Phase III**
Triapine®	Single Agent/Combination Studies**			
VNP40541 (KS119)	Preclinical			
Hydrazones	Preclinical			
TAPET ®	Preclinical			



* **Investigator Initiated**
** **NCI Sponsored**

Vion Management

- **Alan Kessman**, Chief Executive Officer: Entrepreneur, formerly CEO of Executone Information Systems
- **Howard Johnson**, President & CFO: Entrepreneurial financial management at several technology firms and Investment Banking at Paine Webber
- **Meg Fitzgerald**, Chief Business Officer: formerly Senior Director in Strategic Planning at Pfizer
- **Ann Cahill**, Vice President, Clinical Development: formerly in project management at Schering-Plough
- **Dr. Ivan King**, Vice President, Research & Development: formerly in R&D at Schering-Plough
- **Aileen Ryan**, Vice President, Regulatory Affairs: formerly Head of Global Regulatory, Oncology at Bayer
- **Karen Schmedlin**, Vice President, Finance and Chief Accounting Officer: Over twenty years experience in public company accounting

Cloretazine®
Vion's Lead Anticancer Agent

- **Novel alkylating agent**
- **In two pivotal trials for AML**
  - Phase III trial completion of patient accrual expected late 2007
  - Phase II trial completion of patient accrual expected mid-2007
- **Phase II single agent data in elderly AML from 14 sites worldwide demonstrated 32% response rate overall, 50% response rate in de novo patients**
- **Initial data in solid tumors suggests activity in small cell lung cancer and brain tumors**
- **Licensed from Yale University**
- **Patent extends to 2015**

Cloretazine®
Biology and Pharmacology

- Preferential O^6 alkylation
- Forms DNA cross-links
- In contrast to BCNU
  - No hydroxylating, aminoethylating, or vinylating activity
  - Produces a methylisocyanate versus chloroethylisocyanate
- Methylisocyanate group is thought to contribute to cytotoxicity
- Alkyl-guanine transferase (AGT) believed to be major mechanism of resistance
- Does not inhibit glutathione reductase
- Crosses blood-brain barrier
- Orally active

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%**

Cloretazine® Clinical Regulatory Strategies

Hematologic Indications		Regulatory Approval Considerations
Elderly *de novo* Poor-Risk AML (CLI-033 and CLI-043)	Single agent	• Pivotal Phase II underway • Fast Track Designation • Orphan Drug Designation (US and EU)
First Relapse AML (CLI-037)	Combination with cytarabine	• Pivotal Phase III underway • Fast Track Designation • Orphan Drug Designation (US and EU)

Cloretazine®
Acute Myelogenous Leukemia:
Elderly Poor-Risk Induction Therapy

Registration Indication
Elderly AML Induction Therapy

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**
  - **Medical Comorbidities (cardiac, hepatic, pulmonary)**

CLI-033: Cloretazine® Phase II trial

- Cloretazine® 600 mg/m^2 IV *Day 1*
- Stratum A
  - Elderly AML (no prior cytotoxic treatment)
  - High Risk MDS ≥ 60 yrs (no prior cytotoxic treatment)
- 107 patients treated overall, 104 evaluable
- Median age: 72 (range: 60-84)
- 44% de novo AML patients; 45% secondary AML patients; 15% high-risk MDS patients
- No favorable risk cytogenetics; 55% intermediate cytogenetics; 45% unfavorable cytogenetics

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

Clinical Response			
Disease	CR/CRp	Overall Response (n)	% Response
de novo AML (44)	**20/2**	**22**	**50**
Secondary AML (45)	**5/0**	**5**	**11**
MDS (15)	**4/2**	**6**	**40**
Total (104)	**29/4**	**33**	**32**

Cytogenetics: *de novo* Patients (n=22 responders)

14 patients intermediate cytogenetics 52% CR

8 patients unfavorable cytogenetics 47% CR

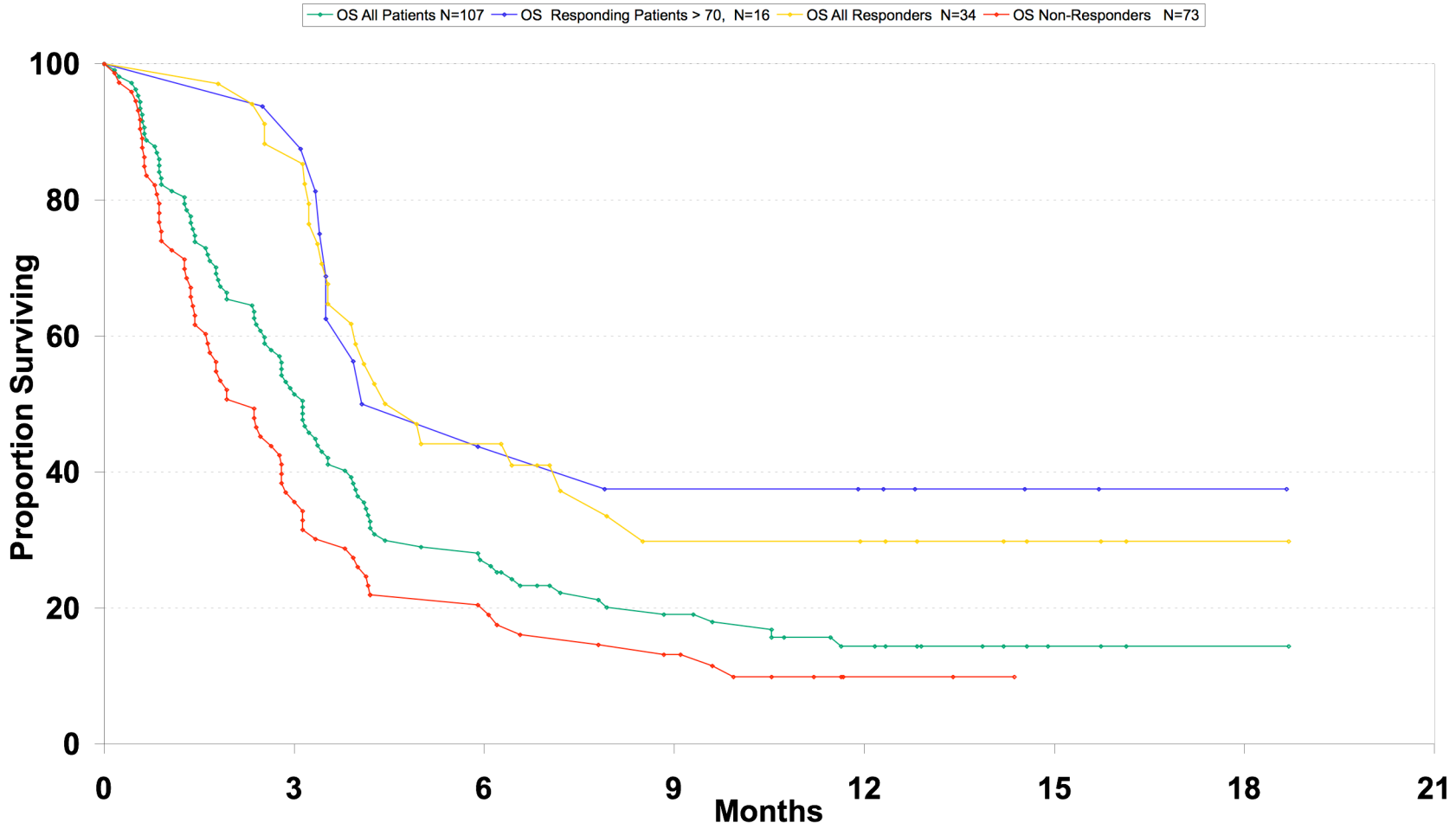
CLI-033: Cloretazine® Phase II Trial
Stratum A: Distribution of Risk Factors

# Risk Factors	# of patients	Unfavorable cytogenetics N (%)	Secondary AML N (%)	PS 2 N (%)	Organ dysfunction N (%)
Age+0	**12**	**0 (0%)**	**0 (0%)**	**0 (0%)**	**0 (0%)**
Age+1	**20**	**4 (20%)**	**9 (45%)**	**0 (0%)**	**8 (40%)**
Age+2	**43**	**23(53%)**	**22 (51%)**	**11 (26%)**	**27 (63%)**
Age+ ≥ 3	**29**	**19 (66%)**	**14 (48%)**	**20 (69%)**	**29 (100%)**

CLI-033: Cloretazine® Phase II Trial Stratum A: Response by Risk Factors

# Risk Factors	# of patients	CR/CRp (N=33)	CR/CRp (%)
Age+0	**12**	**7**	**58%**
Age+1	**20**	**7**	**35%**
Age+2	**43**	**9**	**21%**
Age+ ≥ 3	**29**	**10**	**34%**
All	104	33	32%

CLI-033: Cloretazine® Phase II Trial
Stratum A: Overall Survival



CLI-033: Cloretazine® Phase II Trial
All Adverse Events

EVENT	Worst Grade per Patient* 1-2	3	4	5	TOTAL N	(%)
Infusion-related symptoms**	60	5	2	0	67	26%
Gastrointestinal disorders	53	4	0	0	57	22%
Non-infectious pulmonary disorders	20	6	1	0	27	10%
Infection including febrile neutropenia	7	14	6	1	28	11%
Constitutional Disorders	19	4	1	0	24	9%
Skin/Rash	14	3	0	0	17	6%
Cardiac disorders	7	0	1	1	9	3%
Neurologic dysfunction	6	2	0	0	8	3%
Metabolic changes	5	2	0	0	7	3%
Eye Disorders	5	0	0	0	5	2%
Hepatic Disorders	0	2	2	0	4	2%
Renal Dysfunction	1	2	1	0	4	2%
Vascular Disorders	3	0	0	0	3	1%
Musculoskeletal Disorders	2	0	0	0	2	1%
N	**202**	**44**	**14**	**2**	**262**	
%	**77%**	**17%**	**5%**	**1%**	**100%**	

Majority of toxicity was grade 1-2.

Grade 3/4 toxicity: myelosuppression -induced infection.

* Based on an analysis of 104 patients

** Infusion-related events occurred in 32 (31%) of patients only after 1st cycle treatment

Outcomes in AML Therapy

	Age (yrs)	CR rates (%)	Induction deaths (%)
Bennett et al *Cancer* (1997)	**<60**	70	10
	61-69	55	20
	>70	35	39
CLI-033 *de novo* **AML**	**72 (60-84)**	50	17

- **Encouraging activity**
- **Reasonable toxicity profile**
- **Acceptable induction death mortality**

CLI-043: Pivotal Phase II Trial of Cloretazine® for Elderly Patients with de novo Poor Risk Acute Myeloid Leukemia

Registration Indication First Relapse AML Therapy

Current Treatment Patterns

- **No current standard of care**
- **Most patients receive cytarabine-based therapy**
- **Prognosis depends on age and length of first remission**

CLI-043: Cloretazine Pivotal Phase II Trial in Elderly de novo Poor Risk AML

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

- **Study Design**
  - Open label Phase II design following FDA discussion
  - 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

- **Primary Objective**
  - Complete Response

- **Secondary Objective**
  - 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

Cloretazine®
Acute Myelogenous Leukemia:
First Relapse Therapy

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**

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**
- **60+ sites in North America and Europe**
- **Target accrual 420 patients over 30 months**
  - **First patient enrolled March 2005**
  - **210 patients expected to be enrolled as of late 2006**
  - **Interim analysis in 1Q07**
  - **Full accrual expected late 2007**

Cloretazine® in Solid Tumors

PHASE II SMALL CELL LUNG CANCER	PHASE I PEDIATRIC GLIOMA PEDIATRIC BRAIN TUMOR CONSORTIUM	PHASE II ADULT GLIOMA DUKE UNIVERSITY
Objectives ➢ Determine complete and partial response rate in sensitive relapse and resistant SCLC patients	**Objectives** ➢ Determine MTD in two cohorts of pediatric patients	**Objectives** ➢ Efficacy/tolerability in gliomas
Dosing ➢ Cloretazine® 125 mg/m^2 weekly x 3 weeks ➢ Reduced to 100 mg/m^2 weekly x 3 weeks	**Dosing**	**Dosing** ➢ 300mg/m2 q 6 wks
Experience to date ➢ N=36 ➢ 32% response rate in sensitive relapsed disease (n=19)	**Experience to Date** ➢ Data to be released	**Experience** ➢ Initial data released in May 2005; update expected
Plans ➢ Trial ongoing	**Plans** ➢ To be determined	**Plans** ➢ To be determined

Cloretazine® Market Opportunity

- **Cloretazine® may be used in both frontline and relapsed AML settings**

- **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 Market in the U.S.: Some estimates are that this population could represent an additional 5-8,000 patients**

- **Opportunity in solid tumors (gliomas and small cell lung cancer investigation already underway)**

- **Opportunity in other settings where alkylating agents have been used in the past**

Sources:

1. **American Cancer Society, Cancer Facts and Figures 2006**
2. **Industry research reports and company filings**

Triapine®

- **Ribonucleotide reductase targeting M2 subunit**
- **More potent than hydroxyurea**
- **Under development as a single agent, combination therapy, and radiosensitizer**
- **4 trials underway with NCI, additional trials to be initiated, 8 trials completed**
- **Phase II clinical study in metastatic pancreatic cancer with gemcitabine yielded 8 month median survival**
- **Phase I evaluation of oral formulation expected to start in 2006**

VNP40541

- **Novel alkylating agent selectively activated in hypoxic conditions**
- **Planned clinical development in solid tumors known to be particularly hypoxic**
  - Pancreatic
  - Head and Neck
  - Glioma
- **IND to be resubmitted in 2007**

Vion by the Numbers

- Cash and Investments (as of 6/30/06): $41.4 Million
- Market Capitalization (as of 11/06/06): $102 Million
- Shares Outstanding (as of 6/30/06) 68.2 Million
  - Options 4.5 Million
  - Warrants 9.2 Million
- Total Shares Outstanding 81.9 Million

Conclusions

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