

SIGMA-ALDRICH INVESTOR PRESENTATION

July 2014

CAUTIONARY STATEMENTS

This presentation contains "forward-looking statements" regarding future sales, earnings, margins, return on equity, return on invested capital, cost savings, process improvements, free cash flow, share repurchases, capital expenditures, acquisitions and other matters. Such statements can be identified by words such as: "ability," "building," "driving," "estimates," "expect," "forecast," "implementing," "will," "would," or similar references to future periods. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Actual results could differ materially from those stated or implied in the forward-looking statements. For a list of factors, risks and uncertainties which could make our actual results differ from expected results, please see Item 1A of Part I of our latest Annual Report on Form 10-K. We undertake no obligation to publicly update any forward-looking statement, whether written or oral, as a result of new information, future developments or otherwise.

This presentation also contains non-GAAP financial information. Management uses this information in its internal analysis of results and believes this information may be informative to investors in gauging the quality of our financial performance, identifying trends in our results and providing meaningful period-to-period comparisons. For a reconciliation of non-GAAP measures used in this presentation, see the Appendix to this presentation – Reconciliation of GAAP to Non-GAAP Financial Measures.

OUR MISSION

ENABLING SCIENCE TO IMPROVE THE QUALITY OF LIFE



Our Customers Span a Wide Spectrum of Scientific Disciplines and Responsibilities



Scientists & Researchers

Scientific Research to Discover and Develop New Drugs and Materials



Clinicians & Engineers

Clinical, Environmental and Industrial Testing
Industrial R&D and Manufacturing



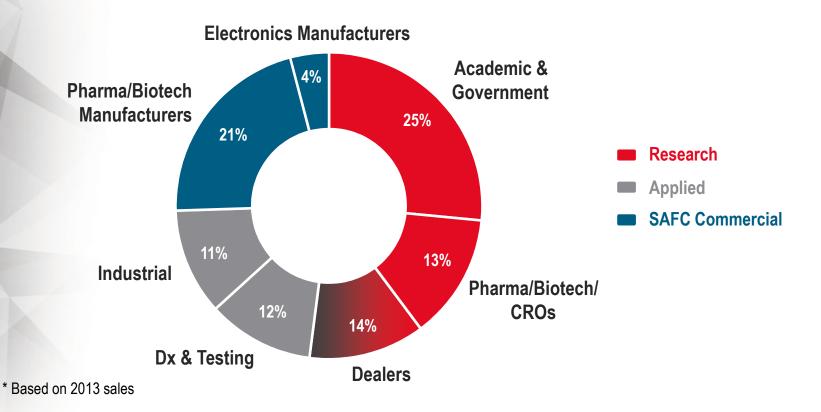
Commercial Manufacturers

Commercial Production in Pharma, BioPharma and Electronics Industries

4

LOOKING AT THE COMPANY THROUGH A CUSTOMER LENS

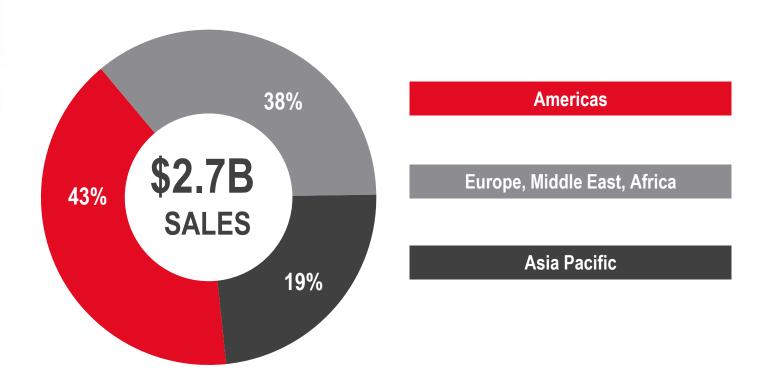
End-Market Segmentation*



POSITIONED FOR GROWTH WITH A BALANCED CUSTOMER BASE

Geographically Diverse

2013 Sales



UNIQUE COLLECTION OF CORE STRENGTHS

Ability to Address the Needs of Customers in All Three Business Units

TRUSTED BRANDS

SIGMA[®]

ALDRICH°

SUPELCO°

Fluka[®]

SAFC®

Cerilliant®

ISOTEC*





~230,000

Products, Services & Solutions



#1

Life Science eCommerce Platform

~1,600

Sales People in 40+
Countries

~1,500

Regulatory Agencies

~40

Manufacturing Sites Globally

~160

Countries Sold to

LEADER IN GLOBAL QUALITY & COMPLIANCE

Quality Assurance (QA)

cGLP • cGMP • cGDP • ISO • SafeBridge • USDA

Quality Trends

- Disciplined change management and control
- High-level traceability through the supply base
- More requests for documentation and investigation support

Compliance

- Over 700 employees supporting quality functions
- Greater than 450 global customer audits per year



"Every time we use a product from Sigma-Aldrich, we know it will work."

- Major Applied Industrial Customer

~1,500
Regulatory Agencies

HIGHEST VOLUME FILER WITH THE BUREAU OF INDUSTRY AND SECURITY FOR US EXPORT LICENSES

LEADING LIFE SCIENCE eCOMMERCE

SIGMA-ALDRICH.COM



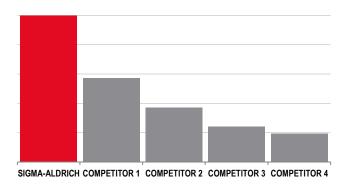
SALES

VISITS

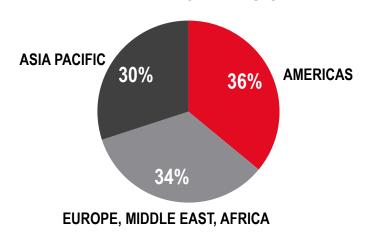
ORDERS

~\$1B 70M 2.7M

UNIQUE VISITORS



WEB TRAFFIC BY REGION



MARKET TRENDS

Academic funding constraints, Pharma consolidation, and Supplier consolidation

Emerging regions fueling growth in scientific research

Increasingly stringent regulatory environments – Applied and Commercial

Increasing demand for new diagnostics and testing technologies

Biologics drug market growing at twice the rate of small molecules

Growing targeted therapy approach in treatment of diseases favors specialized capabilities

Q2 2014

- Sales of \$701 million a new quarterly high
- Organic sales growth of 2%
- Adjusted diluted EPS of \$1.11 a new quarterly high
 - Gross margin expansion of 100 basis points;
 150 basis points excluding impact of FX
 - Adjusted operating income margin expansion of 30 basis points;
 70 basis points excluding impact of FX
- First half 2014 free cash flow of \$232 million
- Top 5 ranking in Newsweek's 2014 Green Rankings
- Ranked #28 in CR Magazine's 100 Best Corporate Citizens List

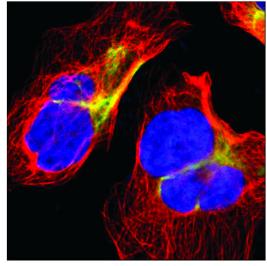




RESEARCH BUSINESS UNIT

Q2 2014: flat organic sales growth

- Organic sales growth improved in U.S. academic and pharma segments
- Declines in EMEA Research sales caused by academic weakness in southern
 Europe, growth improved at the end of the quarter
- APAC Research sales were strong in China and Southeast Asia, offset by softness
 - in India, Oceania and South Korea
- Update on initiatives:
 - CRISPR gene-editing technology
 - TruPAGE™ pre-cast gels
 - Palau-Chlor chlorination technology
 - ADME/Tox cell lines



European Collection of Cell Culture (ECACC) cell lines exclusive to Sigma-Aldrich

APPLIED BUSINESS UNIT

Q2 2014: 6% organic sales growth

- Strong growth in Diagnostics & Testing across all geographies
- Solid Industrial growth in the U.S.
- Update on initiatives:
 - Gaining momentum as the supplier of choice for IVD manufacturers
 - Expanding ELITE™ program for enzymes and buffers
 - Awarded OEM manufacturing contracts
 - Adoption of air-monitoring devices used in schools



SAFC COMMERCIAL BUSINESS UNIT

Q2 2014: 1% organic sales growth

- Changes in timing of delivery of large contract manufacturing orders
- Solid sales growth in biopharma materials
- Strong Life Science Services sales growth
- Strong semiconductor precursor sales offset by weak LED precursor sales
- Update on initiatives:
 - Q4 2014 opening of dry powder media facility in Scotland
 - Q4 2014 opening of high potent API facility in Wisconsin
 - On track for ADC capacity in 2015





Dry Powder Media Facility Irvine, Scotland

14

Q2 2014 FINANCIAL RESULTS

(\$ in millions, except per share amounts)

| | | read over read |
|--|--|-----------------|
| | As Reported Q2 2014 | As Reported |
| Sales | \$ 701 | ↑ 3% |
| | As Reported Q2 2014 | As Reported |
| Operating Income | \$ 184 | ↑ 11% |
| Net Income | \$ 133 | 1 2% |
| Diluted EPS | \$ 1.11 | ↑ 13% |
| Free Cash Flow (1) | \$ 89 | ↓ 2% |
| (1) See slide 26 for Reconciliation of Net | Cash Provided by Operating Activities to | Free Cash Flow. |

| | YEAR-OVER-YEAR |
|------------------------|---------------------------------|
| As Reported Q2 2014 | Q2 2014 Organic Sales Growth |
| \$ 701 | 个 2% |

| Adjusted Q2 2014 | Adjusted ⁽²⁾ |
|---------------------|-------------------------|
| \$ 185 | ↑ 4% |
| \$ 133 | ↑ 5% |
| \$1.11 | ↑ 6% |

Q2 2014 organic sales growth of 2% and adjusted EPS growth of 6%

YEAR-OVER-YEAR

⁽¹⁾ See slide 26 for Reconciliation of Net Cash Provided by Operating Activities to Free Cash Flow.

⁽²⁾ Excludes other charges; see slide 22 and 23 for reconciliation for adjusted measures.

Q2 2014 QUARTERLY ORGANIC SALES VS. PRIOR YEAR

Business Unit: Research



| | 20 | 014 |
|-----------------------|-------------------|-------------------|
| | Q1 | Q2 |
| Organic Sales Growth: | 1% | Flat |
| Acad/Govt/Hospitals | Flat | (Low-single) |
| Pharma | Slightly declined | Flat |
| Dealers | Low-single | Low-to-mid single |
| | | |

Improved demand in U.S. offset by declines in southern Europe and certain APAC countries

Q2 2014 QUARTERLY ORGANIC SALES VS. PRIOR YEAR

Business Unit: Applied



2014 Q1 Q2

Organic Sales Growth: 7% 6%

Diagnostics & Testing High-single Double-digit

Industrial Mid-single Low-single

Another strong quarter of organic sales growth in Diagnostics & Testing

Q2 2014 QUARTERLY ORGANIC SALES VS. PRIOR YEAR

Business Unit: SAFC Commercial

| | | 2014 |
|-----------------------|--------------|---------------------|
| | Q1 | Q2 |
| Organic Sales Growth: | 3% | 1% |
| Life Science Products | Low-single | (Low-to-mid single) |
| Life Science Services | Double-digit | Double-digit |
| Hitech | (Low-single) | Flat / |

Strong services growth offset by delivery timing of large orders in contract manufacturing

MARGIN ANALYSIS

| | Q2 2013 | Q3 2013 | Q4 2013 | Q1 2014 | Q2 2014 |
|-----------------------------|---------|---------|---------|---------|---------|
| Gross Margin % | 50.1% | 50.3% | 50.0% | 50.9% | 51.1% |
| Adjusted Operating Margin % | 26.1% | 25.3% | 25.0% | 25.4% | 26.4% |

Q2 2014 adjusted operating margin increased by 30 basis points from Q2 2013 Excluding FX headwinds, net of hedging, margin would have increased by 70 basis points

2014 GUIDANCE

Organic Sales Growth

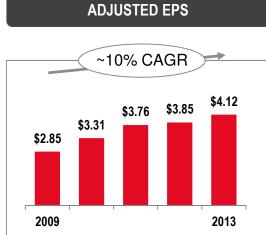
| | 2 nd Half | Full Year |
|-----------------|-------------------------|------------------|
| Research | Low-to-mid single digit | Low-single digit |
| Applied | Mid-single digit | Mid-single digit |
| SAFC Commercial | Mid-single digit | Mid-single digit |

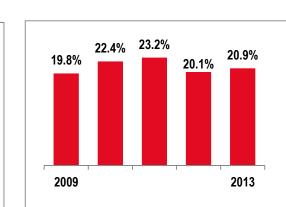
Overall
2014
organic
sales
growth of
low-single
digit

Raising lower end of 2014 full-year adjusted diluted EPS guidance to a new range of between \$4.32 to \$4.40

INVESTOR DASHBOARD

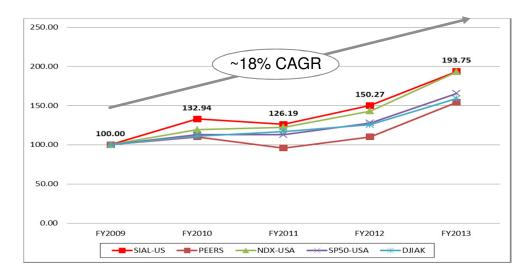






STRONG ROIC

Generating Strong Returns to Shareholders





APPENDIX

Reconciliation of GAAP to Non-GAAP Financial Measures

Reconciliation of Reported Net Income and Diluted Earnings Per Share to Adjusted Net Income and Adjusted Diluted Earnings Per Share (Unaudited)

| | | Net Income in millions) e Months En June 30, | ded | 1 | Three Mo | Share | |
|---|------|--|-----------------|---------------|----------------------|-----------------|----------------------|
| | 2014 | | 013 | 2 | 2014 | | 2013 |
| Reported net income Other charges Adjusted net income | | 33 \$ 33 \$ | 119 8 127 | \$ \$ | 1.11 - 1.11 | \$ | 0.98 0.07 1.05 |
| | (| Net Income in millions) Months End | | | Diluted l Per S | Share | |
| | SIX | June 30, | ea | | | ins En e 30, | uea |
| | 2014 | | 013 | 2 | 2014 | | 2013 |
| Reported net income Other charges Adjusted net income | | 59 \$ 1 60 \$ | 241 8 249 | \$ \$ | 2.16 0.01 2.17 | \$ | 1.99 0.07 2.06 |

Reconciliation of Reported Operating Income to Adjusted Operating Income (Unaudited)

In millions

| | 7 | Three Mon | | ded |
|---|----|--------------|---------|---------|
| | 2 | June 2014 | | 2013 |
| Reported operating income | \$ | 184 | \$ | 166 |
| Other charges | | 1 | | 12 |
| Adjusted operating income | \$ | 185 | \$ | 178 |
| | | CI 3. 1 | 1 173 1 | |
| | | Six Mont | | ed |
| | 2 | | 30, | ed 2013 |
| Reported operating income | \$ | June | 30, | |
| Reported operating income Other charges | _ | June 2014 | 2 | 2013 |

Trend of Reported Operating Income Margin to Adjusted Operating Income Margin (Unaudited)

Three Months Ended

| _ | June 30, 2014 | March 31, 2014 | December 31, 2013 | September 30, 2013 |
|----------------------------------|------------------|-------------------|----------------------|-----------------------|
| Reported operating income margin | 26.2% | 25.3% | 25.0% | 23.8% |
| Other charges | 0.2 % | 0.1 % | <u> </u> | 1.5 % |
| Adjusted operating income margin | 26.4% | 25.4% | 25.0% | 25.3% |

Reconciliation of Reported Operating Income Margin to Adjusted Operating Income Margin (Unaudited)

| | Three Montl June 3 | | Six Month June 3 | |
|----------------------------------|-----------------------|-------|---------------------|-------|
| | 2014 | 2013 | 2014 | 2013 |
| Reported operating income margin | 26.2% | 24.4% | 25.8% | 24.5% |
| Other charges | 0.2 % | 1.7% | 0.1% | 0.9% |
| Adjusted operating income margin | 26.4% | 26.1% | 25.9% | 25.4% |

Reconciliation of Net Cash Provided by Operating Activities to Free Cash Flow (Unaudited)

| n millions | , | Three Mo | nths En | ded |
|---|----|-----------------------|----------------|------------|
| | | Jun | e 30, | |
| | 2 | 014 | 2 | 2013 |
| Net cash provided by operating activities | \$ | 115 | \$ | 115 |
| Less: Capital expenditures | | (26) | | (24) |
| | | | _ | |
| Free cash flow | \$ | 89 | \$ | 91 |
| Free cash flow | \$ | Six Mon | ths End | |
| Free cash flow | | Six Mon | ths End | |
| Free cash flow Net cash provided by operating activities | | Six Mon | ths End | ed |
| | 2 | Six Mon Jun 014 | ths Ende e 30, | ed 2013 |