

## Israeli science prizes

# Acceptance bestowed at last

### Rehovot

THE Wolf Foundation prizes, which will be presented next week in Jerusalem for the fifth time, have now come in from the cold.

Their very creation was resisted tooth and nail by the Israeli scientific establishment, which thought that the \$10 million set aside by a then anonymous donor would be better spent on financing research than in giving out prizes. Moreover, critics argued that it would be pretentious for Israel to serve as a venue for the distribution of "imitation Nobel prizes".

So in the mid-1970s, when the idea was first mooted, the heads of the Israel Academy of Sciences and Humanities pleaded with Prime Minister Golda Meir, Finance Minister Pinchas Sapir, Education Minister Aharon Yadin and the donor that the project be shelved. The government leaders were willing to listen, but not the donor, and since it was his money the prizes came into existence.

That donor, whose identity was only made public in 1978, was Dr Ricardo Wolf, a German-born inventor who spent most of his life in Cuba before coming to Israel in 1961 as Cuban Ambassador. Although a millionaire, thanks to his development of a process for recovering iron from the residue of smelting, Dr Wolf was a great believer in social justice and an early supporter of Fidel Castro in his revolt against the Batista regime. After Castro came to power, he appointed Wolf as an ambassador, first to Italy and then to Israel.

When Cuba broke off diplomatic relations with Israel in the wake of the Yom Kippur war, Wolf, then already in his 80s, decided to remain here and devote himself to philanthropy, with special emphasis on the promotion of science and the arts. As a result he established the Wolf Foundation and brought about the passage of a special law by Israel's Knesset in 1975 whereby the five \$100,000 Wolf prizes were to be presented each year by the President of Israel in the Knesset building.

Even now, the president of the Israel Academy of Sciences and Humanities, Professor Ephraim Orbach, and his immediate predecessor, Professor Aryeh Dvoretzky, regret that Dr Wolf's gift is not being used to support the work of young scientists rather than for prizes to established scientists who, in Dvoretzky's view, "don't need the money anyway". But both Orbach and Dvoretzky are pleased that the Wolf Fund is financing some scholarships and research, and neither question the stature of those given Wolf prizes.

This is particularly clear in the field of medicine, where three of the eleven men honoured between 1978 and 1981 — Professor George D. Snell of the Jackson Laboratories in Bar Harbor, Maine, Professor Jean Dausset of the St Louis Hospital in Paris and Professor Roger W.

Sperry of California Institute of Technology — went on to receive Nobel prizes.

Medicine is also the only scientific field in which an Israeli, Professor Leo Sachs of the Weizmann Institute, has won a Wolf prize. Since that time, cancer researcher Sachs has garnered other honours, including, last month, the Bristol-Myers prize in New York.

Three "non-Nobel" fields are recog-

nized by the Wolf Foundation: agriculture, mathematics and the arts. Professor Isaac Harpaz, former dean of the Hebrew University's faculty of agriculture, says that agricultural researchers in Israel and abroad are very grateful that their work has been recognized in this way, for the first time anywhere.

Harpaz believes that Israel's prestige in the world of science is enhanced by the fact that the prizes are awarded here. This view is echoed by Professor Sachs, who says they reflect "Israeli — and indeed Jewish — appreciation of intellectual values".

**Nechemia Meyers**

## India's space programme

# Hopes soar with successful launch

INDIA has demonstrated its continuing progress in space research by putting into orbit yet another satellite using the indigenous satellite launch vehicle SLV-3. The four-stage solid-fuel rocket blasted off without a hitch from the Sriharikota launch-pad on the east coast on 17 April, placing the 41.5 kg satellite in an elliptical orbit at 45 degrees inclination with perigee 438 km and apogee 975 km. The Rohini-II (named after the birth star of Lord Krishna, the Hindu god) is second in the series of "50-kg" satellites India has been building with Soviet hardware and technical assistance. The latest satellite carries a charge-coupled device array imaging system called SMART to be evaluated for remote sensing applications.

The successful launch has restored the morale of the Indian Space Research Organization (ISRO), which had reached a low point after the failure of the US-built multipurpose commercial satellite (INSAT-1A) which followed an unsuccessful SLV-3 launch. But the orbiting of Rohini-II has changed all that and Prime Minister Mrs Indira Gandhi, who witnessed the latest SLV-3 launch, promised more funds for space research in the next ten years.

SLV-3, intended to be the workhorse of India's future space missions, had been flight-tested three times previously but only once successfully. ISRO now says there will be no more developmental flights and SLV-3 is considered operational. Its future payloads will be applications satellites, including one for reconnaissance. The Indian planning commission has already sanctioned funds for an augmented SLV (ASLV) that will have two strap-on solid boosters to give 150 kg payload capacity. ISRO has also been given the go ahead for the ambitious polar satellite launch vehicle (PSLV) project aimed at placing 1,000 kg satellites in polar orbit.

PSLV will use a liquid-fuelled engine in the second stage identical to the Viking engine used in the Ariane launcher of the European Space Agency. The first PSLV launch is scheduled for 1986 and work on testing the liquid propulsion system is soon to start at the newly acquired site on 5,000

acres of forest land near Trivandrum.

Meanwhile ISRO is getting ready for the INSAT-1B multipurpose satellite scheduled for launch by the US space shuttle in August. INSAT-1A and INSAT-1B were built by the Ford Aerospace Corporation, with whom negotiations have begun for INSAT-1C. □

## Exosat — please wait

THE European Space Agency (ESA) has now fixed a date for the launch of the X-ray satellite Exosat — but once more the astronomical community is trying to persuade it to change its mind. The scheduled launch date of 26 May will give the satellite a useful lifetime of about 2.8 years. But the astronomers say that by delaying the launch by a month, the useful lifetime could be extended by a year. Unfortunately, the change would involve a financial penalty for ESA — and some loss of face.

The Exosat satellite has had a troubled time ever since its conception, most recently because of ESA's intention to launch the satellite on the delayed Ariane rocket. Earlier this year it was agreed (see *Nature* 3 March, p.4) that the satellite should after all be launched on a Thor-Delta rocket from the Vandenberg test range in California, and ESA's director of scientific programmes, E. Trendelenburg, duly signed a contract with the National Aeronautics and Space Administration (NASA) for a launch on 26 May.

Unfortunately, it has since become clear that a later launch would permit Exosat to use an orbit that combines a greater perigee height (and hence less air resistance) with more efficient use of fuels to control spacecraft attitude, increasing the useful lifetime to four years. The useful lifetime increases quite rapidly with launch delay, but at a diminishing rate so that even a few days could make a substantial difference. The question now is whether ESA can be persuaded by Exosat's scientists to pay the money required both internally (to keep the ESA Exosat team together) and externally (to reimburse NASA for the extra costs involved).

**Philip Campbell**