

US nutritional research

Your grant is what you eat

Washington

NUTRITIONISTS find themselves divided on the activities of United Sciences of America (USA) Inc. Founded just six months ago, USA intends to put some \$1.2 million a year into nutritional research; the trouble is that the company's profits come from "network marketing" of "revolutionary dietary supplements". Despite USA's distinguished scientific board, many experts are sceptical about the value of dietary supplements for the general population and object to USA's advertising.

USA was founded last year by Robert M. Adler, a telecommunications entrepreneur. Its promotional videos make much of the claimed scientific merit of USA's preparations; a slickly produced 1985 video features views of huge computer rooms where research data is stored, and brief shots of the covers of *Nature* and the *New England Journal of Medicine*. The scientific advisory board includes two Nobel prizewinners and other well-known medical researchers. Critics allege, however, that not enough is known about some of the ingredients to recommend dietary supplements.

In addition to a retainer (at least for some members), members of the scientific advisory board get first shot at USA's research awards. Two weeks ago, at a meeting at its Dallas headquarters, USA approved its first twelve awards totalling \$600,000, of which several went to board members. But the meeting also spawned disagreement among the advisory board on the company's use of members' names for endorsements. One member, Dr Alexander Leaf of Harvard Medical College, threatened to resign unless his name was removed from endorsements.

According to Dr Jeffrey Fisher, USA vice-president for product development, the company will eventually offer a nutritional plan, a weight management plan and an aerobic fitness plan. The catchword is "optimal health". So far only the nutritional plan is on the market: it consists of a preparation of vitamins, trace elements and amino acids billed as rich in anti-oxidants; a "fibre energy bar" that includes a complex mixture of carbohydrates and a proprietary blend of cotton seed and surimi protein; a calorie control formula, again with special proteins; and a marine lipid concentrate containing omega-3 fatty acids, antioxidants and garlic extract.

Many of the ingredients are the subject of legitimate research. But many nutritionists question the strength of the evidence on which USA's products are based. Some, such as Dr Robert Good of the University of Southern Florida, chairman of the scientific advisory board, be-

lieve that indirect evidence is sufficient to recommend that the public take, for example, fish oils. But others, such as Henry Kamin of Duke University, who recently chaired a controversial National Research Council dietary study, believe that to offer fish oil supplements to the general public is "grossly premature".

Kamin — and many others — believes that epidemiological evidence (such as the low rate of heart disease among eskimos who eat a lot of fish) should not be used as a basis to "stuff people with fish oils" until possible hazards of long-term use are evaluated. Even if they could benefit some individuals, nobody has any idea of what would be a good dosage of omega fatty acids, according to Kamin. One of USA's recent research awards was to Leaf to investigate the effects of different levels of fish-oil supplements on blood chemistry.

Kamin also argues that there is no need for special protein blends with good amino-acid balance when the typical US citizen daily eats more than three times the amount necessary. He questions the relevance of the scientific advisory board's expertise; although a celebrity cast, few if any members are primarily nutritionists, a point admitted by Fisher.

Other features of the USA products are also contentious. Victor Herbert of Mount Sinai School of Medicine says there is "no evidence" that taking supplementary doses of vitamins E and C above national recommended daily allowances has any protective effect against cancer, a conclusion reached by the National Academy of Sciences in 1982.

USA's advertising is careful not to make any claims about specific health benefits, which would in the eyes of the Food and Drug Administration make the product a drug needing trials for safety and efficacy. But the 1985 video, which dwells darkly on environmental pollution and blames it for high heart disease and cancer rates, manages to suggest directly that USA's products might counter these hazards.

Leaf, chairman of the department of preventative medicine and clinical epidemiology at Harvard Medical College and a member of the scientific advisory board, is quoted in USA promotional materials as saying that "the four formulas of USA Inc. together constitute a nutritional plan that is the finest and most complete I have ever seen". But Leaf denies making such a statement and says he thought he had been "a little naive" in his dealings with USA Inc., having been told only that he would serve as a consultant. Leaf said he was threatening to resign from the advisory board unless his name was removed from product endorsements

and that other members had made similar protests. The American Heart Association's logo is also apparently used in the video without permission.

USA's sales method is a source of concern to some. Described by Fisher as "as innovative as the programs", it involves individuals becoming "associates" of the company and then recruiting more associates — similar to "pyramid selling". The Food and Drug Administration points out that it is difficult to police claims made for products sold in private. But Dr Robert Morin of the University of California at Los Angeles, another member of the advisory board, contends that the instructional materials provided by USA Inc. make "network selling" preferable to simple counter sales.

Good says the dietary programme has been established "within conventional scientific wisdom" to provide "under-nutrition without malnutrition". Good admitted that he had not seen USA's promotional video. But he is a believer in the benefits of anti-oxidants, which may inhibit some ageing processes. Good says he has been able to forestall death of genetically short-lived animals in all species so far studied, and believes there are sufficient data to promulgate cautiously dietary supplements to the public. And Good believes that a weight-reduction plan must include protein supplements.

Fisher admits that early videos were "too hypish" and says later versions were toned down. And he admits that there is debate about some nutrients in USA products but says science is coming around to USA's point of view. **Tim Beardsley**

Young Hungarian

SZEGED University's Department of Natural Sciences has called on the Hungarian government to cut military spending and uneconomic large-scale projects and to devote the money saved to improving higher education and the standard of living of young graduates. Although such issues have been raised before in Hungary's underground press, this is the first time that they have been explicitly stated in an official context, at least since the discussions that led up to the 1956 uprising.

The Szeged group, which consists of young academic and graduating students, submitted its proposals to the Congress of the Hungarian young communist movement in May. Officially they were ignored and, according to some unconfirmed reports, copies of the university newspaper, *Szegedi Egyetem*, which carried the proposals, have been impounded.

Even apart from the proposal that military spending should be "rationalized", the Szeged document is bound to be controversial. One proposal is that the univer-

Information technology

Where next for Alvey?

BRITAIN'S Alvey programme, aimed at strengthening the information technology industries through collaborative research with the universities, appears to be at a critical stage. Last week's Alvey conference made clear that the programme, now halfway through its five-year life, has produced enough successes to excite government, universities and industry. But nobody is sure how to keep the momentum going to ensure long-term industrial success.

The 600 delegates at the conference at the University of Sussex were clearly optimistic about the future. The Alvey programme is a unique attempt to break down the barriers between the universities and industry in key areas of information technology: very-large-scale integrated circuits, software engineering; intelligent knowledge-based systems; and man/machine interfaces. To ensure industrial involvement, even the smaller basic research projects carried out at universities must have an industrial "uncle" — someone from industry who will alert colleagues when an idea begins to look worth industrial development.

Three hundred and three projects are now under way at a cost of almost £200 million to the government plus a somewhat smaller amount from industry. One hundred and eight companies are participating alongside 53 universities and polytechnics (Imperial College, Edinburgh and Cambridge form the first league), a

academics protest

sities be given real, not merely symbolic, control over their budgets and the right to choose their own officials, rather than have them appointed by the state.

A further suggestion is that student grants should be pegged to keep pace with inflation and that less weight should go to means testing of family income. This would favour better-off families and is liable to be opposed by Party hard-liners.

Another proposal raises the whole question of the relationship between workers and intellectuals in a socialist state. In Hungary, entitlements to annual leave, pension rights and priority for housing are all related to length of service at a particular enterprise. Young graduates entering the system thus find themselves disadvantaged because they are five years behind in acquiring benefits compared with a worker who entered employment direct from school. The Szeged group is now asking for the years of study to be counted in the employment record — a seemingly modest proposal but one with clear political overtones.

Vera Rich

level of cooperation that Minister of State for Information Technology Geoffrey Pattie described as "probably unprecedented in peacetime". But as John Alvey, who originally proposed the programme, put it, "we have won some victories, but haven't won the war". The test will be the international marketplace. If saleable products cannot be produced, then Britain's industrial position will fall back still further.

Much discussion centred on what must be done to prevent this happening. Those actively involved in research tended to concentrate on the details: is there not, for example, an easier way to cope with drawing up cooperative agreements? Big delays have been caused. And would it not be wiser to have a central research institute instead of distributing work throughout the participating laboratories? Advantages of the former are that it quickly creates a critical mass of expertise and avoids duplication. But it can too easily become an ivory tower. The really big questions, spelled out by Pattie, were of government support and the balance between national and international programmes. Although everyone would like funding to continue, the pre-competitive research of Alvey must be commercially exploited and the postgraduates who have been trained persuaded to move on to industry.

For the balance between international and national funding, critical decisions must be made soon. The huge industrial high-technology programmes, ESPRIT and RACE (for information and communication technology), lie within the European "research and development framework programme", designed to shape policy for the next five years. The outline of the programme is now before the European Community's science ministers. Where will the post-Alvey programme fit? According to Pattie, international programmes cannot substitute for national ones, for the latter are necessary to give strength in collaborative projects.

A formal "After Alvey" committee, chaired by Sir Austin Bide, has already been set up and will report in the autumn. Submit your evidence to Sir Austin, said Pattie: "no decision has been predetermined" and "real decisions" will be made. But as one iconoclast at the meeting put it, "can any number of collaborative programmes be a substitute for the rationalization of Europe's information technology industries?" Without markets and companies of the size found in United States and Japan, can Europe's excellent research ever be successfully exploited?

Alun Anderson

Chinese science

Legal protection for scientists

CHINA is to have a new law to protect societies from "outside interference". Addressing the third national congress of the Chinese Association for Science and Technology (CAST) last month, Song Jian, minister in charge of the State Science and Technology Commission, noted that the proposed law would give "official status to scholarly societies and define their role". It would regulate their relationship with the Communist Party, the government and state-owned collective and individual enterprises, Song said, as well as guaranteeing that their work could proceed "along normal lines".

China has 138 learned societies and organizations with 1.8 million members, who, in their turn, according to Song, are "in touch with a further five million scientists and technicians". The need for legal protection for scientific and learned research has been much discussed in the Chinese media during the past two months, in connection with the thirtieth anniversary of the launching of the "double hundred" policy ("Let a hundred flowers bloom, let a hundred schools of thought contend") which in recent years has been restored to official favour. The Constitution of the Peoples' Republic of China (Article 47) stipulates that "citizens have freedom to engage in scientific research, literary and artistic creation and other cultural activities", but this did not save scientists and scholars during the cultural revolution. Promulgating a specific law to cover learned activities, however, is felt to be sufficient, in the words of the *People's Daily*, to "ensure the implementation of the 'double hundred' without any intervention by or hindrance from either 'leftist' or 'rightist' tendencies".

The new law, and the "double hundred" policy itself will not give the scholars total independence. Social scientists, economists and philosophers will be allowed, within their learned environments, to investigate and consider non-Marxist theories. If they are asked to provide recommendations for practical implementation in production or society, however, they must base their proposals on sound Marxist principles. The natural scientists come off somewhat better, since, according to the *Peoples' Daily* and other leading commentators, the natural sciences can only flourish properly when kept clear of misleading ideological and philosophical labels. Frequent reference has been made recently to the Qingdao genetics forum of August 1956, which broke the monopoly of Lysenkoism in China as the exemplar of the proper "contention" of scientific ideas.

Vera Rich