

Fountains of youth, profit

BY KELLY A. J. POWERS

One Baltimore physician's experiments with the anti-aging human growth hormone, or hGH, may soon become the norm for physicians and plastic surgeons nationally—at least that's what investors in the half-dozen hGH manufacturers are hoping.

Doctors are hoping the same, since the \$10,000-a-year out-of-pocket treatments for healthy adults, once approved by the FDA, promise to be very profitable for physicians, too.

Using FDA clinical protocols, Dr. Dean P. Kane, a cosmetic surgeon in northwest Baltimore, has begun what he says is one of the first long-term studies into the effects of hGH on healthy adults. It is believed to increase muscle mass and cognitive ability, reduce fat, and boost the immune system.

In the experiments, sponsored by the



hGH testers Azman and Kane: Investors are banking on another Viagra.

Physician Research and Pharmaceutical Alliance, the patients will inject growth hormone twice daily, in the hopes that it will have a trickle-down effect on the body's other hormones "so that the entire body will operate like a well-tuned orchestra," says Kane.

Not all patients need a replacement amount of growth hormone; some patients will receive a stimulant to produce their own hGH.

"Over the five years, we are looking to have 50 people a year enrolled," says Phyllis Azman, a nurse practitioner in Kane's office. And, yes, all of Kane's study participants will pay for the hGH, which costs an average \$800 a month, and is not covered by insurance. (hGH is covered and approved for other medical conditions, such as stunted height in children, cardiac failure, AIDS, burns, and thyroid conditions.)

One of the first bioengineered drugs to hit the market, synthetic hGH replaces natural human growth hormone, an extremely precious commodity that until 15 years ago was only available from cadavers. Five compa-

nies now manufacture hGH: Genotropin is made by Pharmacia & Upjohn in Peapack, N.J.; Norditropin by Novo Nordisk in Princeton, N.J.; Nutropin by Genentech in San Francisco; Saizen, which Kane uses, is manufactured by Serono in Switzerland; and Humatrope is manufactured by Eli Lilly in Indianapolis.

In 2002, the patents on hGH will expire, allowing other firms to produce it, but that may not bring down the price, says financial analyst Dennis Harp of Deutsche Banc Alex. Brown.

"With biotech products, because of the way they are produced, it's difficult for there to be generic substitutes," says Harp. "There won't be the intense price competition and price erosion as with other chemical entities."

Others are more optimistic about the future price: "There's no reason why hGH should be any more expensive than bioengineered insulin, which is \$1.50 a day," says Dr. Ronald Klatt, director of the Academy of Anti-Aging Medicine in Chicago. "I expect hGH will one day cost just \$100 a year."