Looking Back To See Ahead

G. Steven Burrill
Chief Executive Officer
Burrill & Company

4th Annual CDD Community Meeting
For Catalyzing Drug Discovery Research
October 21, 2010
This Year’s Book – Focuses on adapting...

Next Year’s Book – Looking back to see ahead...

"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change."

—Charles Darwin
What did the world look like a year ago?

• We were amid a global economic downturn
  – Dow at 9321; NASDAQ at 1986; S&P500 at 1004
• Capital markets essentially closed
• Concerns about H1N1 flu outbreak (possibility of a pandemic)
• Healthcare reform discussion ongoing/intensifying (Obama in office 7 months)
• New head of FDA/CMS appointed
• Cautious optimism for future…still strong pessimism
...and today

- Biotech’s market cap is up since October 2009 (9%) (DJIA up 14%, NASDAQ up 14%)
- Investor confidence in biotechnology – IPO window opens slightly; 11 IPOs since last year
- US Health care reform finally passed, after a struggle...
- Gene patent issues (Myriad vs. The American Civil Liberties Union)
- Stem cell financing in question
- Biogreentech is hot
- A record $62B raised by US biotech companies (capital & partnering)
Several Key Points…

• Healthcare Reform – what it did to our world? / comparative effectiveness
• Population growth / Globalization / Opportunities
• Where technology is taking us? and how fast? / Wireless Health
• Value Capture – are we/how do we do it?
• Capital Markets – what is happening…
• Several personal reflections
Innovation makes a difference

• Changes in healthcare solutions
• Reduces cost dramatically

...and it creates value:

– From 1970-2000, increase in life expectancy produced 50 percent of the growth in America’s gross domestic product
– Genentech $100B when acquired by Roche (Pfizer $91B at that time)
The Changing Focus of Healthcare

Source: Ralph Snyderman
Personalized Medicine Market Size, 2009 and 2015

**2009 TOTAL MARKET:**
$225–$232 Billion

- **Nutrition & Wellness**
  - Total: $196 Billion
    - Complementary & Alternative Medicine
    - Health Clubs & Spa

- **Personalized Medical Care**
  - Total: $5–$12 Billion
    - Nutrition/Organic Care
    - Medical Retail
    - RPM/Telemedicine
    - EMR
    - DM

- **Core P4**
  - Total: $24 Billion
    - Targeted Therapeutics
    - Molecular Diagnostics
    - Esoteric Lab Services
    - Esoteric Test Sales

**2015 TOTAL MARKET:**
$344–$452 Billion

- **Nutrition & Wellness**
  - Total: $292 Billion
    - Complementary & Alternative Medicine
    - Health Clubs & Spa

- **Personalized Medical Care**
  - Total: $9–$118 Billion
    - Nutrition/Organic Care
    - Medical Retail
    - RPM/Telemedicine
    - EMR
    - DM

- **Core P4**
  - Total: $42 Billion
    - Targeted Therapeutics
    - Molecular Diagnostics
    - Esoteric Lab Services
    - Esoteric Test Sales

*Total may differ due to rounding. Source: PricewaterhouseCoopers*
Convening Stakeholders and Aligning Objectives

- Drug Diagnostic Companies
- Healthcare Providers
- Patient Groups
- Insurance Payers
- Government Regulators
- Academia
- Government Agencies
- Other Stakeholders

Source: PWC
So what will healthcare look like in 2020?
<table>
<thead>
<tr>
<th>2000 Years Ago</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episodic</td>
<td>Episodic</td>
</tr>
<tr>
<td>Local healers / midwives</td>
<td>Doctors / nurses / hospitals</td>
</tr>
<tr>
<td>Medicine “Man”</td>
<td>Pharmacists / pharmacies</td>
</tr>
<tr>
<td>Evidence in Ancient Egypt, publicly provided healthcare system with healers paid by the community</td>
<td>Governments provide and pay</td>
</tr>
<tr>
<td>Most people died of disease</td>
<td>Most things don’t work and people die</td>
</tr>
</tbody>
</table>
Big Trends: The Promise of Mobile Technologies for Health

- Hospital Beds: 20
- Computers: 1,000
- Mobile Phones: 5,000
- Population: 6,692

(millions)
Healthcare – Spit on your BlackBerry/cellphone
The Market’s Comeback

Recent low on March 9, 2009
6547.05

All-time high on Oct. 9, 2007
14164.53
IPOs – window is opening?

Number of IPOs

- 1996: 45
- 1997: 27
- 1998: 7
- 1999: 11
- 2000: 66
- 2001: 7
- 2002: 4
- 2003: 7
- 2004: 29
- 2005: 17
- 2006: 19
- 2007: 28
- 2008: 1
- 2009: 3
- 2010: 11

IPO Financings

- 1996: $1,465
- 1997: $688
- 1998: $369
- 1999: $670
- 2000: $6,490
- 2001: $440
- 2002: $445
- 2003: $456
- 2004: $1,701
- 2005: $819
- 2006: $920
- 2007: $2,041
- 2008: $1,114
- 2009: $736
- 2010: $369

($ millions)
IPO deals in the current window (2010 YTD)

<table>
<thead>
<tr>
<th>Company</th>
<th>Filing Date</th>
<th>Expected to Raise ($M)</th>
<th>Amount Raised ($M)</th>
<th>Filing Range</th>
<th>Offering Price</th>
<th>Price as of 10/20/2010</th>
<th>% Δ Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ironwood Pharmaceuticals, Inc</td>
<td>2/2/10</td>
<td>266</td>
<td>215.6</td>
<td>$14-$16</td>
<td>11.25</td>
<td>11.00</td>
<td>▼ 2.2%</td>
</tr>
<tr>
<td>Anthera Pharmaceuticals, Inc</td>
<td>3/1/10</td>
<td>70</td>
<td>42.0</td>
<td>$13-$15</td>
<td>7</td>
<td>6.44</td>
<td>▼ 8.0%</td>
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<tr>
<td>AVEO Pharmaceuticals, Inc</td>
<td>3/12/10</td>
<td>105</td>
<td>89.7</td>
<td>$13-$15</td>
<td>9</td>
<td>15.16</td>
<td>▲ 68.4%</td>
</tr>
<tr>
<td>CorMedix</td>
<td>3/22/10</td>
<td>12.5</td>
<td>12.5</td>
<td>$6-$8</td>
<td>6.5</td>
<td>1.38</td>
<td>▼ 78.8%</td>
</tr>
<tr>
<td>Tengion</td>
<td>4/9/10</td>
<td>46</td>
<td>30.0</td>
<td>$8-$10</td>
<td>6</td>
<td>2.95</td>
<td>▼ 50.8%</td>
</tr>
<tr>
<td>CODEXIS</td>
<td>4/21/10</td>
<td>84</td>
<td>78.0</td>
<td>$13-$15</td>
<td>13</td>
<td>10.06</td>
<td>▼ 22.6%</td>
</tr>
<tr>
<td>Alimera Sciences</td>
<td>4/21/10</td>
<td>86</td>
<td>72.0</td>
<td>$15-$17</td>
<td>11</td>
<td>10.48</td>
<td>▼ 4.7%</td>
</tr>
<tr>
<td>GenMark Dx</td>
<td>5/28/10</td>
<td>45</td>
<td>28.0</td>
<td>$8-$10</td>
<td>6</td>
<td>3.43</td>
<td>▼ 42.8%</td>
</tr>
<tr>
<td>Trius Therapeutics</td>
<td>8/2/10</td>
<td>78</td>
<td>50.0</td>
<td>$12-$14</td>
<td>5</td>
<td>3.89</td>
<td>▼ 22.2%</td>
</tr>
<tr>
<td>NuPathe</td>
<td>8/6/10</td>
<td>75</td>
<td>50.0</td>
<td>$14-$16</td>
<td>10</td>
<td>6.71</td>
<td>▼ 32.9%</td>
</tr>
<tr>
<td>AMYRIS</td>
<td>9/28/10</td>
<td>101</td>
<td>85.0</td>
<td>$18-$20</td>
<td>16</td>
<td>17.11</td>
<td>▲ 6.9%</td>
</tr>
</tbody>
</table>
IPO Queue

Alternative fuels
- PetroAlgae: produces biocrude from duckweed, $200 million.
- Gevo: produces isobutanol from biomass $150 million.

Tools/Technology
- Pacific Biosciences – Next generation DNA sequencing – $200 million
- Complete Genomics – DNA sequencing – $86M

Therapeutics
- Aegerion Pharma – Cardiovascular metabolic diseases – $86M
- Endocyte – Cancer-fighting drugs – $86M
- Horizon Pharma – Arthritis, pain and inflammatory diseases – $86M
- Ventrus Biosciences – GI disorders – $20M
- Ikaria – Respiratory diseases – $200M
Adapt = Success
Our Special 25th Anniversary Edition Available Early 2011

Visit our website www.burrillandco.com for more information
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