

RESEARCH AND DEVELOPMENT

- › To leverage and hone its core competencies in Opto-Digital Technology, the Olympus Group conducts ongoing, proactive R&D into optical, digital imaging and microprocessing technologies. In addition, the Group is endeavoring to develop various cell-related technologies to add another core competence.

In the fiscal year ended March 31, 2008, R&D expenses amounted to approximately ¥65.9 billion, a year-on-year increase of 18.7%. The ratio of R&D expenses to net sales was 5.8%, which indicates the Group's intensified focus on technological R&D activities.

Imaging Systems Business

1. Development of E-420 interchangeable-lens-type digital SLR camera

- › Olympus has developed the world's slimmest and smallest*1 digital SLR camera, the E-420. This is an upgraded version of the E-410, which gained popularity for its excellent portability and high-quality images. In addition to improved portability, achieved by exploiting the E-410's Four Thirds System standard, the new E-420 is equipped with new technologies, including Auto Focus Live View and Face Detection and Shadow Adjustment, so that even beginners can take high-quality, natural-looking pictures.

*1 Of all interchangeable-lens-type digital SLR cameras as of March 5, 2008 (in-house research)

2. Development of μ [mju:] 1020 compact digital camera

- › Thanks to its proprietary lens development technology, with the slim and stylish μ [mju:] 1020 Olympus has produced a camera with optical 7x zoom in a body as compact as a model with 3x zoom. With a high-definition, 10.1-megapixel CCD*2, Olympus' unique TruePic III image processing engine and a lens that can provide precise images, the μ [mju:] 1020 enables high-quality photography. In addition, Olympus' proprietary Face & Back Control function detects faces (Face Detection function) and automatically adjusts the focus and exposure, while giving appropriate exposure control to the background (Shadow Adjustment Technology). These characteristics realize precise images with both the subject and background of the photo in focus.

*2 Effective pixels in camera

3. Development of AF Live View function for interchangeable-lens-type digital SLR cameras

- › Olympus first installed the Full-Time Live View function in the E-330, making it the first camera in the world to



combine auto-focusing and live view functions. In the E-420, Olympus succeeded in incorporating a more compact yet more functional AF Live View function at lower cost. With the High-Speed Imager AF system, when the shutter button is pressed down halfway in Live View mode, the image sensor detects the contrast values and adjusts the focus to the peak contrast position.

Medical Systems Business

1. Development of EVIS LUCERA small intestinal videoscope, OBCU Balloon Control Unit and ST-SB1 Single-Use Splinting Tube

- › Olympus conducted development of these products in response to medical facility needs, such as shortened examination times for tissue diagnoses, treatment by simple operations that combine accurate diagnosis by means of flexible endoscopes, and therapeutic devices for the small intestines. In recent years, capsule endoscopes have enabled the diagnosis and detection of diseases in the small intestines. In addition, these products are making a valuable contribution to highly efficient examinations and treatments.

2. Development of OLYMPUS ENF TYPE VT2 VISERA nasopharyngeal videoscope

- › To assist in tissue extraction and the collection of foreign bodies, Olympus developed an operative videoscope that incorporates an array of devices for the observation and treatment of the nasal cavity, pharynx and larynx. Thanks to its high-resolution CCD (object imaging element) and an optical system with greater depth of field, this videoscope produces high-resolution, narrow-band imaging (NBI) at ranges as close as 2.0mm. Boasting these characteristics, during endoscopic observation, NBI enhances visualization of the capillary network morphology, and is expected to make a contribution to doctor diagnosis of that part of the malignant tumor in which the capillary concentrates.

3. Development of disposable guide sheath kit

- › Olympus developed the disposable guide sheath kit in response to the requirement for diagnosis of minute cancers in the peripheral lung. The development was conducted to enable more accurate extraction of specimens from the peripheral lung, which is inaccessible with a bronchoscope. This achievement has contributed greatly to the field of minimally invasive treatment, which reduces patient exposure to stress by shortening examination times and exposure to X-rays.

Life Science
Business

1.
Development of MX61A automated semiconductor microscope

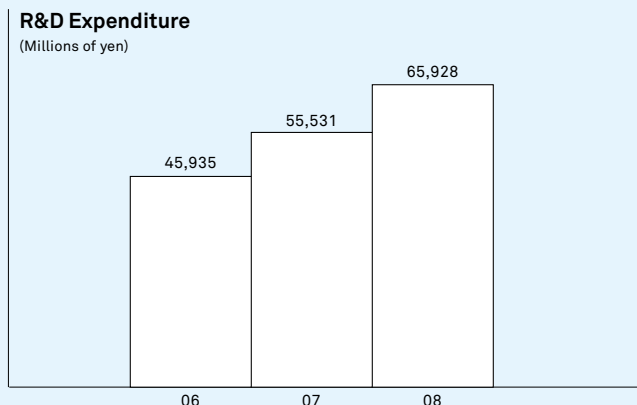
- › Based on the new concept of two selectable controllers, depending on the need for either semiconductor inspection or analysis, the new MX61A automated semiconductor microscope is Olympus' top-end model. Enhancing its operability, the MX61A displays the automated and electric-powered operation necessary for microscopic observation. In addition, the product boasts flexibility and excellent extensibility to meet each inspection and analysis need, realizing improved defect detection and better operational efficiency.

2.
Development of OLCOS blood transfusion control system II

- › The OLCOS, a blood transfusion control system that enables uniform management of results of transfusion test, transfusion history and inventory and specimen reserves of blood products, handles the entire process from collection to the taking of statistics of blood transfusion-related data. Providing due control over infection test result data before and after transfusion as well as specimen reserves, the OLCOS will contribute to streamlining blood transfusion and hospital managements.

3.
Development of CELAVIEW RS100 cellular imaging analysis system

- › This cellular imaging analysis system responds to the needs of screening by fluorescent quantitative analysis or morphology analysis. The CELAVIEW RS100 assists in the cellular function analysis frequently conducted in the cutting-edge life science fields, including drug discovery and the study of disease.



Others



1.
Development of IPLEX FX industrial videoscope

- › Olympus has developed an industrial videoscope that can be used by anyone, anywhere. Such usability was realized thanks to a number of features including: an optical tip adaptor with cutting-edge LED lighting; high-resolution images provided by wide dynamic extended range; a dust-proof, rain-proof and drop-proof base unit that meets the MIL standard with its sealed structure thanks to its magnesium chassis; power-assisted articulation that simplifies operations and gives a better response; and a new measuring mode that measures areas and lengths by automatically recognizing defective areas.

2.
Olympus Terumo Biomaterials Corp. awarded international standard for "Artificial Bone Quality System Requirement"

- › On December 12, 2007, biomedical materials manufacturer Olympus Terumo Biomaterials Corp. was awarded certification for its "MDD93/42/EEC Annex.II.3 (artificial bone quality system requirement)" in addition to the international standard ISO 13485: 2003 for medical equipment quality management systems.

3.
Use of heterogeneous materials in development of micro cantilever with polycrystal diamond tip

- › By using heterogeneous materials (diamond/Si or SiN), Olympus has succeeded in developing micro cantilevers containing a multicrystal diamond exploratory needle that can be used for nano-cell mapping. This research formed part of the R&D activity into diamond nano-tip for nano-cell mapping conducted under the Nanotech Apical Parts Materials Commercialization initiative by the New Energy and Industrial Technology Development Organization (NEDO).

