AMRAD Corporation Limited and the Ludwig Institute for Cancer Research have recently announced their collaboration with Baxter Healthcare Corporation to investigate the VEGF-B (vascular endothelial growth factor B) protein as a possible new approach to treating patients with ischaemic heart disease (leading cause of death in developed countries). This agreement not only provides for the sharing of up to US$22 million in licence fees, milestone payments and royalties from the sales of any resulting products by both companies, it also serves to accelerate the development of AMRAD’s AM133 (the VEGF-B protein). According to Mr. John Grace, managing director of AMRAD, one primary consideration in partnering with Baxter was the company’s leadership in research and technologies related to recombinant proteins, particularly Baxter’s Recombinate® brand of recombinant Factor VIII (a genetically engineered blood-clotting therapy for people with haemophilia A). Through the company’s Cardio Vascular Group, Baxter also maintains a leadership in technologies for advanced stages of cardiovascular disease. Under the new agreement, this new potential therapy is expected to achieve clinical and commercial success.

AMRAD and Ludwig have also recently announced a collaboration with RPR Gencell for the development of the VEGF-B gene for gene therapy applications, highlighting the significant international interest and investment in cardiovascular therapy, particularly in respect of VEGF-B.

Two teams working independently discovered and characterized VEGF-B. One team was based at the Queensland Institute of Medical Research (QIMR), an AMRAD member institute, working in collaboration with scientists at AMRAD. The other team consisted of scientists based at the Stockholm branch of the Ludwig Institute for Cancer Research, working jointly with researchers from the University of Helsinki.

Further research on characterizing VEGF-B is in progress at AMRAD’s Burnley laboratories and at Ludwig.

AMRAD Corporation Limited
AMRAD Corporation Limited is an Australian research-based pharmaceutical and biotechnology company. Based in Melbourne, AMRAD conducts research in the fields of virology, neurology, cytokine discovery, screening of natural products and genomics to discover and develop innovative medicines.

Baxter Healthcare Corporation
Baxter, through its subsidiaries, is a global medical products and services company that is a leader in technologies related to the blood and circulatory system. It has marketed leading positions in four global businesses: biotechnology, which develops therapies and products in transfusion medicine; renal, which develops products and services to improve therapies to fight kidney disease; intravenous systems and medical products, which develops technologies and systems to improve intravenous medication delivery, and distributes disposable medical products overseas; and cardiovascular medicine.

Heart Disease and Arterial Vascular Disease
Coronary artery disease is the leading cause of death in the US for men and women over 45 years of age, accounting for approximately 600,000 deaths each year. Coronary artery disease, which can lead to ischaemic heart disease, is estimated to be responsible for more than 10 million deaths per year worldwide.

Arterial or peripheral vascular disease refers to conditions affecting blood vessels carrying blood away from the heart. Peripheral vascular disease, like heart disease, is very prevalent, affecting especially the arteries supplying blood to the lower limbs. Without effective treatment, peripheral vascular disease can lead to limb amputation and death.

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Mitsubishi and Takara Shuzo to Screen for Genetically Modified Soybeans

Mitsubishi Corporation and Takara Shuzo Co., Ltd., Biomedical Group have agreed to cooperate in DNA analysis and identification of genetically modified agricultural products. For a start the companies will be screening soybeans imported by Japan from the US. Japan imports about one million tons of soybeans — almost 90 percent of its needs, and about 80 percent of this is imported from the US. Japanese consumers have voiced concern over the genetically modified soybeans that enters their country from the US because more than one third of all the soybeans grown in the US are genetically modified. They have long requested that genetically modified soybeans is labeled before it is marketed in Japan. However, such demands could not be met because there is no organization which is able to conduct the necessary testing to determine whether a product is genetically modified.

With the recent agreement between the two companies, soybeans grown in the US will be examined through the PCR technique at the Takara Shuzo’s research facility in the US before they are shipped to Japan. In addition, when the soybeans arrive in Japan they will be screened once more at Takara Shuzo’s research facilities in the country. Upon thorough inspection the soybeans will be certified whether they are genetically modified.

Takara Shuzo is licensed by the Roche Group to conduct the food analysis service in Japan that makes use of the PCR-based technologies. Since 1998, the company has been marketing analysis kits for detecting genetically modified organisms (GMOs), and has also been providing on-demand GMO analysis services to co-operatives and ‘tofu’ manufacturers. Mitsubishi Corporation is the largest importer of dietary soybeans into Japan, and has its own network of distribution facilities. Both companies are also considering of setting up a joint company that will handle certification of GMOs — issue certificates attesting that the food that has been inspected is free of GMOs. They have also agreed to join forces to look into the possibility of providing advanced GMO identification services.

Many countries in the world are switching to genetically modified agricultural crops for increased production and better protection against pests. Genetically modified soybeans, corn, rapeseed, potatoes, and tomatoes have been approved for commercial production. The Japanese Ministry of Health and Welfare has declared that over 22 different agricultural products that have been genetically modified, including soybeans are safe for consumption.

Merger to Form Japan’s Largest Drug Wholesaler

Three Japanese drug companies — Kuraya Corp., Sanseido Co. Ltd., and Tokyo Pharmaceutical Co. Ltd. — have agreed to merge on April 2000 to become the country’s largest pharmaceutical wholesaler in terms of sales. The resulting new company is tentatively called Kuraya Sanseido. Its sales is expected to exceed US$6.8 billion and outpace that of the current market leader — Suzuken Co. Ltd. All the three companies are linked to Takeda Chemical Industries Ltd., which is the largest pharmaceutical company in Japan. Takeda has a 71.9 percent stake in Tokyo Pharmaceutical, 22.5 percent stake in Sanseido, and 2.9 percent stake in Kuraya. The pharmaceutical industry in Japan has been affected by recent moves to cut down the price of some drugs.
Merck to Launch Vioxx
A New Arthritis Pill with Less Side-Effects

Merck & Co. is poised to launch a new arthritis pill — Vioxx — touted to be effective in treating osteoarthritis (most common form of arthritis) and relief acute pain. This medication is part of a powerful new class of drugs known as cox-2 inhibitors. It does not cause side-effects such as the deadly ulcers as well as other serious gastrointestinal complications often associated with existing anti-inflammatory medications. Application for approval of Vioxx, is to be reviewed by an advisory panel of the US Food and Drug Administration (FDA). They are expected to reach a final decision by late May 1999.

Merck claims that Vioxx is superior to Monsanto and Pfizer’s Celebrex (a cox-2 arthritis medication similar to Vioxx) in many ways. Apart from the treatment of arthritis, it is likely to be approved for the treatment of menstrual pain, dental pain and other uses, whereas Celebrex can only be used for treating arthritis. Also, Celebrex cannot be used by patients with allergies to antibacterial drugs, whereas such restrictions do not hold for Vioxx. But Vioxx’s greatest advantage over Celebrex, according to Merck research chief Edward Scolnick, lies in its duration of action. Apparently, one dose of Vioxx relieves arthritis symptoms for a longer period of time than a dose of Celebrex. But Monsanto’s spokeswoman counterargued that Celebrex can also be a “once-a-day” pill.

Merck needs Vioxx in order to be at the forefront of the competition between the pharmaceutical giants. It is predicted that in the near future, Merck’s sales will be threatened as many of its most profitable patents will soon expire. Furthermore, the company has suffered as a result of a delay in development of a new antidepressant, which has caused the company to incur some losses. Merck has also recently come up against Pfizer, considered the most aggressive marketer in the industry. It has allowed Lipitor, marketed by Pfizer and Warner-Lambert Co., to become the dominant cholesterol drug in the US, even though its own Zocor had been introduced first. This time, Merck intends to gear up for a marketing battle. The company has hired 700 new sales representatives to aggressively promote Vioxx and other new drugs. Raymond Gilmartin, Merck’s chief executive officer, has announced plans for a large marketing budget for the product’s launch.

Despite the efforts, most industry analysts are not confident of Vioxx’s successful penetration into the market. This is because Celebrex has already dominated a large proportion of the market. Arthritis sufferers content with Celebrex are unwilling to switch to Vioxx. Also, Celebrex is approved for treating the most severe form of arthritis — rheumatoid arthritis — a use that Vioxx will not be able to promote initially. Vioxx is also up against other competitors such as Johnson & Johnson’s cox-2 drug, and Boehringer Ingelheim GmbH’s Mobic. It is predicted that Vioxx will capture only 5 percent of the market for prescription anti-inflammatory drugs in its first year, only a small fraction of Celebrex’s current share of almost 25 percent. Therefore, it seems that Vioxx has to be significantly more superior (such as a clearly enhanced safety profile) than the reigning Celebrex in order to displace it.

It is possible for Merck to weather its patent problems by acquiring another drug company. Merck, however, intends to concentrate on the development of breakthrough drugs, and is counting on its existing medicines to sustain a respectable level of growth.
Terumo to Take Over 3M’s Cardiovascular Business

Terumo Medical Corp. (the wholly owned subsidiary of Terumo Corp. of Japan) announced its acquisition of 3M’s Cardiovascular Systems business recently. The 3M business includes hardware and related disposables that are used to artificially maintain and monitor blood and oxygen flow during cardiac surgery, and has operations in Ann Arbor (Michigan) and Tustin (California). Last year, 3M Cardiovascular Systems’ global sales exceeded US$100 million. The transaction is expected to be completed by the end of May 1999.

There are several reasons for this course of action. Firstly, as Terumo is a company dedicated to technology development and growth of hospital-based cardiovascular devices, it will be able to present opportunities to both employees and customers. Secondly, according to Ron DeVore, president of Terumo Medical Corp., the product offerings of Terumo and 3M are very complementary. He says that the combined strengths will help enhance Terumo’s market presence and provide opportunities to build an industry leadership position. Terumo Medical Corp. is recognized for its innovation in oxygenators and tubing packs, while 3M is recognized for its strengths in the Sarns brand heart-lung support equipment and the CDI brand monitoring products. Thirdly, this acquisition is a critical step in efforts to globalize Terumo’s business.

Terumo Corp.

Terumo Corp. is a premier global medical company with annual sales of approximately US$1.5 billion last year. Terumo Medical Corp. manufactures, markets and sells a wide range of medical products, including syringes, needles, catheters and blood bags, and is headquartered in Somerset, N.J., with manufacturing operations in Elkton, Md., and Ashland, Mass.

3M

3M is a diversified, international company with a healthcare business consisting of more than 10 000 medical, surgical, consumer and home healthcare, dental, and pharmaceutical products. 3M Healthcare is committed to supplying reliable products and services that make a difference in the practice and outcome of healthcare delivery. 3M, Sarns and CDI are trademarks of 3M company.

Zeneca’s Joint Venture in China Takes Off

Construction work for Zeneca Agrochemical’s pesticide plant in Nantong, Jiangsu Province, China, commenced recently. The plant is part of the company’s US$85 million joint venture project in China. It is expected to be completed by 2001 and will manufacture the herbicide paraquat, an active ingredient in ‘Gramoxone,’ one of Zeneca’s leading herbicide brands and one of the world’s largest selling crop protection products. The demand for ‘Gramoxone’ in China is expected to increase. At present, China has not permitted any local herbicide producers to manufacture paraquat. The new plant has the capacity to produce 6000 tons of paraquat herbicide per annum. Zeneca’s joint venture company in China — Zeneca Nantong Agrochemical Company — is said to be the largest foreign-funded joint venture in China’s agrochemical sector.