Opinion: The "Money Culture" in Academic Biomedical Research

A drive for revenue is damaging basic science.

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Recent *New York Times*'s articles focused on Memorial Sloan Kettering Cancer Center have drawn attention to conflicts when academic biomedical researchers consult for pharmaceutical companies. Such conflicts are only one symptom of an expanding "money culture," where revenue is valued more than research and basic science is diminished. This will delay the advances needed for future clinical breakthroughs.

Academic biomedical research occurs largely at university medical schools and a few free-standing centers. Research spans clinical studies to laboratory investigations of fundamental disease processes. Clinical researchers deliver patient care at organizationally separate academic hospitals.

These institutes face significant financial pressures. They do not receive a university operating budget and must pay their own way. Some even pay a form of "rent" to parent universities. Tenure is infrequent and rarely covers a full salary. From deans to junior faculty, in times flush or lean, there is funding anxiety.

The anxiety diminishes basic science. Seeking more clinical revenue, institute leaders have accommodated hospital executives in expanding routine clinical volume well beyond that needed for clinical research and training. Academic hospitals have been busy buying community practices. Research institutes increasingly resemble large community medical provider groups. Basic science departments stagnate as leaders focus on managing ever larger clinical workforces.

There is also destructive interaction between financial anxiety and the genomic revolution. Spurred initially by hopes of curing disease and profitable low hanging fruit, such as human insulin, fund-hungry institutes have shifted the focus of basic laboratory research to drug development. Partnerships with pharmaceutical companies and faculty consulting have proliferated. There is a frenzy

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consulting have proliferated. There is a frenzy to patent every minor advance and many institutes have acquired pharmaceutical manufacturing technology, systems requiring industrial engineering expertise rarely found in academia. Comparing my work evaluating projects for the Southern California Biomedical Council, an industry trade group, with 17 years at academic biomedical research institutes, I find it increasingly difficult to distinguish institute laboratory research from company research.

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While the genomic revolution has produced fewer cures and financial windfalls than optimists hoped, the hype buoys fundraising and reinforces current trends. Many unsophisticated donors lack the patience for basic research and are captivated by exaggerated fundraising presentations promising cures. I can recall institute leaders inadvertently acknowledging donors' help in establishing institute scientific priorities, confirming my worst suspicions about decision-making.

The "money culture"

While routine clinical care and hopes for home-grown therapeutics may reduce the emphasis on basic science, the combination with haphazard management creates an incompatible "money culture."

Unlike most academic disciplines, biomedical research involves a massive and technologically complex infrastructure. I have observed that, relegated to the category of support staff, the necessary management experts have little status or influence in this MD-dominated world. As a result, tradeoff studies are rarely performed and institute investment strategy is often determined by the squeakiest faculty wheel. The typical response to the resulting inefficiency is to seek additional funds, further increasing inefficiency. Basic science is a poor way to "feed the beast."

Lack of patience for life cycle cost analysis is an example. In my experience as a senior administrator at a number of academic medical centers, I have seen leaders jump at every expansion opportunity while ignoring downstream costs. But donors want their names on new buildings, not on the resulting parking lots, utility systems, roads, etc. The more money raised, the more money needed. To compensate, institute leaders tie faculty incentives, such as salaries, bonuses, institutional support, and minor perks, to the volume of activities generating overhead revenue. Quantity replaces quality and growth becomes the most important metric. No wonder there is concern about scientific accuracy and reproducibility. The "money culture" is incompatible with science.

Recommendations

Figuratively, basic science is a declining species in an ecosystem polluted by a "money

culture." Like most ecosystems, there is interdependency. Tomorrow's clinical researchers will stand on the shoulders of today's basic scientists.

To revive basic science and curtail the "money culture," leaders should:

- *Improve internal management.* Hire top management analysts and elevate their status and influence. Analysts should determine hospital characteristics needed for clinical research and leaders should use that analysis to rationally determine clinical volume.
- *Eliminate contorting financial incentives.* Place faculty and institute leaders on periodically reviewed fixed salaries. End the preoccupation with growth by eliminating incentives for expanding clinical loads, growing grant portfolios, or lassoing donors. Regulate consulting for private companies.
- *Disengage from exaggerated claims*. Establish and empower independent, multidisciplinary committees to scrutinize institute fundraising presentations.
- *Restore the academic tradition.* University leadership should evaluate medical schools on scholarly contributions, not pecuniary metrics like those used for football programs. Tenure should be meaningful and laboratory studies should gain organizational separation from clinical missions and no longer be directed by leaders managing a large clinical workforce.

Nationally, a philanthropic foundation should establish a permanent center to study the governance systems and organizational dynamics driving biomedical research. The nation's investment is too large and important to be managed in the current haphazard manner.

Institutes are still staffed by committed physicians and basic scientists dismayed by the "money culture." The continued accuracy of this statement will depend on reversing current trends.

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