Young and talented, **KAREEM SAAD**, IBM's worldwide business segment executive for clinical genomics, is overseeing the company's initiative **to take clinical genomics from concept to market**.

BY KIM RIBBINK

Big Blue's Genomics ACE

I am extremely passionate about biotechnology and pharmacogenomics. My passion emanates from my background and experience in basic science.

With youthful enthusiasm, innate technical and scientific intelligence, and insight and thoughtfulness well beyond his years, Kareem Saad's career is soaring, literally and figuratively. As the leader of IBM Healthcare and Life Sciences' core integrated strategic and market development clinical genomics team, this 25-year-old executive racks up more than 300,000 air miles a year to bring the company's innovative clinical genomics solutions to the global marketplace.

When he joined IBM in November 2001 at the age of 22, Mr. Saad already had an impressive resume. His credentials included degrees in biochemistry and computer science, hands-on laboratory experience, and familiarity with operating a business, having cofounded the Vancouver-based genomics and bioinformatics business InphoGene BioCommunications Inc. This August, he completed his MBA, and until starting InphoGene in 1999, he was pursuing a Ph.D.

"I am extremely passionate about biotechnology and pharmacogenomics," says Mr. Saad, who in January was named worldwide business segment executive for clinical genomics. "What has helped me from a business perspective is the fact that my passion emanates from my background and experience in basic science."

At the time Mr. Saad joined IBM, the company's Healthcare and Life Sciences business was about a year old, having been formed in August 2000. Today, the division is one of IBM's fastest growing business units, with a compounded growth rate of 20% a year.

The goal of the division is to create leading-edge technologies and bring those solutions to the marketplace. The division addresses the information technology needs of healthcare and life-sciences organizations by drawing on IBM's diverse capabilities ranging from high-performance computing and storage offerings to data and knowledge-management software, services, and research expertise.

Mr. Saad continues to establish the mindshare position that IBM has developed in the area of clinical genomics with academic medical centers, biopharmaceutical companies, and the healthcare industry. He is responsible for overall leadership for the development and deployment of IBM-based clinical genomics solutions to propel the personalized medicine marketplace forward and drive a promising growth area for IBM.

"I'm not shy about saying what I believe in," Mr. Saad says. "The fact is, without a technology base and the rigor of information structuring, coupled with the development and dissemination of standards, which is very much needed in the area of scientific research and development, we won't be as effective in leveraging the fruits of the human genome project and beyond to curing disease, which is really the end game."

THE PULL OF TECHNOLOGY

A successful career usually entails a sometimes elusive mix of talent and interest, but for Mr. Saad the combination is innate.

"My interest from childhood always has been on the technical side as well as on physics and mathematics because my father, who is an engineer, is a huge influence on me," he says. "During high school I started to shift gears and became interested in biology, chemistry, human physiology, anatomy, and medicine."

Those interests led the young student to undertake a biochemistry degree with the goal of pursuing a career in medicine. But the draw of technology was still strong, so Mr. Saad completed a second degree in computer science.

"After I finished my biochemistry degree I became disenchanted with the field, so I decided to pursue a second degree in computer science, which went back to my passion, technology," he says. "At the same time, the human genome project was starting to gain traction, and I had an opportunity to start a Ph.D. program in the field."

The combination of biochemistry and computing exposed Mr. Saad to exciting opportunities in bioinformatics in the emerging fields of proteomics and genomics.

"I am one of those guys who is always looking for the next best thing," Mr. Saad says. "I left the Ph.D. program to form InphoGene, along with Chris Carthy, another Ph.D. student, and Bruce McManus, a professor from the faculty of medicine at the University of British Columbia, and the director of the lab that I had been working at."

The three partners had a vision to start a company that had systems and applications for acquiring, storing, analyzing, and integrating various phenotypic data and high-throughput expression data for identifying and validating novel therapeutic targets in cardiovascular and pulmonary disease.

For some, starting a company at the age of 22 would be a risk, but according to Mr. Saad the opportunity was a "slam dunk."

"I was fresh out of school, I'd just started a Ph.D. program, and I had an opportunity to start a company; I had nothing to lose," he says. "But I guess in the real world, looking back it was a risk. It was a leap of faith, based on our belief in a lot of abstract ideas that people at the time, and even today, didn't necessarily grasp very well."

Cofounding a company quickly exposed Mr. Saad to the realities of business.

"I had a biochemistry/scientific background and was heavily entrenched on the technical side," he says. "Starting the company exposed me to a new dimension: commercialization, marketing, finance, and economics."

To broaden his business knowledge, when he joined IBM Mr. Saad embarked on a MBA.

"I became extremely passionate about business in the area of biotechnology and pharmacogenomics," he says. "Unlike other executives who have general management skills or finance skills, I really appreciate the basic science and research. Research teaches one patience and persistence; an experiment might be done two, three, or 10 times without any results. In the business world, the reality is that one can't fail 10 times; one has to become better at pursuing the next opportunity."

Mr. Saad's many accomplishments to date are no doubt fueled by his competitive nature, and had Mr. Saad not been bitten by the science and technology bug, he might have courted a quite different career.

"When I was younger, I contemplated a tennis career," he says. "My dad was into it, my coach was into it. I'm Egyptian and lived in the United Arab Emirates for some time, and I was a No. 1 junior player there. When my family moved to Canada I was one of the top 10 junior players. I played at a collegiate level and at a professional level until I started the company."

EARLY FOUNDATIONS

As InphoGene began to absorb much of Mr. Saad's time, tennis took a back seat. Along with

his cofounders, he helped build InphoGene from a three-person operation to a company of about 25 people located in Vancouver and another eight people located in Pasadena, Calif.

Within six months of forming the company, Mr. Saad assumed the role of VP and interim chief operating officer.

"Six months into the operation we raised a significant amount of money," he says. "It became very apparent, at least to our venture capital backers, that it was important to have someone in place to conduct the operations and lead the day-to-day execution of the company. The finance community, which for a small start-up company are the stakeholders, became comfortable with me leading the charge, so I temporarily assumed that position to ensure that operational focus was maintained."

As part of Mr. Saad's responsibilities, he helped the company to achieve several successful alliances. Through a collaboration with the University of British Columbia (UBC) and St. Paul's Hospital, one of the main tertiary healthcare organizations affiliated with UBC, InphoGene had access to large volumes of high-quality normal and diseased human heart, blood vessel, and lung tissue. The company also secured access to one of the world's most extensive and ethnically diversified tissue bank registries for cardiovascular and pulmonary tissue comprising more than 12,000 archived and catalogued cardiopulmonary human tissues.

In addition, the company had all the clinical characterizations of the samples and de-identified patient information. The organization's mission was to take all that data to generate high-throughput research information and then, using the human genome annotation, link the two pieces of information together — namely the clinical information and the high-throughput research information — in an effort to understand some of the mechanisms of certain diseases.

"My role was to lead a team responsible for building the infrastructure, the architecture, and the systems necessary for capturing, storing, managing, and integrating the information," Mr. Saad says. "The goal was to allow scientists to pick out the pieces of information that provided data about disease mechanisms."

In addition to the UBC collaboration, Mr. Saad helped bring about an alliance with Affymetrix in late 2000, which was starting to develop its GeneChip technology. The chip, at the time had 1,300 genes; today that chip holds 20,000 plus genes. Affymetrix has developed and intends to establish its GeneChip system as the platform of choice for acquiring, analyzing, and managing complex genetic information to improve the diagnosis, monitoring, and treat-

GENOMIC RESEARCH'S NEW FACE

IN AN EXCLUSIVE INTERVIEW WITH PHARMAVOICE, KAREEM SAAD TALKS ABOUT HIS INSPIRATIONS, HOW HE SEEKS TO MOTIVATE AND INSPIRE, AND WORKING FOR IBM.

AT 25, YOU ARE EXTREMELY ACCOMPLISHED; TO WHAT DO YOU ATTRIBUTE THIS SUCCESS?

I still have a long way to go. I could tell you all the standard answers, which is that I am goal oriented, focused, my parents are driven, they taught their kids discipline, and so on, but I think the thing that has propelled me the most is that I've been very lucky. I've had the luxury of being associated with people of extremely high stature that I respect immensely. And not only do I respect them, but the international and national scientific technical business communities respect them and the contributions that they're making in their respective fields. They have put a lot of trust and confidence in my abilities. They have had access to a lot of resources, and they've been very generous in extending a life line and a lot of resources to me. In various stages of my career I've found those sponsors, and I don't know how or why I meet them, but they open up avenues for me, and more important they give me enough room to maneuver. Even when I make mistakes they save me, and I go back and start again. This type of support has enabled me to do what I've done so far.

WHAT IS IT ABOUT THE INDUSTRY AND THE WORK YOU DO THAT INSPIRES YOU?

Maybe I'm being overly romantic, but I think genomics will have a tremendous impact on the way people view not only healthcare but the concept of quality of life. It excites me because I believe genomics is a field that will change the face of healthcare. It will transform such areas of healthcare as prevention, preventive measures, disease management, and nutrition. I feel privileged and excited to be a part of this, and I'm looking forward to helping to funnel the potential and the energy of this increasingly complex and promising field of research into impacting the quality of life of every human being.

WHAT DO YOU BELIEVE ARE SOME OF THE KEY CHALLENGES FACING YOUR WORK IN THE GENOMICS ARENA?

One of the most imminent challenges is overcoming the skepticism and cultural issues. As the public becomes more educated about genetics, there are two general responses. There are people who say this research is great and there are people who are fearful or apprehensive, partly because they may not necessarily understand the issues surrounding the science. Likewise in the medical community there is the beginning of a paradigm shift, which is bringing about cultural issues. So above and beyond the usual ethical and moral questions that are being posed as a result of genomics making its way into the mainstream, there are the cultural issues.

WHO ARE THE PEOPLE WHO HAVE INFLUENCED YOU?

My parents have been very influential. They found the perfect balance between requiring high standards and being extremely supportive. They had this push-and-pull mechanism that worked out. They definitely pushed me in some areas but only so far as to inspire me. From university and in my various jobs, I've had a number of mentors who have been influential, in particular two individuals who had complete belief in me and have been extremely generous over the years with their advice. One was my Ph.D. advisor and business partner Bruce McManus, who

ment of disease. The company's GeneChip system solution consists of oligonucleotide arrays; instruments to process and analyze the arrays; and software tools to manage and mine data.

"The relationship revolved around building a large encyclopedia for pulmonary and cardiovascular diseases exclusively using, from a gene-expression perspective, the Affymetrix platform," he says. "InphoGene was one of the first companies to negotiate what Affymetrix calls its Silver EasyAccess agreement.

"We became a concentric group of people, all of whom shared a common vision," Mr. Saad continues.

Mr. Saad considers it serendipity that he had the opportunity to help create and lead a company at the forefront of scientific and technological innovation.

"I was fortunate to have tapped into something I'm good at and very passionate about," he says. "I was given the resources and the trust from people who had been in this industry for a long time."

DISCOVERING OTHER OPPORTUNITIES

The cutting-edge nature of InphoGene's business allowed Mr. Saad to mix in some of the same business circles as another up-and-coming life-sciences technology organization, IBM Healthcare and Life Sciences.

After several meetings with Dr. James Coffin, then worldwide VP of sales for the group and now worldwide VP of Healthcare and Life Sciences Solutions, Mr. Saad was invited to join IBM's nascent team.

"From the start, I was impressed by how well the IBM Healthcare and Life Sciences team understood the science behind genomics and proteomics and the potential these technological innovations have on science," Mr. Saad says. "The group understood not only the business opportunities in developing technologies that aid scientific research, but by turning data into


KAREEM SAAD

now is a scientific director of one of the largest institutes in Canada for circulatory and respiratory health research, ICRH. The second is the man who brought me into IBM, Dr. Jamie Coffin, who is a worldwide VP for sales. These people gave me balance and direction without pushing me in one field versus another. Whatever choices I made, they would be hugely supportive. I don't take that for granted.

HOW DO YOU SEEK TO MANAGE AND INSPIRE THOSE YOU LEAD?

I'm still learning and adapting my management style, but one thing I realized early on is that everyone is different. There's no one way of inspiring or leading or managing one group of individuals that will apply to every other group. I'm learning to use people-reading skills to determine the best ways to motivate and inspire people. To do that, I spend a lot of time understanding the people I work with and coming up with unique and specialized ways of managing, mentoring, and inspiring. I'm also a firm believer in shared vision. I believe managers can get much more effective horsepower and much greater execution from people if there is a shared vision, and they are most likely to share the vision if they contribute to that vision.

HOW DO YOU UNWIND FROM THE FAST-PACED NATURE OF THIS BUSINESS, THE EXTENSIVE TRAVEL, AND THE PRESSURES OF BEING IN A CUTTING-EDGE FIELD?

In the past three years, I've been focused on getting the business up and running and getting my MBA out the way, so many other areas of my life took a backseat. But with the MBA out the way, I plan to get back into the tennis. I do try to take advantage of the perks IBM has to offer. And one thing that holds particular interest to me is the fact that IBM is a sponsor of the grand slam tennis events. In fact, The U.S. Tennis Association is using IBM technologies as the infrastructure for the U.S. Open and the USTA National Tennis Center Website. And, when the technologies are not needed for tennis, those same resources are being used for other workloads, in some cases running applications for protein folding.

My team and I are **fueling and growing the clinical genomics practice** to deliver the solutions we're developing. **I began as an evangelist for this field; now I'm accountable for the profit and loss of the business.**

discovery how this information will eventually impact the way in which healthcare is delivered to the patient. I'd never before heard a technology company articulate this message so well."

Mr. Saad has managed to effortlessly meld his skill set — science, technology, and business expertise — with a passion for the field of bioinformatics, a boundless energy and a natural interest in, and rapport with, people.

At the same time, Mr. Saad is deeply appreciative of the opportunities that have been afforded him, at both IBM and earlier in his career at InphoGene.

"I've had the luxury in basking in the fruits and the spoils of some of the most highly respected people in this industry," he says. "They have put a lot of trust and confidence in my abilities and have been very generous about extending resources to me."

Mr. Saad says what has helped to put IBM in a leading position in the fields of proteomics and genomics is the fact that the division is comprised of calculated risk takers.

"These people want to explore ideas and try new things, and in this field that's important because it's still in its infancy," he says.

The division began with two employees; today it includes more than 1,000 people around the world, including bioinformaticians, biologists, chemists, and computer scientists.

TURNING THE DREAM INTO REALITY

At the start of 2004, IBM established what it refers to as an emerging business organization (EBO) in the area of information-based medicine, led by Mike Svinte, VP of Information-Based Medicine, and one major segment within that EBO is clinical genomics, which Mr. Saad has led since January.

"My team and I are fueling and growing the clinical genomics practice to deliver the solutions we're developing," Mr. Saad says. "I began as an evangelist for this field; now I'm accountable for the profit and loss of the business."

As with all innovative technologies and ideas, stumbling blocks lie in wait for the innovators. While some of those hurdles will be technical, Mr. Saad argues that with the right technical and scientific brains those challenges can be overcome. The real difficulties lie in overcoming people's skepticism and cultural reticence, he says.

"Above and beyond the usual ethical and moral questions about genomics are the cultural issues, particularly with regard to the various practitioners, who can be somewhat apprehensive about these changes," Mr. Saad says.

If any one company can overcome those dilemmas, it is IBM, Mr. Saad believes.

"This is a company that has been in the business of transforming entire industries — from the financial sector to transportation, oil and gas, and the automotive industry — based on the promise of what information technology can do not only to overcome the technological challenges but also to overcome congruent, cultural, and abstract challenges," he says.

Furthermore, IBM and its partners might well have the trump card. With Mr. Saad, they have an individual who not only understands and is passionate about the technology and its potential, but also someone with a true affinity for people and an ability to explore views from different perspectives.

"I'm a chameleon when it comes to blending in various environments, which is one of the things that's helped me in various aspects of my life," he says. "I thrive on getting to know and to understand different cultures and people, whether I am in Japan, Sweden, or Iceland. I've found this is a two-way street. By showing interest in cultural nuances instead of running over them or ignoring them, people of different cultures return that positive sentiment. That interplay is important whether it be in the area of business, biotech, or on an athletic basis."

With the help of leading genomics businesses worldwide and innovators in the field of technology, Mr. Saad predicts his division will become a powerhouse for IBM.

"This is an area within the company that was nonexistent a year ago, and we're forecasting that it will represent a very significant chunk of a billion-dollar business within three to five years," he says.

Since its formation in 2000, IBM Healthcare and Life Sciences has entered into more than a dozen collaborations with leading life-sciences companies, including Accelrys, LION bioscience, Physiome Sciences, Proteome Systems, and others. To advance genomic research, IBM also is working with major universities, such as Indiana University, the University of Pennsylvania, the University of Georgia, Johns Hopkins University, and the University of Toronto. The division is constantly seeking new partnerships that will advance its goals of bringing solutions to the marketplace.

Two such alliances are with deCODE and Affymetrix, both of which Mr. Saad helped to bring about.

When Mr. Saad joined IBM in late 2001, scientific excitement and some controversy, were focused on deCODE, an Icelandic biotech company. deCODE focuses on identifying the genetic causes of common diseases through its unique genealogical database, including all living Icelanders and stretching back to the settlement of the country 1,100 years ago.

"From a technical and scientific perspective, deCODE was doing something that was absolutely unprecedented," Mr. Saad says.

IBM was paying attention, and Sheila

BRINGING SCIENCE AND TECHNOLOGY TOGETHER

IBM HEALTHCARE AND LIFE SCIENCES IS DEDICATED TO BRINGING LEADING-EDGE TECHNOLOGIES OUT OF IBM'S LABORATORIES AND INTO THE MARKETPLACE.

DATA MANAGEMENT

Researchers need to organize and integrate information from different sources, in many formats and file types, so that they can uncover patterns and associations among genes and proteins. IBM's DB2 database software and DiscoveryLink technology enable researchers to access and extract information from many sources, such as public and private databases, using a single query. IBM's federated approach to data management can dramatically improve research and development cycles and lower drug development costs.

STORAGE MANAGEMENT

Through its integrated TotalStorage disk and tape storage product family, IBM offers the life-sciences industry high-performance storage and backup systems to store, access, and retrieve genomics and proteomics data.IBM's Enterprise Storage Server (code named Shark) is designed for the rigors of research data analysis, where information is often on multiple computing and storage platforms. More than 19 petabytes, or quadrillion bytes of data, are stored on Shark systems worldwide. Shark uses next-generation concepts for storage by integrating modular technologies, including disk and optical storage media, powerful processors, and rich software.

IBM's FAStT Storage Server systems are designed to be workhorses in heterogeneous environments and can scale to more than 16 terabytes to support growing storage requirements of life-sciences companies.

IBM's Linear Tape-Open (LTO) Tape Library provides high-performance tape backup storage capabilities to companies with data-intensive applications, such as the life-sciences applications.

HIGH-PERFORMANCE COMPUTING

IBM leverages the company's supercomputing power to help customers process and analyze vast amounts of genomics and proteomics data and solve some of the most complex medical challenges of our time, including treatments for cancer and heart disease.

The IBM eServer p690 system, which runs the AIX operating system, incorporates the world's first computer chip containing two processors, each operating at incredibly fast speeds in excess of one gigahertz. The new system also features self-healing technologies that can help provide uninterrupted operation, even through major power outages and system failures.

The IBM eServer xSeries 1300 Linux Cluster incorporates advanced supercomputing capabilities using Intel-based servers, including single-system management and fast shared access to huge amounts of data. The benefits to chemists, biologists, and consumers could mean new drugs faster, more efficiently, and at lower costs.

SERVICES

IBM has established a life-sciences consulting and solutions practice to help biotech and pharmaceutical organizations use information technology to speed discovery and development of new medical treatments. Offerings from IBM Global Life Sciences Consulting and Solutions include: requirements assessment. solution design and implementation services, and enterprisewide deployment. A data-management offering, High-Performance Data Exploration,allows researchers and scientists to leverage the DiscoveryLink technology for complex queries and analyses, including predictive modeling to analyze complex relationships between biological, structural, chemical, and textual data. This capability is critical in accelerating drug discovery activities and identifying new compounds to fight disease. IBM Global Services also provides application hosting and maintenance services for DiscoveryLink and other scientific applications.

RESEARCH

IBM is building Blue Gene/L, a 200 teraflop supercomputer based on technology under development by IBM Research and Lawrence Livermore National Laboratory. A teraflop equals a trillion calculations per second. IBM also is building a petaflop-scale (one quadrillion operations per second) Blue Gene machine for a range of projects. Blue Gene will be about 30 times more powerful than today's fastest machine.

IBM has developed a variety of computational tools and models to discover and classify these patterns, including: TEIRESIAS algorithm, a pattern analysis algorithm that helps find patterns present in biological sequences, and Bio-Dictionary, a protein dictionary containing more than 30 million protein "words" designed to accelerate the understanding of protein shapes and functions.

LINUX IN LIFE SCIENCES

The life-sciences market has embraced Linux because of its ability to deliver high-performance computing (HPC) with lower total cost of ownership. IBM's xSeries clusters are popular across pharmaceutical,biotechnology, academia, and government sectors. R&D is increasingly being done on IBM supercomputing clusters powered by Linux.

E-BUSINESS

By partnering with leaders in the life-sciences community and providing e-business tools and services, IBM is helping to further key initiatives within the world of medicine, including automating clinical-trial processes, personalized medicine and e-health, and improving the drug-discovery and development process.

Moran, worldwide healthcare solutions executive at IBM's Healthcare and Life Sciences unit, asked Mr. Saad to lead discussions with the company.

"deCODE had access to blood samples and genotype information dating back 1,100 years, and combining those two sets of data is the name of the game in the clinical genomics practice," Mr. Saad says. "I believed that by joining forces, we would be in a position to test some of the joint technologies that we were experimenting with in an environment that was ahead of its time."

In January 2003, the two companies announced a strategic alliance to deliver a set of integrated applications, technologies, and services for analyzing, managing, and storing genetic, genealogical, and clinical data. Under the three-year agreement, deCODE and IBM will jointly market and sell deCODE's Clinical Genome Miner (CGM) discovery system running on IBM hardware and software. The CGM Discovery system is a statistically based application for isolating and analyzing genes and gene variations associated with particular diseases.

"deCODE had by far one of the most sophisticated, user-specific applications," Mr. Saad says. "The company saw that IBM had a complementary set of expertise and technologies on the information side, as well as the business acumen and reach, that would supplement its application and make it much more powerful."

Another important alliance Mr. Saad helped to solidify was with Affymetrix. He already had a relationship with the company from his time at InphoGene.

Carol Kovac, IBM's general manager of Healthcare and Life Sciences, had started a strategic advisory council comprised of some of the industry's scientific heavy hitters. On this list was Susan Siegel, president of Affymetrix.

"Sue was enthusiastic and invited us to discuss our ideas further," Mr. Saad says. "Her company had been thinking of the application of its chip in the area of translational medicine and clinical genomics. She believed that Affymetrix could capitalize on its platform, chip, and technology to transition some of its technology into clinical development use and eventually into clinical practice."

The IBM practice had the same vision from a technology perspective, Mr. Saad says.

"We wanted to integrate clinical information with high-throughput research information in the area of basic research, in the area of clinical research, and then eventually in the area of clinical care," he says.

In March 2004, the two companies announced a global initiative designed to help medical centers, pharmaceutical companies, and research institutions use advanced technologies to integrate genomic research data with patient clinical data to help reduce healthcare costs, improve patient care, and provide more targeted treatment solutions.

From the start, Mr. Saad's contributions to IBM Healthcare and Life Sciences' growth have been phenomenal. He has helped in the development of the general information-based medicine strategy for IBM and the transition of that into a business with real traction in the market. He has led a global core team focused on the execution of the clinical genomics solution strategy with current and potential customers. And he has led the charge in ensuring that the clinical genomics direction drives significant revenue objectives for the business unit, influencing about $25 million in revenue to date.

"Today, I'm accountable for the overall operation, results, and growth of the entire clinical genomics business segment," he says. "I coordinate with the sales leader, Nancy Roche, who helps on the day-to-day tactical execution of sales engagement. I also coordinate with the business consulting services side, which is led by Anwar Khan. We have an entire practice, and we're fueling that practice to deliver integrated solutions. I have overall responsibility for the marketing programs for many of our solutions and our campaigns. I oversee the links between our solution development initiatives and our research initiatives and how these translate into real clinical genomics offerings that can be brought to the marketplace. This is a grand challenge because at the end of the day it's one thing to get people to buy into a vision and story line; it's a completely different thing five years later to be able to demonstrate that not only did we say it, but we actually did it. If we have this discussion five years from now, hopefully I will be able to proudly say we accomplished all of our goals; so far we're on the right path.

"I have played a role in ascertaining a niche for how an organization such as IBM can both contribute to and reap the rewards from clinical genomics, an area that I believe is going to explode over the next decade," Mr. Saad says. ✦

PharmaVoice welcomes comments about this article. E-mail us at feedback@pharmavoice.com.

HITTING HIS STRIDE

KAREEM SAAD – RESUME

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