# AMA Research Institute: Trouble on the Road to "Utopia"

*Chicago.* In October 1965, the American Medical Association (AMA) dedicated its new Institute for Biomedical Research with the hope it would become "a prototype for a utopian research facility." As described by the president of the AMA's Education and Research Foundation, which governs the institute, the new facility was to provide an environment that would permit "a few selected individuals of exceptional qualifications . . . to realize their fullest capabilities free of the demands of frequent and hurried publications, the hours of teaching, the competition of project grantsmanship, and the far too many unnamed compulsions and even irritations that have confronted research in America." Instead of vying for grants and conforming to the requirements of granting agencies, institute scientists were to receive "superior salaries," ranging from $25,000 to $45,000 a year for full members, and be furnished all the equipment, facilities, and other supporting materials they needed. They could design their own laboratories (within space limitations), hire their own assistants, be eligible for tenure, and were to have no teaching responsibilities other than those which they assumed voluntarily by accepting appointments at nearby universities. About the only duties required of staff scientists were attendance at staff seminars and preparation of a budget and annual report. "The beginning of a dream come true," exclaimed Roy E. Ritts, Jr., the institute's first director.

That was two years ago. In the past few months, the prospective utopia has been shaken by a series of events that might charitably be described as severe growing pains, or that may even reflect a more fundamental illness. Ritts has abandoned his "dream come true" to take a job as head of microbiology at the Mayo Clinic. Nobel laureate Sir John C. Eccles, the brightest scientific star in the AMA firmament, announced, after roughly a year on the scene, that he is resigning to join the State University of New York at Buffalo. And the AMA has precipitously decided to move the institute from its present location in the AMA headquarters building in downtown Chicago to a new site at the University of Chicago, roughly 10 miles to the south. The move was offered as an inducement to George W. Beadle, a Nobel laureate who is retiring as president of the University of Chicago, to become director of the troubled research institute.

Though details remain to be worked out, high officials of the AMA and the university say it is a virtual certainty that the institute will move to the campus and that Beadle will become its director.

The prospective move has provoked considerable controversy. "I see it as the demise of the institute," says Ritts. "It's too great a price to pay to get Beadle." "It's the best thing that could possibly happen," says Sir John. "It's a tremendous opportunity for this institute to develop into a high-ranking scientific body."

The AMA got into the basic research business for reasons that were not wholly scientific. There was clearly a feeling that doctors should participate in the biological revolution that so profoundly affects the quality of their daily practice. But there was also a desire to establish rapport with the often hostile academic and research communities, and a need to improve the AMA's public image, which had become somewhat tarnished during the bitter Medicare battles. As Irvine H. Page, then research head of the Cleveland Clinic Foundation, noted at the 1965 dedication symposium: "It is no secret that the American Medical Association is eyed by the public as a labor-union type of political machine . . . for many years the association has not taken its rightful position of leadership in the furtherance of medical research."

The institute now occupies the penthouse and top three floors (38,000 square feet) of this wing of AMA headquarters.

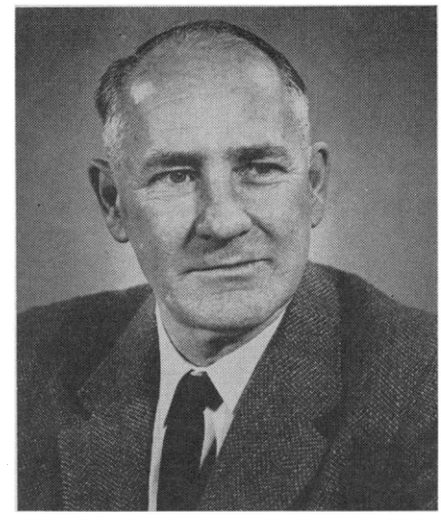
The idea of an institute had been seriously discussed in the AMA since at least the mid-1950's, but it was not until 1963 that directors of the AMA education and research foundation (they're the AMA trustees wearing different hats) and the AMA House of Delegates voted to establish it.

Ritts seems to have played a key role in pushing the idea across, though the precise origins of the institute are lost in a cloud of conflicting claims. In 1963, Hugh H. Hussey left his post as dean of the medical school at Georgetown University to become director of scientific activities for the AMA. Before leaving Washington he had a long talk with Ritts, who was then chairman of the microbiology department at Georgetown. Ritts outlined his dream of an institute for the "magnificent but inarticulate scientist," and Hussey later transmitted Ritts's thoughts to the AMA. This, coupled with the continuing efforts of some AMA insiders, seems to have brought to fruition "an idea whose time was ripe."

The AMA (primarily Hussey) persuaded Ritts to become the institute's first director—a move which some AMA officials now think was a serious mistake. Ritts himself argued that the institute should be headed by "a very prestigious scientist," but he says he yielded to AMA entreaties that "if you believe strongly in your ideas, you should put your money where your mouth is."

Ritts, in collaboration with officials and directors of the research foundation then set about building up the institute. A committee of prominent scientific advisers was appointed to make policy recommendations and help in recruit-

Roy E. Ritts, Jr.



George Wells Beadle

ing the institute's professional staff. The current members of the committee are Maurice B. Visscher, University of Minnesota Medical School; Henry Eyring, University of Utah; William H. Feldman, retired from the U.S. Veterans Administration; Chauncey D. Leake, University of California School of Medicine; Severo Ochoa, New York University School of Medicine; and Wendell M. Stanley, University of California.

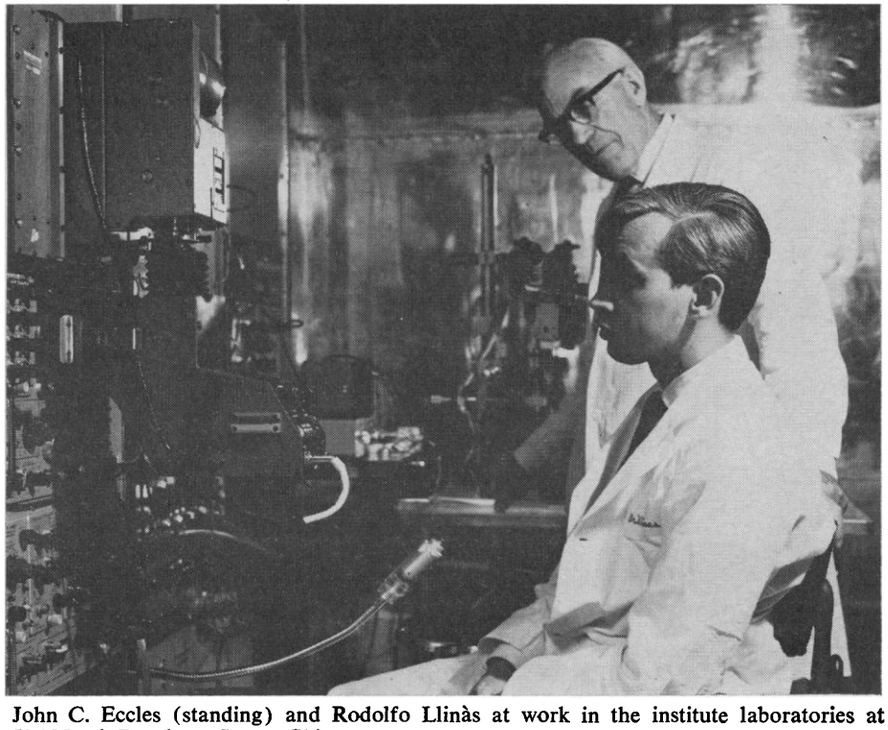
Recruiting of professional staff proceeded at a deliberate pace in order to lessen the danger of stocking the new institute with duds. At the present time there are six laboratory heads: Eccles, who is investigating the cerebellum; Clyde R. Goodheart, formerly at the University of Southern California School of Medicine, who is working with tumor viruses; Oscar M. Hechter, formerly with the Worcester Foundation for Experimental Biology, who is studying hormones; Rodolfo Llinàs, formerly at the University of Minnesota and a former doctoral student of Eccles', who is also studying the cerebellum; Howard A. Schneider, formerly at the Rockefeller Institute, who is working with compounds that inhibit disease; and Dan W. Urry, fresh from several months as a guest in Melvin Calvin's lab at Berkeley, who is using biophysical methods to study enzymes. George R. Collins, formerly at the Rockefeller Institute, directs the animal research facility.

The institute has operated on a 1967 budget of about $1.3 million, of which some $500,000 came from the AMA treasury; about $215,000 was specifically donated to the institute by doctors, industry, the AMA women's auxiliary, foundations, and other sources; and roughly $580,000 was allocated to the institute from unrestricted donations received by the AMA's research foundation.

Virtually everyone connected with the institute agrees it has not yet reached the "critical mass" needed to provide the greatest stimulation to member scientists and the widest exchange of ideas among disciplines. It is also much too early for a fair evaluation of the institute's success. Surprisingly, despite the turmoil of recent months, there is some evidence that the institute is making progress toward the productive environment originally envisioned. Probably the least convincing evidence is a statement by AMA officials that institute scientists have produced "more that 100" papers so far. The statistic is grossly inflated, according to institute scientists, because it includes work done elsewhere but published after a scientist had joined the AMA and because "Sir John gets published every time he opens his mouth." More reliable evidence comes in the form of judgments by scientific advisers ("It's been amazingly productive," asserts Chauncey Leake) and from staff scientists, who are near unanimous in agreeing that the institute has fulfilled their expectations. "It's been fantastic," says Llinàs. "The equipment and the salaries are very good. They've bent over backwards to modify the building. And they've got animal facilities such as I've never seen before."

So why all the turmoil? The trouble at the institute stems, at least in part, from a series of administrative frictions that led to a state of minor warfare between the institute scientists and the AMA headquarters brass. To an outsider, the frictions appear trivial, but it is surprising how much heat they generated. The administrative tangles played at least a minor role in the resignations of both Ritts and Eccles.

One battle erupted over the AMA's handling of mail. At the insistence of



John C. Eccles (standing) and Rodolfo Llinàs at work in the institute laboratories at 535 North Dearborn Street, Chicago.

its auditors, the AMA has designated certain trusted employees to open the 15,000 to 20,000 first-class letters it gets each day to make certain that incoming money, which can mount into the thousands of dollars in a single day, is correctly handled. (Mail marked "personal" is not supposed to be opened.) The scientists seem to have lived with this mail system until one researcher received what he considered a personal check through the mail, along with a note from the accounting department asking if it was rightfully his. Staff scientists say they were also "extremely embarrassed" when a touring Scottish scientist, who used the institute as a mailing address, arrived to find his personal letters had been opened. "Thank God he didn't get a check," comments one staff scientist.

Another battle raged over the AMA's policy of locking its doors at the close of the business day. This meant that scientists who came back to the building to work at night would sometimes have to wait 20 or 30 minutes in the cold until a guard finished his rounds and returned to his post at the door to admit them. Other frictions developed, according to Ritts, over the handling of honoraria; the high salaries paid some institute scientists (wives of other AMA professionals apparently got jealous); the participation of some scientist in a lab coat and sandals and marches; and the clannishness of the scientists, who always ate together in the cafeteria and failed to "mix" with other AMA personnel. "As a group we never really fit in," says Ritts. "The scientist in a lab coat and sandals and turtleneck sweater was a source of puzzlement to the AMA rank and file."

The battles probably reached a pinnacle of emotion last May when institute scientists met with an AMA attorney to discuss policies on honoraria, retirement, and other issues. The meeting ultimately degenerated into a shouting match, according to one transcript of the proceedings. Several scientists registered gripes, the attorney suggested anyone who was unhappy could quit, and Sir John Eccles at one point exclaimed: "I'm not used to being talked to this way." One observer found it "a most embarrassing and difficult meeting—the lawyer and Eccles were extremely antagonistic and rude to each other."

F. J. L. (Bing) Blasingame, the AMA's executive vice president, considers the administrative squabbles "a tempest in a teapot" which the scientists

# NEWS IN BRIEF

● **IRS TAX RULING**: The Internal Revenue Service has abolished the tax-exempt status for advertising revenues received by the publications of a number of nonprofit organizations, including the AAAS. The new ruling, which went into effect 13 December, provides for exceptions, including that a publication which is losing money will not have to pay taxes on its advertising revenues. Among the publications that will be affected by the ruling are *Science,* the *National Geographic,* the *Journal of the American Medical Association, Nation's Business,* and *Banking.*

● **MARINE LAB FIRE**: A fire on 17 December at the University of Miami's Marine Sciences Institute caused extensive damage. Among the losses was an accumulation of data and specimens from 17 years of research on billfish and marlin. Officials at the institute could not estimate the cost of damage, but some believe that, on the basis of the man hours involved in the destroyed materials, it could be as much as $10 million.

● **NOISE POLLUTON**: A special committee has been appointed by Secretary of the Interior Udall to study the impact of noise in the environment. The effect of widespread sonic booms is expected to be one topic that will come under study. The group, which met for the first time on 20 December, is expected to issue a report on its findings in mid-1968. John C. Calhoun, vice president of programs, Texas A & M, is chairman of the group. Other members are: H. Stanley Bennett, professor of biology and medical sciences, University of Chicago; Rene J. Dubos, professor of pathology, Rockefeller Institute; Joseph L. Fisher, president, Resources for the Future; Roger R. D. Revelle, director, Harvard Center for Population Studies; Athelstan F. Spilhaus, president, Franklin Institute; Harrison Brown, foreign secretary, National Academy of Sciences; N. Barry Commoner, Botany Department, Washington University, St. Louis; Leonard Duhl, special assistant to the secretary of Housing and Urban Development; and Gordon J. F. MacDonald, executive vice president, Institute for Defense Analyses. Interior representatives are: John L. Buckley, head, Office of Ecology; S. Fred Singer, deputy assistant to the secretary for water pollution control; and Milner B. Schaefer, science adviser to the secretary.

● **PUBLICATION RULING**: The U.S. Court of Appeals for the Third Circuit has upheld the decision of a lower court that a state university law review has the right to select which manuscripts it will publish. Alfred Avins, assistant district attorney for New York City, had filed charges against the Rutgers University Law Review after the review had rejected one of his manuscripts. In the suit, Avins contended that a state-supported university such as Rutgers is a public instrument through which all must be allowed to present their ideas. He claimed that the review's editors had no right to reject an article because of its nature or ideological approach. In rejecting those contentions, the three-member court ruled, "The right to freedom of speech does not open every avenue to one who desires to use a particular outlet for expression. . . . On the contrary, the acceptance or rejection of articles submitted for publication in a law school review necessarily involves the exercise of editorial judgment and this is in no wise lessened by the fact that the law review is supported, at least in part, by the State."

● **PUBLIC SERVICE AWARD**: The 1967 Rockefeller Public Service Award in the field of Science, Technology and Engineering has been awarded to Herbert Friedman, superintendent of the Atmosphere and Astrophysics Division of the Naval Research Laboratory and chief scientist of the Hulburt Center for Space Research. The Rockefeller awards carry a $10,000 cash grant and are awarded to federal employees.

● **SMALE GRANT**: The National Science Foundation (NSF) has granted $87,500 to Berkeley mathematician Stephen Smale. The 2-year grant was made on 17 November, at the same time that a grant for an identical amount was made to one of Smale's colleagues on the project, Professor S. Kobayashi. Smale requested $247,900 to cover the entire project for a 2-year period with himself as the principal investigator (*Science*, 3 November; 6, 13, and 22 October; and 29 September). Smale's previous grant had been for $91,500.

could easily have solved simply by picking up the phone and calling him instead of getting "rather emotional about it." Almost all sources of friction have, in fact, been removed, usually by making small changes in previous AMA practices. There is widespread agreement that better administration could have prevented almost all the abrasions, but there is disagreement over whether to blame Blasingame, Ritts, other AMA officials, or the whole bunch. Significantly, the institute is not the only unhappy part of the AMA. Insiders report that an unusual number of professionals in other departments have resigned in the past year or so.

What brought about Ritts' resignation is not completely clear. Ritts says he left primarily because the opportunity at the Mayo Clinic, where new microbiological facilities are being built, looked exceedingly attractive to a man with "a penchant to build." Ritts also says "many, many quite trivial but annoying things" rendered his job as an AMA executive "unpleasant." He also wants to spend more time on science and less on administration.

Other AMA professionals believe Ritts was frustrated by his inability to convince the AMA it should build an endowment for the institute, and by his lack of power at the AMA. ("He never established himself as boss of the institute—he was director in name only," says one staff scientist.) Some observers say the aggressive, articulate Ritts, who is considered more "liberal" than the general run of AMA brass, also pushed too hard and too fast into the jungle of AMA internal politics. "Roy got tangled up with a lot of stuff that had nothing to do with the institute at all," says one staff scientist, Howard Schneider. "I begged him not to get involved in those affairs, but he convinced me the game is to be inside where the decisions are made rather than outside waiting for the decisions to be handed down. Roy made waves and he got cut down to size, I'm sorry to say."

Ritts himself is quite bitter about what he calls the "internecine politics" of the AMA. "The character assassination and defilement in that organization are unbelievable," he says. "They tell you about a guy and, from their description, you expect him to be impossibly stupid, sitting around gibbering. Then you meet him and you find he's actually a superior human being." AMA officials retort that Ritts himself is engaging in "a campaign to destroy our credibility —he wants to bring the whole place down with him."

Sir John's decision to resign was made almost simultaneously, but apparently independently of Ritts's. Sir John told *Science* he decided to leave primarily because he felt "insecure" about being able to carry on his work for a sustained period at the AMA. He detected Ritts's growing disenchantment and "couldn't be sure if Roy left that this place would go on." The 64-year-old Nobelist also says he came to the AMA with the understanding he would be allowed to work past age 70 (though nothing to that effect was put in writing), so he objected strenuously to an AMA policy that members are subject to an annual review of their ability and productivity after their 68th birthday.

A contributing factor in Eccles' resignation was "a series of minor, trivial irritations" brought about, Sir John says, by the fact that "the AMA is a business organization with a business management. With the best will in the world, those men cannot understand what is involved in setting up a scientific laboratory of the highest level. They don't understand what we prima donnas in science are like." Sir John was particularly critical of the AMA bureaucracy for "beating me down on some stupid things." As an example, he said he hired a housewife as a technician and, at the woman's request, paid her an abnormally low $4000-a-year while seeing whether she panned out. The woman quickly proved to be one of his best technicians, so he tried to raise her to $6500, equivalent to the amount paid other less competent technicians, but was told he couldn't do it because of an AMA rule limiting the percentage increase in salary that could be granted in any one year. "I spent weeks writing memos," Sir John says. "I never met the people who made the decision. They never met her. We just wrote memos back and forth. A good administrator could surely have found a way to dismiss her on Friday and hire her back on Monday at the higher salary."

Other staff scientists believe Sir John, who is regarded as a "temperamental" and "difficult" scientist, is leaving partly because AMA officials failed to accord him the deference due a Nobel laureate and a Knight of the British Empire, and partly because of a personal divorce problem. Sir John, who chafed at the institute's policy forbidding scientists from soliciting individual grants, is also virtually the only staff scientist who feels he didn't receive all the financial support he needed. "He's never satisfied," comments one scientific adviser. "He was given the moon with a fence around it."

Eccles' decision to leave, coming after Ritts's resignation, caused considerable concern in the AMA hierarchy. In an effort to stave off possible bad publicity, a worried Blasingame even staged a mock press interview with his departing Nobelist—just in case anyone should ask Eccles what was troubling him. With Ritts acting as an observer, Blasingame assumed the role of the hostile press and had Eccles recite dutifully how he was leaving the AMA because of a desire to return to an academic environment. "They're terribly concerned with the image, you know," chuckles Sir John. "And it is true I prefer a university." Ritts says he, too, was schooled in what to say.

Morale problems surrounding the two resignations were further complicated by the effort to attract Beadle as the next director of the institute. Beadle's name was suggested by Ritts and by several others, and almost everyone connected with the institute believes he would be an ideal choice—a scientist of world renown, an experienced administrator, a proven fund-raiser, and a man who can "speak the language" of scientists, bureaucrats, and provincial doctors alike. There was only one hitch—when Blasingame sounded out Beadle he found that Beadle wanted the institute "situated at or contiguous to a university (not necessarily the University of Chicago) and affiliated with it." Beadle would not commit himself to working with the institute "under the present arrangement." (The quotations are from a memorandum prepared by Blasingame. Beadle declined to talk with *Science*.) At an October 25 meeting of the research foundation directors, much to the surprise of everyone connected with the institute, Blasingame recommended that the directors "look with favor on affiliation with the University of Chicago and take action to transfer the institute geographically to the University of Chicago." Echoing Beadle, he cited the stimulation that would be provided by a university environment, the advantages of being able to use such university facilities as the library and computer services, and the greater ease of attracting first-rate scientists to the institute if it were in a university setting.

Blasingame's proposal was immediately attacked by Ritts and by two of the institute's scientific advisers. The burden of Ritts's argument, as developed at that meeting and subsequently, was that the institute would inevitably be swallowed up by the university, and that a university affiliation might endanger some of the original aims of the institute—such as freedom from the pressure to teach, publish or solicit individual grants. Ritts told *Science* most of the dangers he foresees could be warded off by a vigilant director, but he is convinced the institute, which depends heavily on donations from doctors, from pharmaceutical companies, and from the AMA itself, will die of financial malnutrition if it becomes identified with a particular university rather than the AMA. The AMA is talking in terms of an annual budget of $2.5 million once the move is completed, and Ritts questions whether donors will have much stomach for contributing to a facility at a school that is not their alma mater. If the AMA ultimately has to abandon the institute, he says, the university would presumably take over the institute's new building (which is expected to cost some $2 to $3 million), and inherit some institute talent.

The haste of the decision to move, and the ensuing struggle between Ritts and Blasingame, provoked opposition to the plan at all levels of the AMA. One influential doctor who played a big role in establishing the institute told *Science* he is "very unhappy" about the move. The institute's laboratory heads at one point signed a memorandum unanimously opposing the move. And one scientist, Clyde Goodheart, has announced he will resign rather than go to the university. "I just don't get along in an academic setting —I find it boring," he told *Science*. A few scientists are even convinced the move is a Machiavellian plot to get rid of the institute.

Despite the initial misgivings, the proposed move seems to have won general acceptance in recent weeks. Observers credit this partly to the adroit maneuvering of Blasingame ("he's another LBJ") and of Charles L. Hudson, chairman of the AMA's research foundations partly to a superb impression made by Beadle, and partly to assurances that the move will mean nothing more than a "change of address" and will not involve any form of subjugation to the University of Chicago or any change in the basic concept of

# Euratom: A Cut for Cooperation

*Brussels.* The Council of Ministers of Europe's Six took a drastic step recently when they cut Euratom's 1968 budget in half, but they still face difficult decisions on long-term policies for the nuclear research organization.

A Euratom commission proposal for an $82-million budget was turned down, and the council approved $40.7 million for the coming year. The action was the culmination of a long period of bickering over budgets, which reflected the member nations' differing conceptions of Euratom's proper scope.

Halving of the budget was achieved by suspending all association agreements under which the community helps support national R & D projects in the member countries. The action was taken primarily on the insistence of the Italian government, which has felt it was not benefiting from association programs in proportion to its contributions. The French joined the Italians in pressing for suspension, from rather different motives. With a flourishing nuclear development program of its own, France has been unenthusiastic about association agreements, particularly where advanced reactor projects are concerned, and has favored a research role for Euratom. The Germans and Dutch, by contrast, have backed a broad-gauge Euratom and have supported extension of the association agreements for another year. Belgium and Luxembourg reportedly took a middle position.

How seriously the suspension will affect work in progress depends on the willingness of individual countries to take over the portion of financing for which Euratom was formerly responsible. Nuclear fusion research, a thriving program, has been based almost entirely on association agreements. Nearly all of Euratom's $3-million-a-year biology research program is financed the same way. The balance of Euratom research could be upset; many projects, however, are expected to be kept going.

The council-approved $40.7-million budget will permit Euratom's own four research centers to remain open and its personnel to be kept largely intact. The agency's "in-house" scientific resources may be brought to bear on technological problems—including nonnuclear ones—which the Six now seem disposed to attack. The European Economic Community science ministers at the end of October agreed to coordinate research policies in certain fields—data processing and telecommunications, transportation, oceanography, metallurgy, environmental problems, and meteorology. The door appears to be open to Euratom's development of a diversified research program.

Nothing concrete has been done, however, to give Euratom a master plan to follow after the current 5-year program expires on 31 December. The agency has been living on a month-to-month budgetary basis. The compromise assures Euratom another year of life and time to make plans for the longer term. Suspension of the association agreements, however, must place the fate of a truly coordinated European program of nuclear research in doubt, especially in such an industrially sensitive field as reactor development. Some observers see the association agreements being replaced by programs in which participation is voluntary. Such international arrangements—in space research in Europe, for example—have not proved brilliantly successful. Unless minds and national positions change significantly, it is likely that emphasis in Euratom will be more on research, less on development.

Needed most now is a policy decision from the council which will make it possible for Euratom to make long-term plans. At its recent meeting the council called for recommendations from the committee of permanent representatives—the EEC ambassadors—which has its own advisory group on atomic affairs. So, in addition to the injury of the budget slash, Euratom suffers the insult of having others propose its fate.

—JOHN WALSH

the institute. AMA officials say they never had anything more than "relocation" in mind, and that "affiliation" was an unfortunate choice of words. They also say they have "long-term" plans to support the institute, and that they will probably seek to build an endowment.

As things stand now, the foundation directors and the AMA House of Delegates have endorsed the move in principle, most of the institute's scientists and scientific advisers either approve the move or are willing to accept it, and the University of Chicago trustees, always eager to add to their community of scholars, have agreed in principle to make land available on a long-term token-payment lease. A final agreement is expected to be approved by the first week of February. What the move will mean in the long run remains to be seen, but Beadle obviously has no small plans. He has told AMA officials he expects the institute to become "the outstanding biomedical research institute in the world."

Beadle's words are reminiscent of the optimistic forecasts that flowed forth in 1965 when the institute was dedicated. At this point it remains to be seen whether the difficulties that ensued were the products of particular and avoidable personality conflicts, or whether there is a more fundamental problem, namely, the suitability of the AMA as an institutional base for the peculiar requirements of basic research.

—PHILIP M. BOFFEY

# Fund Raising: Yale Launches Marathon Campaign

*New Haven.* Yale has just announced a fund-raising drive of $388 million, the largest goal ever set by an American university. The campaign's significance lies not so much in its staggering target as in its time span, 10 years. Nearly a decade ago, Yale's rival, Harvard, upset the conventional wisdom of university fund-raisers by seeking, and getting, $82.5 million; up to that time no university had ever dared seek so much. The pattern established by Harvard was that of a mammoth, single, capital campaign of limited duration, usually 2 or 3 years—donors could be asked to give generously on the presumption that the drive was a unique event. The Yale announcement now explicitly says that this approach will not suffice; the gigantic fund-raising campaign is becoming permanent.

Yale, of course, is not alone in realizing this. The California Institute of Technology recently announced a 5-year projection of needs, and a number of other colleges have done the same. Harvard President Nathan Pusey, after listing some $160 million of capital needs in his last annual report, reflected: "What I have listed above are only the immediate needs of a single university. Multiplied nationwide by hundreds of institutions larger and smaller, it is clear that in the last third of the 20th century we shall require huge sums of money [for higher education] . . . this is not an expression of avidity or cupidity. It is simply a sober statement of fact."

Why do universities keep absorbing such huge quantities of money and continue coming back for more? Yale provides some answers.

According to the University's calculations, Yale's expenses are rising 8½ percent annually; and its income, at present rates, is increasing only 7 percent. The costs of good scholarship are becoming progressively more oppressive—maintaining a strong library system and catering to the rising demand for computers are particularly expensive. Yale has already conceded that it will not be able to do everything it pleases. For example, the library budget, which now stands at $4.5 million, would have to double every 5 years if all the requested books and services were to be provided; almost certainly, they will not.

Faculty salaries exert the most irresistible pressure. "The single most important fact of current academic life," Yale President Kingman Brewster wrote in his last annual report, "is that demand for faculty far outstrips its availability. Faculty salaries will inevitably respond to this imbalance by going upward far faster than the rise in the cost of living." In the next decade, Yale expects the cost of supporting its faculty to rise from $22.6 million to $50.6 million. Yet, inflation and expansion will force most other costs up, too, and the whole budget is expected to more than double, from $90 million to $205 million.

To meet higher costs, Yale will rely on new endowment, $241.5 million of its $388 million total. Yale is also trying what amounts to a major experiment with its endowment: it is taking funds from its annual gains on stock and bond transactions and appropriating this money toward current expenses. In times past, this practice has been strictly taboo. Almost all major universities, including Yale, have used only endowment yield (interest from bonds and dividends from stocks) for current operating expenses; endowment gain (appreciation of stocks or bonds) has always been reinvested in the hope that a larger fund would bring greater future yields.

Yale changed because it needs both future assets and current cash. Its present yield is too small to cover expenses. Yet, if it attempted to increase its yields by investing more in high-paying bonds or stocks with large dividends, it would surely stunt the long-term growth of the endowment fund; some of the fastest growing stocks have low yields. Eventually, the yield from a slow-growing endowment would not be able to meet the costs. To escape this dilemma, Yale hired three highly successful mutual-fund managers to run the university's investment portfolio; the hope is that they will raise the fund's productivity and provide enough money for current expenses, while maintaining a healthy rate of reinvestment.

Besides endowment needs, Yale is asking for $146.5 million for construction of new facilities, ranging from music and drama centers to graduate-school dormitories. The most ambi-