

## **Canada's Top 100 Corporate R&D Spenders List 2005 Analysis**

### **Top 100 Spending Recovers**

Following 2 years of decline, signs are that corporate spending on research and development (R&D) began to recover in Fiscal 2004. Data available for 99 of Canada's Top 100 Corporate R&D Spenders revealed an increase of 3.0% in their combined R&D spending, versus a -5.1% decline in Fiscal 2003. With Nortel Networks' results omitted, the remaining 98 firms that provided complete data increased their R&D spending by 6.4% in 2004, compared with a 1.9% increase in 2003.

Nortel Networks - by far Canada's largest R&D performer - stabilized its R&D spending in Fiscal 2004, posting \$2.5 billion of worldwide research and accounting for nearly a quarter (23%) of all Top 100 spending. While Nortel's spending declined by -7.2% between 2003 and 2004, this was in fact a significant improvement over its -20.4% drop the year earlier.

However, in spite of the increased Top 100 R&D spending, the result was still considerably less than revenue growth, which indicates that company managers are being cautious about increasing their commitment to research. Whereas combined R&D spending increased by 3.0%, corporate revenues increased at a far faster pace, up by 16.4% between Fiscal 2003 and 2004. This produced a sharp -11.5% decline in research intensity, which is calculated as R&D spending as a percent of revenues. Ignoring Nortel's results helped improve the results only slightly: 98 other companies posted a 6.4% growth in R&D spending against a 17.9% increase in revenues, yielding a -9.7% decline in research intensity.

A very positive sign is that in Fiscal 2004 of 99 firms providing complete data, 62 firms increased their spending on research, compared with 35 firms where spending declined. (Two firms held spending even.) This represents a significant improvement from Fiscal 2003, when 55 Top 100 companies cut back or held the line on their R&D spending and only 45 firms increased their R&D spending. Improving revenues probably helped to spur spending growth.

## The \$100 Million Club

This year's results indicate that 21 companies - the same number as last year - qualified for membership in RE\$EARCH Infosource's \$100 Million Club, an exclusive group of firms that spend over \$100 million each on research. In Fiscal 2004, this elite group accounted for 71% of all Top 100 R&D spending, a slight drop from the firms' 72% share last year.

Interestingly, whereas the \$100 Million Club increased its combined R&D spending by 2.3%, the 79 non-members improved their spending by a healthier 4.9%. However, Nortel Networks' results clearly depressed the \$100 Million Club results. When these are omitted the remaining \$100 Million Club members posted a healthy 7.4% increase in R&D spending.

| The \$100 Million Club |                             |                                |
|------------------------|-----------------------------|--------------------------------|
| 2004 Rank              | Company                     | Industry                       |
| 1                      | Nortel Networks             | Comm/telecom equipment         |
| 2                      | Bell Canada                 | Telecommunications services    |
| 3                      | Magna International         | Automotive                     |
| 4                      | Pratt & Whitney Canada (fs) | Aerospace                      |
| 5                      | ATI Technologies            | Computer equipment             |
| 6                      | IBM Canada (fs)             | Software and computer services |
| 7                      | Alcan                       | Mining and metals              |
| 8                      | Ericsson Canada. (fs)       | Comm/telecom equipment         |
| 9                      | Bombardier                  | Aerospace                      |
| 10                     | Alcatel Canada (fs)         | Comm/telecom equipment         |
| 11                     | Apotex                      | Pharmaceuticals/biotechnology  |
| 12                     | Pfizer Canada (fs)          | Pharmaceuticals/biotechnology  |
| 13                     | Atomic Energy of Canada     | Primary energy                 |
| 14                     | GlaxoSmithKline (fs)        | Pharmaceuticals/biotechnology  |
| 15                     | Creo                        | Software and computer services |
| 16                     | EnCana                      | Oil and gas                    |
| 17                     | Ballard Power Systems       | Primary energy                 |
| 18                     | Cognos                      | Software and computer services |
| 19                     | Merck Frosst Canada (fs)    | Pharmaceuticals/biotechnology  |
| 20                     | Tembec                      | Forest and paper products      |
| 21                     | MDS                         | Health services                |

fs = Foreign subsidiary (includes R&D expenditures for Canadian operations only)

## Industry Performance

As in past years, the Communication/telecommunication equipment industry dominated R&D spending. Led by Nortel Networks, these 11 companies accounted for 28% of Top 100 spending in Fiscal 2004. However, this is a decline from their 31% spending share the year before. The Pharmaceutical/biotechnology sector, with 34 Top 100 companies, accounted for 17% of Top 100 spending, up slightly from 15% in Fiscal 2003. Canadian multinational Apotex, and the Canadian operations of Pfizer and GlaxoSmithKline lead this sector. (RESEARCH Infosource counts worldwide spending for Canadian multinationals, but only the in-Canada spending of foreign multinationals.) With only 4 firms, Bell Canada led the Telecommunication services sector to an impressive 14% share of spending. IBM Canada dominates the 9 Software and computer services companies, which accounted for 7% of all Top 100 spending. Pratt & Whitney Canada continues to lead R&D spending by the 5 Aerospace companies in our list.

| Top 100 – Leading Industries       |                           |
|------------------------------------|---------------------------|
| Industry                           | R&D Spending (% of Total) |
| Comm/telecom equipment (11)        | 28                        |
| Pharma/biotechnology (34)          | 17                        |
| Telecommunication services (4)     | 14                        |
| Aerospace (5)                      | 8                         |
| Software and computer services (9) | 7                         |
| Automotive (1)                     | 6                         |

Combining the Communications/telecommunication equipment, Telecommunication services, Software and computer services, Computer equipment, and Electronic parts and components sectors indicates that the Information and Communication Technology (ICT) sector accounted for over half (55%) of Top 100 spending on R&D.

There is a wide variation in the research intensity of various industry sectors. The Communications/telecommunication equipment sector spent 19.1% of its revenues on research, compared with Telecommunication services, which spent 5.7%. The Computer equipment sector (15.0%) and Pharmaceutical/biotechnology (14.5%) also have high rates of spending on research.

## The Top 10 R&D Intensive Firms

As in previous years, a high proportion of the most research intensive firms are found in the Pharma/biotechnology sector. Seven of the 10 most research intensive companies in Fiscal 2004 were in this sector. These firms tend to spend more on research than they earn in sales, which indicates they are in a growth phase and in some instances may not yet have products on the market.

| Top 10 Research Intensive Companies |         |                        |                      |
|-------------------------------------|---------|------------------------|----------------------|
| 2004 Rank                           |         | Company                | R&D as % of Revenue* |
| Research Intensity                  | Overall |                        |                      |
| 1                                   | 85      | Isotechnika            | 1,208.6              |
| 2                                   | 96      | Labopharm              | 1,150.4              |
| 3                                   | 89      | MethylGene             | 201.2                |
| 4                                   | 98      | ProMetic Life Sciences | 190.3                |
| 5                                   | 70      | Inex Pharmaceuticals   | 185.8                |
| 6                                   | 51      | Cardiome Pharma        | 146.6                |
| 7                                   | 17      | Ballard Power Systems  | 112.7                |
| 8                                   | 56      | Westaim                | 110.1                |
| 9                                   | 59      | Westport Innovations   | 105.3                |
| 10                                  | 46      | ID Biomedical          | 90.5                 |

\*\$1 million or more of revenue

## Gainers and Losers

This year all of the 10 companies that increased their R&D spending the fastest all had more than 60% growth in research spending. Of the established companies on the Top 100 list, ratiopharm and Shell Canada posted the most impressive gains between Fiscal 2003 and 2004, increasing their R&D spending by 210.0% and 180.0% respectively. Forest company Cascades' spending grew by 177.8%. And, oil & gas company EnCana recorded a hefty 119.7% increase in its spending. Most of the other fast-growing R&D spenders were smaller and younger firms, typically in Pharma/biotech.

| Top 10 Companies by Growth |         |                            |                       |
|----------------------------|---------|----------------------------|-----------------------|
| 2004 Rank                  |         | Company                    | % Change<br>2003-2004 |
| R&D<br>Growth              | Overall |                            |                       |
| 1                          | 93      | ratiopharm (fs)            | 210.0                 |
| 2                          | 69      | Shell Canada               | 180.0                 |
| 3                          | 67      | Cascades                   | 177.8                 |
| 4                          | 41      | Vasogen                    | 137.7                 |
| 5                          | 51      | Cardiome Pharma            | 127.7                 |
| 6                          | 16      | EnCana                     | 119.7                 |
| 7                          | 71      | Lorus Therapeutics         | 113.4                 |
| 8                          | 57      | Angiotech Pharmaceuticals. | 67.9                  |
| 9                          | 65      | Neurochem                  | 65.9                  |
| 10                         | 55      | Sierra Wireless            | 63.1                  |

fs = Foreign subsidiary (includes R&D expenditures for Canadian operations only)

Fiscal 2004 was not kind to all companies. Many well-known firms were forced to drop their spending on research, often in response to weakening business circumstances. This year's list of companies that cut back on R&D includes a number of well-known firms in their sectors.

| Bottom 10 Companies by Growth |         |                       |                       |
|-------------------------------|---------|-----------------------|-----------------------|
| 2004 Rank                     |         | Company               | % Change<br>2003-2004 |
| R&D<br>Growth                 | Overall |                       |                       |
| 1                             | 84      | Celestica             | -39.6                 |
| 2                             | 96      | Labopharm             | -38.3                 |
| 3                             | 97      | Noranda Inc.          | -38.1                 |
| 4                             | 58      | Syncrude Canada       | -32.1                 |
| 5                             | 63      | AEterna Zentaris      | -30.1                 |
| 6                             | 59      | Westport Innovations  | -24.7                 |
| 7                             | 86      | Theratechnologies     | -24.0                 |
| 8                             | 26      | Biovail               | -22.2                 |
| 9                             | 22      | Zarlink Semiconductor | -21.5                 |
| 10                            | 94      | CMC Electronics       | -20.8                 |

## Looking Ahead

In last year's analysis we forecasted, "*Indications are that the year ahead is shaping up to be another disappointment for R&D spending*". Thankfully, we were wrong. Corporate spending seems to have rebounded this year, with total spending increasing and nearly two-thirds of Top 100 firms showing spending growth. The bad news is that R&D growth has not kept pace with even stronger revenue growth. Granted, corporate managers usually restrain spending until they are confident that revenue growth will be sustained, so next year's results will be telling.

How will Canada earn its way in the world of the future? The rising loonie and growing foreign competition - especially in manufacturing - are putting more pressure on companies ... and governments. The successful companies and countries of the future will be those that are best able to develop original knowledge and convert it to tradable goods and services that international customers want and are willing to pay for. And R&D will be key, both at the firm level and the country level. That is why corporate R&D performance is a key indicator of Canada's future.

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