Amgen: The Leader in Nephrology

November 17, 2006

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Safe Harbor Statement

This presentation contains forward-looking statements that are based on management’s current expectations and beliefs and are subject to a number of risks, uncertainties, and assumptions that could cause actual results to differ materially from those described. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements, including estimates of revenues, operating margins, capital expenditures, cash, other financial metrics, expected legal, arbitration, political, regulatory, or clinical results, and other such estimates and results. Forward-looking statements involve significant risks and uncertainties, including those discussed below and more fully described in the Securities and Exchange Commission (SEC) reports filed by Amgen, including Amgen’s most recent annual report on Form 10-K and most recent periodic reports on Form 10-Q and Form 8-K. Please refer to Amgen’s most recent Forms 10-K, 10-Q, and 8-K for additional information on the uncertainties and risk factors related to our business. Unless otherwise noted, Amgen is providing this information as of November 17, 2006 and expressly disclaims any duty to update information contained in this presentation.

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## Presentation Overview

| Overview of our Nephrology Business Strategies for growth | Helen Torley  
VP and General Manager  
Nephrology Business Unit |
|----------------------------------------------------------|--------------------------------------------------|
| Amgen Nephrology clinical update  
ASN highlights | Robert Brenner, MD  
Senior Director  
Medical Affairs |
Nephrologists Identify Amgen as the Leader in Nephrology

NOTE: A difference of 5.32 or higher between companies denotes statistical significance at 90%.
Our Customers also Recognize our Leadership in Nephrology

- Fresenius Selected Amgen as Their Long Term Partner
- Exclusive 5-year sourcing and supply agreement
- Amgen to supply all of FMS’ commercial requirements for ESPs
- Fresenius’s decision based on EPOGEN® 17 year track record of safety and efficacy
- Impact on Amgen’s earnings will be inconsequential
EPOGEN® Demand Continues to Grow With Annual Patient Growth*

- Underlying demand in free-standing dialysis centers consistent with annual patient population growth of 3%–4%
- Impact from reimbursement changes (ASP + 6% and EMP) has been minimal YTD
- Conversion to Aranesp® in dialysis has stabilized in mid 2006 at ~ $200M to $240M

*All results reported as of 10/23
Nephrologists Perceive EPOGEN®
“Flexibility” as an Advantage

<table>
<thead>
<tr>
<th>EPOGEN® Benefit</th>
<th>Nephrologists’ Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieving Hb Target</td>
<td>“…Of all the things we do as nephrologists, this is one area where we win.”</td>
</tr>
<tr>
<td>Allows titration</td>
<td>“…an obvious distinction. It can be related to flexibility…”</td>
</tr>
<tr>
<td>Dosing schedule (TIW)</td>
<td>“…a shorter dosing interval allows better treatment…”</td>
</tr>
</tbody>
</table>

Source: EPOGEN® Benefit Ladder, DeNovo Research Solutions, October 2005, N = 28 nephys
Inter-current Events Reported to be the Key Driver of Hemoglobin Variability and Often Require ESP Dosing Changes

Relative Impact of Factors Causing Hb Variability in Hemodialysis Patients
- Mean # of Points Indicated (n=144) -

Relative Impact of Intercurrent Events: 49.5
(accounts for approximately half of the perceived reasons for Hb variability)

Source: Market Research EPOGEN® Flexibility Story Quant Study, DeNovo Research Solutions, September 2006, N = 144 nephs
EPOGEN® is Reported by Physicians to Allow More Flexibility to Address Dialysis Patient Needs

“Allows for timely adjustments…”

“…EPOGEN®…gives you flexibility in dosing.”

“Most physicians want something that is proven to be safe and efficacious. We know it works … it’s proven and trusted.”

“EPOGEN®, no doubt, is now a major component of the management of patients with end-stage renal disease. It definitely has changed the whole picture of [anemia] management.”

Source: Various market research studies (specific study sourced per quote)
Aranesp® is the Leader in Nephrology Clinics

Aranesp® nephrology clinic share 61%

Values shown are based on a rolling 4 week average of gross demand.

Source: Integrated Sales based on chargebacks and IMS DDD Data (September 29, 2006)
Sensipar® Shows Continued Strong Demand Growth

Source: IMS NPA Thru Sept 15, 2006. PY = Previous Year Growth calculated by comparing same period last year
**Sensipar® Profile is Rated Highest by Nephrologists**

<table>
<thead>
<tr>
<th>Sensipar® vs Vitamin D</th>
<th>Sensipar® rated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Achieving iPTH levels within KDOQI™ guidelines</strong></td>
<td>26%</td>
</tr>
<tr>
<td><strong>b. Getting calcium-phosphorus product into KDOQI™ guidelines</strong></td>
<td>28%</td>
</tr>
<tr>
<td><strong>c. Reducing iPTH without elevating the calcium-phosphorus product</strong></td>
<td>15%</td>
</tr>
<tr>
<td><strong>d. Reducing iPTH without elevating serum phosphate levels</strong></td>
<td>28%</td>
</tr>
<tr>
<td><strong>e. Reducing iPTH without elevating serum calcium levels</strong></td>
<td>11%</td>
</tr>
</tbody>
</table>

Q30. For each goal listed below, please rate how well you think Vitamin D performs with respect to helping achieve the clinical goal.

* Source: Sensipar® ESRD Demand Study, June 2006, N = 169 nephs
| Overview of our Nephrology Business Strategies for growth | Helen Torley  
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Medical Affairs |
Amgen Nephrology Objectives

- Increase awareness of CKD and attendant co-morbidities including anemia and secondary hyperparathyroidism
- Support appropriate disease management
- Help advance clinical knowledge through conduct of definitive mortality/morbidity trials
Data Highlights at ASN Renal Week 2006

- Low diagnosis and treatment of CKD and associated co-morbidities
- Racial differences in CKD
- Increased focus on inflammation and C-reactive Protein (CRP)
KEEP: Striving to Address Unmet Medical Need for CKD Awareness and Screening

Seminal CKD Screening Program...

Cumulative Number of KEEP Participants by Year

And Research Opportunity

[TH-FC049] Effect of Obesity on Mortality in Patients at High Risk for Kidney Disease: Results from KEEP.

Claudine Junkovitz, Suying Li, George Bakris, Wendy Brown, Peter McCullough, Joseph Vassalotti, Janet McGill, Ajay Singh, Keith Norris KEEP Steering Committee, National Kidney Foundation, New York, NY

Although obesity is a known risk factor for death in the general population, high body mass index (BMI) is paradoxically associated with lower mortality in hemodialysis patients. The purpose of this analysis was to determine the effect of obesity on mortality in a population at high risk for kidney disease.

We examined this effect in the National Kidney Foundation- Kidney Early Evaluation Program (KEEP) population. KEEP is a screening program for kidney disease enrolling individuals 18 years or older, with a family history (FH) of kidney disease or a personal or FH of diabetes or hypertension (HTN). Obesity was defined as BMI >= 30. Chronic kidney disease (CKD) was defined with albumin creatinine ratio > 30mg/g or calculated glomerular filtration rate < 60 ml/min/1.73m². Deaths were identified from the Social Security Administration Death Master File. Cox proportional hazard ratio (HR) analyses were used to estimate the risk of death according to BMI and CKD, after adjusting for age, sex, race, diabetes, HTN, cardiovascular disease (CVD).

Among the 53,474 participants, 44.6% had a BMI >= 30, 30.7% had diabetes, and 78.4% had HTN. The total death rate was 4.83/1000 person-years. The adjusted risk for death was lower among obese patients (HR=0.72, 95% Confidence Interval (0.56, 0.93)). CKD was a risk factor for death (HR=2.03 (1.57, 2.61)) but did not modify the effect of obesity on mortality. These results suggest that obesity is associated with lower mortality over the spectrum of individuals at high risk for kidney disease.
Renal Regards: Important New Findings about ESRD Family History among African Americans with CKD

Figure 1. Age-gender adjusted multivariable association of measures of renal function and family history of ESRD, shown by race strata

![Graph showing odds ratios for African Americans and Whites across different age groups.

- *Chi-square for linear trend 25.1, 5 df; p<0.001.
- **Chi-square for linear trend 0.066, 4 df; p=0.7978

Source: Kurella et al. TH-PO194
There is a Growing Body of Literature Regarding CRP Levels in Dialysis Patients

Renal Week 2006 Abstracts

**TH-PO442**


Several studies have reported that hsCRP is a powerful predictor of death in the CHD population although there is no consensus on the practical use of this biomarker. The

**TH-PO443**

Determinants of C-Reactive Protein (hsCRP) Patterns in Chronic Hemodialysis (CHD) Patients. Adriana Hung, Lara Pupim, Ayumi Shintani, Edward Siew, T. Alp Ikizler. Vanderbilt University, Nashville, TN.

Studies in the general population clearly indicate the role of hsCRP as a prognostic marker in cardiovascular disease. However, the clinical usefulness of hsCRP monitoring

**F-PO590**

Dialysis Modality and Longitudinal Changes in Serum C-Reactive Protein (CRP) and Albumin Level. Rulan S. Parekh,1,2 Lin Zhang,1 Josef Coresh,1,2 Bernard Jaar,1,2 Brad Astor,2 Laura Plantinga,1 Nancy Fink,2 Neil Powe,1,2 Nathan W. Levin.3 1Medicine, Johns Hopkins University, Baltimore, MD; 2Epidemiology, Johns Hopkins University, Baltimore, MD; 3Renal Research Institute, New York, NY.

How dialysis modality is associated with longitudinal changes of inflammation and nutrition remains unknown. We examined the association between modality and longitudinal

**F-PO600**

CRP Values in HD Patients – A Longitudinal Study over 12 Months. Brigitte Schiller,1 Sheila Doss,2 Archana Dhawan,2 John Moran.2 1Satellite Laboratory Services, Redwood City, CA; 2Satellite Research, Mountain View, CA.

Elevated CRP values have been shown in several cross sectional studies to be associated with increased risk of death in ESRD patients. Little is known about the distribution of

**PUB275**


C-reactive protein has been demonstrated to be an indicator of inflammation and a predictor of mortality. Baseline testing was performed on 1,500 in-center hemodialysis

**F-PO184**

Full-Mouth Periodontal Examination Reveals That Severe Periodontitis Is Highly Frequent and Associated with Elevated C-Reactive Protein (CRP) Levels in Patients with Advanced and Dialysis-Dependent CKD. Jose Suassuna,1 Fernanda Silva,2 Roberta da Silveira,2 Rachel Bregman,1 Ricardo Fischer.2 1Renal Unit, Medical Sciences School. Rio de Janeiro State University, Rio de Janeiro, RJ, Brazil; 2Dept. of Periodontology, Dental School, Rio de Janeiro State University, Rio de Janeiro, RJ, Brazil.

Evidence suggests that periodontal disease-associated systemic low-grade inflammation predisposes to cardiovascular disease (CVD). Periodontitis has been listed as a putative
C-Reactive Protein is Predictive of Hemoglobin Level and EPO Dose Requirements

Bradbury et al, ASN 2006
Elevated CRP Levels are Common in Dialysis Patients

[F-P0600] CRP Values in HD Patients: A Longitudinal Study over 12 Months.

Brigitte Schiller, Sheila Doss, Archana Dhawan, John Moran Satellite Laboratory Services, Redwood City, CA; Satellite Research, Mountain View, CA

Elevated CRP values have been shown in several cross-sectional studies to be associated with increased risk of death in ESRD patients. Little is known about the distribution of this marker over time in HD patients and no threshold value has been established in ESRD patients. We measured CRP values in 790 prevalent HD patients every 6 months between March 2005 and March 2006. Three values were obtained and the time course was assessed.

376 patients (47.8%) showed normal CRP values (< 4.9 mg/L) throughout the study, 197 patients (24.9%) showed continued elevated CRP values (> 4.9 mg/L) at each time point and 217 patients (27.5%) showed fluctuation in CRP values over the study period.

107 patients (13.5%) had CRP values above 30 mg/L at any given time point throughout the study period.

Logistic regression analysis did not show any correlation of this time course of CRP with gender, diabetes or length on dialysis. There was a slight correlation with age indicating that normal CRP values at all three time points was associated with younger age ($p = 0.0428$).

The distribution of CRP values at the first time point is shown in this table. The median CRP value was within the normal reference range (< 4.9 mg/L).

| Quartile Q1 | < 4.9 mg/L |
| Quartile Q2 | < 4.9 mg/L |
| Quartile Q3 | 5 - 8.4 mg/L |
| Quartile Q4 | 8.5 - 255.2 mg/L |

When analyzing this distribution further diabetic patients showed a higher likelihood of elevated CRP values ($p = 0.0004$).

We conclude that the range of CRP values in HD patients is wide (< 4.9 - 255.2 mg/L). A significant number of patients (27.5%) fluctuate over a one year time period. It needs to be seen if monitoring of CRP values may contribute to improved outcomes.

Schiller et al, ASN 2006; Bradbury et al, ASN 2006
Early Initiation of Cinacalcet (iPTH 300-500 pg/ml) for SHPT Improves K/DOQI Goal Achievement

Figure 5. PTH + Ca x P Goal* Attainment by Disease Severity in Patients Receiving Cinacalcet

Figure 7. Cinacalcet Dose by Disease Severity
Cinacalcet Appears to Reduce Vascular Calcification Associated with Vitamin D in Pre-clinical Models

<table>
<thead>
<tr>
<th></th>
<th>Mean ± SE</th>
<th>iCa mmol/L</th>
<th>Total Ca mg/dL</th>
<th>P mg/dL</th>
<th>PTH pg/mL</th>
<th>PCNA+ Calcification cells/mm² (Mod-severe) %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n = 9-10/group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenine only</td>
<td>1.26 ± 0.02a</td>
<td>10.2 ± 0.2</td>
<td>20.6 ± 0.7b</td>
<td>1274 ± 158c</td>
<td>92 ± 18d</td>
<td>10</td>
</tr>
<tr>
<td>641 vehicle</td>
<td>1.23 ± 0.02</td>
<td>10.0 ± 0.2</td>
<td>20.3 ± 0.8</td>
<td>1817 ± 343</td>
<td>90 ± 13</td>
<td>0</td>
</tr>
<tr>
<td>641</td>
<td>0.98 ± 0.04b</td>
<td>8.0 ± 0.3c</td>
<td>21.7 ± 0.8</td>
<td>64 ± 32c</td>
<td>17 ± 5b</td>
<td>0</td>
</tr>
<tr>
<td>Calcitriol vehicle</td>
<td>1.23 ± 0.03</td>
<td>10.0 ± 0.1</td>
<td>20.1 ± 0.6</td>
<td>1385 ± 274</td>
<td>91 ± 13</td>
<td>10</td>
</tr>
<tr>
<td>Calcitriol</td>
<td>1.35 ± 0.02c</td>
<td>10.8 ± 0.1c</td>
<td>19.5 ± 0.8</td>
<td>687 ± 124c</td>
<td>87 ± 14</td>
<td>60</td>
</tr>
<tr>
<td>Both vehicles</td>
<td>1.21 ± 0.02</td>
<td>10.2 ± 0.2</td>
<td>20.6 ± 1.0</td>
<td>1590 ± 146</td>
<td>98 ± 18</td>
<td>10</td>
</tr>
<tr>
<td>641 + calcitriol</td>
<td>1.12 ± 0.03d</td>
<td>9.5 ± 0.3c</td>
<td>20.3 ± 0.5</td>
<td>18 ± 0d</td>
<td>13 ± 6d</td>
<td>20</td>
</tr>
<tr>
<td>No adenine</td>
<td>1.41 ± 0.00</td>
<td>10.6 ± 0.1</td>
<td>7.6 ± 0.2</td>
<td>379 ± 84</td>
<td>15 ± 4</td>
<td>0</td>
</tr>
</tbody>
</table>

*P < 0.05 Adenine vs No adenine; **P < 0.05 641 vehicle vs 641; ***P < 0.05 Calcitriol vehicle vs calcitriol; ****P < 0.05 Calcitriol vs 641 + calcitriol.
Conduct of Randomized Clinical Trials in Nephrology Lags Behind Medicine Subspecialties

## Amgen is Proud of our Leadership Role in Conducting Robust Morbidity and Mortality Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Study Hypothesis</th>
<th>Expected n</th>
</tr>
</thead>
<tbody>
<tr>
<td>TREAT</td>
<td>Treatment of anemia with Aranesp® reduces the risk of mortality and nonfatal cardiovascular events in patients with CKD and type 2 diabetes</td>
<td>4,000</td>
</tr>
<tr>
<td>RED-HF™ Trial</td>
<td>Treatment of anemia with darbepoetin alfa in subjects with symptomatic left ventricular systolic dysfunction and anemia decreases the risk of all-cause mortality or hospital admission for worsening HF</td>
<td>3,400</td>
</tr>
<tr>
<td>EVOLVE</td>
<td>Treatment of secondary HPT with Sensipar® reduces the risk of mortality and nonfatal cardiovascular events in dialysis patients</td>
<td>3,800</td>
</tr>
<tr>
<td>ADVANCE</td>
<td>A treatment regimen including Sensipar® and low dose vitamin D will attenuate the progression of coronary artery calcification over a one year period compared with flexible dose vitamin D alone in CKD subjects receiving HD</td>
<td>330</td>
</tr>
</tbody>
</table>
TREAT: Trial to Reduce Cardiovascular Events With Aranesp® (darbepoetin alfa) Therapy

Hypothesis
Treatment of anemia with Aranesp® reduces the risk of mortality and nonfatal cardiovascular events in patients with CKD and type 2 diabetes

Study Population
- Hb ≤ 11 g/dL
- GFR 20–60 mL/min
- Type 2 DM

N = 2,000

Target Hb 13 g/dL

Design—randomized (1:1), double-blind, controlled

N = 2,000

Control Group

Primary Endpoint
- All-cause mortality
- Non-fatal cardiovascular events (myocardial infarction, myocardial ischemia, HF, stroke)

## TREAT is Fundamentally Different than CHOIR and CREATE

<table>
<thead>
<tr>
<th></th>
<th>CREATE</th>
<th>CHOIR</th>
<th>TREAT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td>Randomized, open-label</td>
<td>Randomized, open-label</td>
<td>Randomized, double-blind, controlled</td>
</tr>
<tr>
<td><strong>Sponsor / Agent</strong></td>
<td>Roche / NeoRecormon® (epoetin beta)</td>
<td>J&amp;J / Procrit® (epoetin alfa)</td>
<td>Amgen / Aranesp® (darbepoetin alfa)</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>CKD</td>
<td>CKD</td>
<td>CKD, type 2 diabetes</td>
</tr>
<tr>
<td><strong>Hb Target(s), g/dL</strong></td>
<td>Arm 1 13-15</td>
<td>13.5</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Arm 2 10.5-11.5</td>
<td>11.3</td>
<td>Placebo with rescue for Hb &lt;9</td>
</tr>
<tr>
<td><strong># Subjects</strong></td>
<td>600</td>
<td>1432</td>
<td>4000</td>
</tr>
<tr>
<td><strong>Censor at RRT</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Hypothsis:

Treatment of anemia with darbepoetin alfa in subjects with symptomatic left ventricular systolic dysfunction and anemia decreases the risk of all-cause mortality or hospital admission for worsening HF.

**Study Population**
- Hb 9 to 12 g/dL
- LVEF ≤ 35%
- NYHA Class II to IV

**Darbepoetin alfa group** (target Hb 13.0, not to exceed 14.5 g/dL)
N = 1700

**Placebo group**
N = 1700

1:1 randomization
Post-Hoc Analysis of Phase III Data Suggests Reduced Risk of CV Hospitalization In Sensipar® treated Patients

Further studies are needed to confirm

EVOLVE is Expected to be the Largest Study in Dialysis Patients Yet Conducted

Hypothesis:
Treatment of secondary HPT with Sensipar® reduces the risk of mortality and nonfatal cardiovascular events in dialysis patients

Study Population
- Hemodialysis
- iPTH ≥ 300 pg/mL (31.8 pmol/L)
- Ca ≥ 8.4 mg/dL (2.1 mmol/L)
- Ca x P ≥ 45 mg²/dL² (3.63 mmol²/L²)

Placebo plus Standard Care Therapy (n = 1900)
Randomized, double blind, placebo controlled
1882 Events; Treatment effect 20%; Alpha 0.049; Power 0.90

Cinacalcet plus Standard Care Therapy (n = 1900)
ADVANCE Study Is Evaluating the Impact of Sensipar® on Vascular Calcification

**Hypothesis:**
A treatment regimen including Sensipar® and low dose vitamin D will attenuate the progression of coronary artery calcification over a one year period compared with flexible dose vitamin D alone in hemodialysis patients

**Study Population**
- PTH ≥ 150 pg/mL
- if PTH 150 - 300 pg/mL:
  - Ca x P > 50 mg²/dL²
- Ca ≥ 8.4
- CAC ≥ 30

**Cinacalcet group** (Cinacalcet plus low dose active Vitamin D, if prescribed)
N = 165

1:1 Randomization (stratified by CAC score), open-label trial

**Control group** (flexible dosing of active Vitamin D, if prescribed)
N = 165
Amgen Looks Forward to Evaluating New Therapeutic Opportunities in Kidney Disease

- Anti-inflammatory strategies
- Renal cachexia
- Diabetes and diabetic nephropathy
- Polycystic kidney disease
- Renal bone disease
- Acute renal failure
- Glomerulonephritis