

# Soviet Academy faces grass-roots revolt

- Academy's official candidates at risk
- Democratic fervour takes a hold

## Moscow

THE nomination conflict at the Academy of Sciences of the USSR is building up to a dramatic denouement this week — the academy's list of candidates may even be voted down by the academy's research institutes. The conference at which the academy will elect 20 of the 23 nominated candidates was scheduled for 20–22 March, at the Youth Cultural Centre in Moscow. The voters will be the 907 full and corresponding members of the academy and 440 institute representatives.

Since the January meeting at which Academicians Andrei Sakharov and Roald Sagdeev were voted down despite the recommendation of many institutes, ordinary scientists have seen the outcome as a blatant disregard of their opinions. After the protest meeting outside the academy on 2 February (see *Nature* 337, 593; 1989), several institutes formed a group to press for democratic elections.

Now the group has held a meeting of Moscow-region delegates to this week's electoral conference at which it was agreed to vote against all 23 official nominees unless the list is abrogated or enlarged (but enlargement is no longer possible). The Moscow region accounts for nearly half of all academy scientists.

The meeting emphasised that its intended "No" vote is not directed against particular nominees but is a protest against the "list imposed on the academy conference despite public opinion".

Even so, the outcome may be dramatic. Under the election rules, candidates who

fail to secure at least one vote more than half of the total eligible to vote will not be elected. If the number of successful candidates is fewer than 20, the conference will have to nominate further candidates on the spot, which is what the protesters want. Much will depend on the full and corresponding members of the academy, who will have a majority this week.

Will the academy bosses allow those with fewer letters after their names to carry the day? The answer cannot be simple. Not only the election is at stake, but the other issues triggered by January's nomination meeting, which in retrospect is the stone that started an avalanche of reforming public opinion in science.

Democratic reform is sweeping the academy. The procedure of electing institute, department and laboratory heads has been changed beyond recognition. Research groups compete for research grants, which is a novel development. Think tanks are set up for particular problems in research and development.

But the outdated is stubborn and tenacious, even though the backward-looking do not offer open resistance. Moth-eaten patterns of behaviour have inertia, and the research community is wary of risky ventures.

The protest meeting at which the decision was taken to vote "No" against the official list of candidates was also the first to voice a now-popular idea — that of creating an independent Soviet scientists' union. The praesidium of the academy supported this initiative at its meeting of 7 March, and appointed a working-group under Yuri Osipyan, an academy vice-president and director of the Moscow Solid State Physics Institute, to study the idea; a national researchers' conference is planned.

But the inter-institute activist group is in a ferment, regarding the academy's action as a means of appropriating its own project and of attaching the budding union to the praesidium.

At a rally of Moscow researchers which I attended on 11 March, the union's prospects were debated. Although the organizers had invited members of the academy's upper echelons, the bosses were conspicuous by their absence. The rally adopted the text of an address to Soviet scientists about the formation of the union, and elected an organizing committee with close on 40 members. An inaugural conference is expected in May.

**Yuri Kanin**

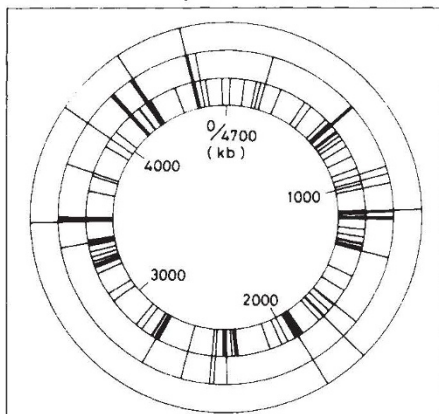
*Nature Moscow correspondent/Novosti*

# Full sequence for *E. coli*

## Tokyo

JAPAN'S Ministry of Education, Culture and Science (MESC) will shortly announce its backing for a project to sequence the entire genome of the bacterium *Escherichia coli*. With luck, *E. coli*'s estimated 4,700 kilobase pairs, one thousandth the number of the human genome, could be sequenced in five years. Funding for the project will remain uncertain until the Diet passes the 1989 budget, delayed by political quarrels over the Recruit bribery scandal. But given the scale of MESC's 'priority areas of research' fund, it seems likely that more than a million dollars a year will be provided for an initial three years.

The project is led by Takashi Yura of Kyoto University and Katsumi Isono of



By July 1987, most of the *E. coli* genome had been cloned, as shown in the outer ring here. The bars represent uncloned regions and the inner two rings show the 'gaps' closed by successive clonings. Scale in kilobases from 0 min. the *thr* locus. (Modified from Y. Kohara, K. Akiyama and K. Isono, *Cell* 50, 495; 1987.)

Kobe University and builds on a physical map of the *E. coli* chromosome put together from 3,400 clones (see box). Researchers from Kyoto, Kobe, Osaka and Tokyo universities will make up the core of the project, but international collaboration should become possible once a clone bank has been established at the National Institute of Genetics at Mishima.

Of course, *E. coli* has already been extensively studied. More than 1,000 genes have been mapped and about 450 kilobase pairs have been sequenced by researchers around the world. Isono says he hopes his laboratory alone will be able to manage 200–500 kilobases a year. He adds a note of caution, however, because in sequencing projects, "90 per cent of the work is done in 50 per cent of the time", with unbridgeable gaps remaining.

If successful, the complete *E. coli* sequence will be the first for an independently living organism. **Alun Anderson**

IMAGE  
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REASONS

Moscow spring: thousands marched in Moscow in support of pro-perestroika Boris Yeltsin in Sunday's election.