

any provision for granting 'exclusive marketing right'. Similarly, the arrangement provided for receiving product patent applications immediately after coming into force

of the Uruguay Round Agreement should be totally excluded. Retroactive pipelines must be rejected.

(f) The provisions of cross-retaliation between sectors pro-

posed in the Draft Final Act is against GATT discipline and should be rejected. Further, any unilateral action of retaliation should be explicitly prohibited.

## News from IUCAA

After its dedication on 28 December 1992 (see *Current Science*, 1993, 64, 551), the tempo of activities of the Inter-University Centre for Astronomy and Astrophysics has picked up. The Centre conducted its first Refresher Course in A&A for college and university teachers in May this year. A regional school on introductory astronomy was held in Thiruvanthapuram in March and a research workshop on pulsars at IUCAA in Pune in February.

As in previous years, a Vacation Students Programme was held during June-July when selected postgraduate students from their penultimate year were given introductory pre-research projects and a few lectures over a six-week period, after which those interested were interviewed for an advance

offer of research scholarship at IUCAA. This is one of the ways tried in a few research institutions for attracting students to areas in pure science.

At the other end of the spectrum, IUCAA has introduced several programmes directed at secondary schoolchildren. On the National Science Day (February 28) there was a science quiz and several other programmes in which about 125 schoolchildren participated. In the summer vacation about 80 children each spent a week at IUCAA interacting with the academic and scientific members through projects that would give them glimpses of A&A. Since July, every second Saturday of the month there are lecture-demonstrations for them. This has caught on and in the September programme the

new 500-seater auditorium was overflowing.

The completion of the auditorium was just in time for the first major international meeting to be held on the campus. The Sixth Asian Pacific Regional Meeting of the International Astronomical Union was jointly hosted by IUCAA and the National Centre for Radio Astrophysics during August 16-20. Over a hundred overseas participants and nearly double that number from India participated. The academic programme and the local arrangements were appreciated by the visitors. The Indian Academy of Sciences will publish the proceedings of the Meeting.

Jayant V. Narlikar, IUCAA, Pune.

## At what price – sore throat?

A symposium on streptococcal infection, rheumatic fever and rheumatic heart disease was held on 25 July 1993 at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram. The symposium focused on the problems in laboratory diagnosis, recent advances in management and the inadequacy of control measures. M. S. Valiathan (SCTIMST, Thiruvananthapuram) inaugurated the symposium and pointed out that research in rheumatic fever and rheumatic heart disease was hampered by the presence of an animal model.

In his presidential address, George Jacob highlighted the magnitude of the problem of rheumatic fever and rheu-

matic heart disease in India and other developing countries. The prevalence is about 100/100,000 population and each year 6/1000 children are newly affected. About 30-40% of the hospital admissions in a cardiology unit consists of rheumatic heart disease. He also drew attention to the virtual disappearance of rheumatic fever among affluent populations in the West, which is one of the dramatic events of recent medical history. This is attributed not to the magic of penicillin, but to better living conditions and clean environment. Indeed, overcrowding with poor ventilation perpetuates cross infections. But K. N. Brahmattan (Christian Medical College, Vellore) struck a

warning note – there has been a resurgence of rheumatic fever in USA with an outbreak in Utah, Ohio and Hawaii. He also spoke about a new entity – streptococcal toxic shock syndrome and also about streptococcal G infections in post-renal transplant patients. Toxic shock syndrome is believed to be related to streptococcal pyrogenic exotoxin-A which has 50% amino acid homology with staphylococcal enterotoxin-B.

N Sathy (Medical College Hospital, Thiruvananthapuram) touched upon the pitfalls in the diagnosis of rheumatic fever and discussed various conditions which can mimic rheumatic fever. The participants felt that

the Jones criteria have stood the test of time and should be applied to a given case when arriving at the diagnosis.

Shanmugham spoke about the structure of Group A streptococcus. The pathogenic strains are rich in M-protein on their cell walls and there are more than 80 M-types which are of epidemiological importance besides their pathogenic significance. The T type antigen has no pathogenic importance but is of epidemiological value. He also discussed the diagnosis of rheumatic fever which is still not fool proof. Raised antistreptolysin O (ASO) titre, despite its shortcomings, still remains the gold standard. Reba Chabra (Lady Hardinge Medical College) drew attention to a low cost diagnostic kit developed by their institute. This kit may be helpful in field surveys.

Jagan Mohan Tharakan (SCTIMST) gave a very colourful account of the echocardiographic (ultrasound) evaluation of the cardiac lesions and explained how patients can be sent for surgery without invasive techniques such as cardiac catheterization. Recent developments such as colour doppler and trans esophageal echocardiogram (TEE) are powerful diagnostic tools in the hands of the cardiologist.

The field of invasive cardiology has expanded by leaps and bounds and balloon valvotomy has become an established procedure in the treatment of

mitral stenosis. Here by using a special balloon catheter which is passed from the groin into the heart, the narrowed valve is dilated. This technique was explained in detail by G. Girija (Medical College Hospital, Thiruvananthapuram) and she showed that the results are comparable with those of operative treatment. This procedure is really a boon, especially in the Indian context, where a surgical scar is like a brand preventing many a young girl from marrying. However, the balloon is still very expensive (about Rs 20,000 for the conventional balloon and Rs 40,000 for the Inoue Japanese balloon). By using the balloon 5 or 6 times after sterilization the cost of the procedure can be cut down.

In many cases surgery is the only answer and the human valve has to be replaced by an artificial valve. The indigenously developed Chitra Valve has already been successfully implanted in more than 300 patients. However, all the surgeons were unanimous that the artificial valves are still a poor substitute for the human valve and hence surgical repair of the native valve rather than replacement may be undertaken in selected cases. Repair has been found to give satisfactory results.

The session was concluded with a couple of lectures on the epidemiology of rheumatic fever and here we came to

a very practical problem. Patients with rheumatic fever and rheumatic heart disease have to virtually take life long penicillin prophylaxis. Conventionally, long acting penicillin (Penidure) is given once in every three weeks to prevent streptococcal infection. Unfortunately allergic reactions are common and even deaths have occurred in some instances. Therefore private practitioners are reluctant to give Penidure, thus necessitating patients going to government hospitals for just an injection, creating further congestion in the already overburdened public services. Those assembled unanimously agreed that as medical personnel we should take an active part in solving this deadlock. The need to develop an antistreptococcal vaccine was pointed out.

Simple sore throat can indeed rage a terrific battle but the medical community is all geared up to win the rheumatic war. Small pox, a scourge of mankind, has been eradicated from the face of the earth. This has been one of the great triumphs of medical history. We look forward to yet another miracle.

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