Nobel laureate
Dr Martin Chalfie hopes
for more mad ideas

Inga-Lill Andersson
dispels the myth that
patents inhibit research

WIPO’s Francis Gurry:
“We aim to regain our crown”
“It is extremely important for us
to focus on service”

On 1 October 2008 Australian Francis Gurry took over as Director General of the World Intellectual Property Organization, WIPO. His appointment followed the resignation of Kamil Idris, who stepped down a year early in the wake of several long-running scandals and negative publicity. Mr Gurry reveals to AWA information his plans for a strategic realignment to help reinstate WIPO as the world’s number one intellectual property organization.

“We must regain our credibility as a neutral and independent forum for discussing matters of intellectual property law. The best way to do that is to improve the quality of our services. It’s extremely important for us to focus on service,” he says.

He believes his strategy to reclaim the initiative in discussions and negotiations on IP-related issues will also provide the antidote to demotivation among WIPO’s staff.

“It’s important that we become less self-centred as an organization and cultivate a much clearer external focus. Concentrating more on the world around us and how to improve the services we supply will also unite the secretariat around a common vision.”

Overheated patent system

One key constituent of WIPO’s portfolio of services is the international PCT system for patent applications. This was Gurry’s area of responsibility before he became Director General and remains one of his most urgent challenges. The ever-mounting backlog of patent applications has led representatives to describe the problem as an escalating crisis.

“In the short term I want to see a quick return to the basic idea behind the PCT system,” he says. “That means eliminating the duplication of work in the patent world. I think we all agree that is the solution. We just have different ideas about how to achieve it.”

Gurry suspects that the big patent offices in particular do not always use the international search report and patentability opinion, but start the whole process from scratch on receiving an application. He believes this is partly due to force of habit, but also to legitimate doubts about how well harmonised legislation and procedures really are around the world, and to a lack of confidence in other patent offices.

“In a sense, patent offices are like our immune systems,” he explains. “They differentiate between what is part of us and what are foreign bodies. They accept their own work, but any one else’s, anything foreign is susceptible of being challenged.”

In the long term Gurry hopes to discuss the way the PCT system is constructed and investigate whether a number of offices might cooperate to produce the international search report and opinion. He believes this would make it easier for offices to
accept the reports as their own work. It could also solve the growing problem that individual offices face in making prior art searches in many different languages. As to the merits of a single, international patent, however, he remains unconvinced.

“Trade and industry would welcome a single international patent, but I don’t think the world is ready for that yet. However, while we may not be able to agree on international rights, an international procedure may well be within reach.”

**File-sharing and the needs of developing nations**

Francis Gurry faces many challenges. One of the most hotly debated is how to resolve problems relating to copyright and digital piracy.

“There are various national proposals that could work. Legal liability for internet service providers, for example. But we need to engage in a dialogue about how best to ensure that the creators of copyrighted material receive their fair share of the value of their creations. I intend to initiate that dialogue.”

He must also succeed in mediating between the interests of industrialized and developing nations on a number of issues, including how to make new technology accessible to developing economies and how to protect and manage traditional knowledge. As regards the development agenda, he is optimistic. He maintains there is broad consensus in principle and plans for concrete projects. Protecting traditional knowledge is trickier.

“We held a meeting on that topic recently, but the lack of progress was disappointing. Eighty percent of the people in the world are dependent on traditional medical systems. Unlike modern innovations, these often develop collectively. We need to adapt IP law to this fact, but right now we’ve reached an impasse.”

**A relevant organization**

Gurry also has plans for WIPO to assume a greater role in many areas where IP intersects with wider issues. Many current proposals to combat global challenges in health and the climate issue, for example, are based on technological innovation, and this raises questions about intellectual property rights.

“WIPO must be less reactive and adopt a more proactive stance,” he says. “For example, in building up a picture of the relationship between patents and the availability of medicines in order to identify any problems linked to this. Or in determining how the patent system can facilitate the spread of technology with the help of patent commons, patent pools and so on. We must tackle today’s challenges – not those of the last century.”

**No conflict between scientific research and commercialisation**

It’s a widely held myth in the world of medical research that patent is a dirty word, merely a way of making money out of your research. In actual fact, applying for a patent has much in common with publishing a paper in a scientific journal. The difference is in the purpose of the exercise.

Academic researchers regularly suggest that it is unethical to protect their innovations with patents. They are disdainful of the kind of commercial research undertaken by the pharmaceutical companies. All they want to do is to be able to publish their findings in scientific journals. They say they want to share the results of their research freely and, as almost all research today builds on earlier discoveries by other scientists, they want to contribute to the advance of science in a spirit of altruism.

Patents, however, do not restrict a researcher’s opportunities to share information. On the contrary! Once a researcher has applied for a patent, he or she can publish their research results the very same day. The patent application itself is also published and here the innovation must be described in such detail that it is possible to reproduce it. There’s nothing hush-hush about that! In fact, lack of reproducibility is one reason to reject a patent application, or even to invalidate a patent after it has been granted.

Nor can you overlook the obvious. Given the sky-high cost of developing today’s pharmaceuticals, many would never have seen the light of day if it hadn’t been possible to protect them with patents. What a disaster that would be! Pure research without a commercial incentive is indispensable if we are to understand how the world works. But there is no reason to condemn the work of developing patented drugs simply because these same drugs may one day make a profit for the companies that developed them. After all, advances in science depend both on “free” research and on patented innovations.
“Researchers should share the results of their discoveries”

Dr Martin Chalfie, one of the Nobel laureates in Chemistry 2008, discovered that the gene for GFP could make its green fluorescent protein in virtually any cell. The discovery allows for various processes taking place inside the cell to be monitored and paves the way for fantastic new innovations. But, as Dr Chalfie explains, it takes scientific openness and courage to make full use of these opportunities.

Dr Chalfie believes researchers have a duty to share the results of their findings. When he and his team realised their discovery would open up totally new applications for GFP, they patented the method they were using. But they also shared what they knew with 50 or so other researchers, even before the results were published in a scientific journal.

“For me, it was an obvious step to take,” says Dr Chalfie. “I can get very irritated with researchers who insist on keeping information secret. Take the mapping of worm DNA, for example. What made the project such a success was the fact that all genetic researchers were able to contribute their own pieces to the puzzle. It’s no good everyone sitting in their own little lab, believing they can actually achieve anything.”

Funding crazy ideas

Dr Chalfie doubts that the Nobel Prize will change much in his life, although it has meant that he now spends more time being interviewed and talking about his research than he ever did before. However, he sees this as an opportunity to share his conviction with others.

“There’s too much focus today on what they call translational research – translating pure research into methods for improving public health. We mustn’t neglect pure research. We haven’t yet discovered all there is to discover! On the contrary, we’re still groping around to find the basic building blocks that we need to fathom out just how life works.”

He also maintains that researchers must take risks if their efforts are to lead to progress. To do this, they need to feel free to let their work take unexpected turns. That’s easier in pure research than in applied sciences. But freedom in relation to financial backers is at least as important.

“I never got any grants to develop GFP as such. It was just a crazy idea of mine. Thanks to the open-minded attitude in my university I was able to follow this hunch that I had. If there’s one thing I hope this Nobel Prize leads to, it’s that more people will dare to invest in mad ideas,” says Dr Martin Chalfie.

Wonderful modifications

Dr Chalfie shares the prize with Dr Osamu Shimomura, who first isolated the protein, and Dr Roger Tsien, who succeeded in making the protein glow in different colours. The prize represents a total of more than 50 years of research endeavours that, only when they were brought together, revolutionized our understanding of what happens in all sorts of different processes. For Dr Chalfie the accumulation of knowledge in this way is essential for progress.

“It’s not important to draw lines in the sand between my discoveries and someone else’s. Today’s research always owes a lot to the success of others. The best we can hope to achieve is simply a few wonderful modifications of this.”