

MY VIEW

*By Phillip Blackerby**

The August 13 cover story on Proposition 102, the *Research for Life* tech-transfer amendment, referenced Goldwater Institute Director Mark Brnovich's unfounded assertion that similar moves in other states have not paid major dividends.

Perhaps the Goldwater Institute never heard of EIEICO, Inc., the Penn State spin-off that markets technologies to improve livestock economics and safety. Or AIR, Inc., another medical spin-off that yielded a \$500,000 endowment when Penn State sold its stock. Or Lycos, the Internet search engine launched by a Carnegie Mellon University joint venture.

What's the issue about?

Every inventor knows the three paths to cashing in on a new technology: (a) sell the technology rights for a lump sum; (b) license the technology (exclusively or not) for an income based on sales; or (c) create equity in a company that takes the technology to market.

Arizona's state universities have only two of these three arrows in their commercialization quivers. The 1912 Constitution prohibits state universities from owning stock in private companies, meaning that Arizona's state universities cannot exchange their technology for equity in a private company. Proposition 102 will fix this antiquated provision and keep up with most other states.

Which approach is best?

The best approach to commercialize technology depends on the nature of the specific technology, its markets and the risk-reward profile.

A lump-sum sale has the lowest risk and reward: a market flop will generate some money, but a blockbuster will generate much less than the technology is worth. This approach works for high-risk technologies serving small or emerging markets.

Licensing rewards market success: the more the technology sells, the more income the inventing university gets. Successful products can earn lots of income, but per-unit royalties are usually small. Licensing works for technologies with mass-appeal that require ready marketing, distribution and sales channels, like the University of Florida's Gatorade, or the University of Rochester's Cox-2 inhibitors, ingredients in pain relievers Vioxx and Celebrex.

The *equity* approach—currently prohibited for Arizona's state universities—works for sound technologies serving small or uncertain markets. Profits may exceed licensing royalties on a per-unit basis, plus the university keeps the capital value of the company's stock. Faced with small markets, creating its own company was the only way Penn State could commercialize its livestock technologies. When Lycos first went online in 1994, no

one really knew the Internet's commercial potential; Carnegie Mellon earned millions for years and still owns the Lycos brand.

Why does it matter?

The commercialization approach can affect the technology's market success. If a start-up company pays a royalty on every sale, its cash flow is diminished. Every entrepreneur knows that "cash is king," especially for start-ups. Draining a company's cash to pay royalties may prevent it from expanding, entering new markets, creating more jobs, developing new products and ultimately succeeding.

When a university takes equity for its technology, rather than royalties, the start-up's cash is conserved and the company stands a better chance of long-term success.

With earnings from research technologies, universities can improve program quality without more taxes from the state or tuition from their students. Artificially restricting ways the state universities can profit from their technologies makes no sense.

The founders of Arizona's Constitution could not dream of the benefits of modern university research in medicine, communications, computing, materials and transportation. We respect our founders, but we must also create our own opportunities. Proposition 102 will create Arizona companies and Arizona jobs, and speed new healthcare and environmental innovations to markets. And it will fund state universities with no cost or risk to taxpayers. Proposition 102 is a "win-win" for Arizona.

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