

Comments of Bayer Schering Pharma AG in Response to the Pharmaceutical Sector Inquiry
Preliminary Report Published by the European Commission (DG Competition)

Bayer Schering Pharma AG (“Bayer”) shares the Commission’s view that innovation, competition and an effective regulatory framework are essential for the continued provision of life-saving medicines to patients. We welcome positive proposals to eliminate delays and obstacles to market entry for safe, innovative and affordable medicines. The Preliminary Report does not, in our view, address the issues of real concern within the pharmaceutical sector. We disagree with the conclusions reached by the Commission both on the challenges to pharmaceutical innovation and on the reasons for inefficiency in the generics sector. The Report does include certain findings with respect to the pharmaceutical regulatory framework with which we agree, and we hope that these findings can form the basis of more constructive recommendations in the final report.

I

GENERAL COMMENTS

Before commenting in more detail on specific aspects of the Preliminary Report, we would like to comment generally on the two central themes of the report – decline in innovation and inefficiencies in the generics market.

Innovation

Commitment to innovation is the hallmark of the research-based pharmaceutical industry. As the Preliminary Report points out, innovator companies spend substantially more of their turnover on R&D than do their counterparts in any other industry, and this figure is increasing year on year. Bayer currently has 42 products in Phase II or Phase III clinical trials, and we received approval for 3 new chemical entities in 2008 alone.

We agree with the Commission that the research-based pharmaceutical industry faces major challenges to continue to bring innovative medicines to the market. We need the support of national and European authorities to ensure that the spectacular advances made by the industry in recent years are brought more quickly and efficiently to those patients who need them. Rather than seeking to scapegoat an industry which is actively working to produce innovative medicines, we would encourage the Commission to focus on removing the roadblocks – such as increased complexity and volatility of regulatory, pricing and reimbursement regimes – that delay access to the market.

Any analysis of innovation in the research-based pharmaceutical industry should also take into account the following key factors:

- Our industry has gone through an expensive retooling to exploit the promises of the biotech revolution, and this has not yet translated into a mature pipeline of products. The research and development of new drugs is getting more difficult and costly, with increasing regulatory hurdles such as larger and more complex trials. Despite significant advances in science and technology, attrition rates and the risk inherent in pharmaceutical R&D remain very high. It’s essential that the very few medicines that do make it through

the complex and expensive development process can be launched quickly on the market at an appropriate price to allow the funding of further R&D efforts.

- Regrettably, all too often medical innovation in Europe is perceived as a threat to national healthcare budgets rather than as a driver of economic growth and an investment in the well-being of millions of patients. Any empirical study of the pharmaceutical sector should take into consideration market distortion caused by national regulatory regimes, which dictate competitive conditions on both the supply and demand side.
- Patents are the lifeblood of the research-based pharmaceutical industry. Patents not only reward innovation, they also enable knowledge to be shared throughout the scientific community so that further discoveries can be generated. For this reason, we are particularly concerned that the Commission, in its Preliminary Report, has singled out the filing, prosecution and enforcement of patents as a focus for criticism. Any action by the Commission that weakens the patent system or causes uncertainty in the industry as to the feasibility of patenting inventions will have a chilling effect on research and innovation within the European Union to the ultimate detriment of patients.
- Pharmaceutical innovation often arises from a series of incremental steps, only seldom from a quantum leap. Many such incremental improvements are the result of years of development and are often essential to ensure tolerability and patient compliance. For instance, a new antibiotic developed by Bayer could only be well tolerated by patients following a modification of the breakthrough new chemical entity. For those millions of patients who suffer from chronic diseases in particular, such improvements can make the vital difference between completing a course of treatment or not. To suggest, as the Commission has done in the Preliminary Report, that incremental improvements do not constitute innovation of a kind to merit patent protection is grossly to underestimate the major contribution to patient welfare made by such improvements.
- Finally, we would also like to point out that real and valuable innovation can continue after launch of a product. Besides improvements to the formulation or delivery of a product, further research can result in new uses for a medicine. An example from Bayer is alemtuzumab, a monoclonal antibody which was approved in 2001 for treatment of chronic lymphocytic leukaemia, and which is now in Phase III clinical trials for treatment of multiple sclerosis.

We hope that the Commission will use the opportunity presented by this consultation period to re-evaluate its analysis of the factors affecting innovation within the research-based pharmaceutical industry and work with us to tackle the real challenges we are facing.

Generics

The key message of the Preliminary Report is that the generics industry is operating inefficiently because of obstacles thrown in its way by the research-based industry. We provide more detailed comments below on the specific issues raised by the Commission but would like to make here the following general points:

- The Preliminary Report confirms that, where sufficient commercial incentive exists, generic medicines enter the market within 6 months or fewer after loss of exclusivity. Experience suggests that the timeframe can be as short as 3 months. This contrasts most favourably with the average delay of 14 months across the EU for life-saving, innovative

medicines to make their way through the regulatory process and come to market. For patients facing life-threatening or disabling diseases, such a long delay can have tragic consequences. We would like to see a concerted effort by the Commission and other EU authorities to reduce this unacceptable delay.

- The Commission does not address at all in its report the lack of efficiency evident in today's generics market. We believe that a thorough analysis by the Commission of competition between generic companies should be undertaken as the potential savings to the health system achievable through a more competitive generics market would be considerable.
- Finally, it seems to us both disingenuous and illogical for the Commission to argue that the short delay in generic market entry is caused by reprehensible practices of the research-based industry. The Preliminary Report criticizes legitimate, legal and appropriate activities ranging from filing and enforcement of patents to development and launch of improved products as a "tool-box" wielded by originator companies to unfairly hinder generic entry. There is no evidence presented in the Report of any causal link between these activities of the research-based industry – which are central to protection of innovation and delivery of improvements to patients – and delay in market entry. In fact, the Preliminary Report demonstrates that the key factor in determining time to entry for generics is the commercial value of the opportunity.

We are concerned that the characterisation by the Commission of such legitimate practices as patent filing and enforcement as reprehensible will lead to uncertainty for the research-based pharmaceutical industry as to the legal environment for protection of innovation. As the Commission acknowledges, a strong patent system is essential for innovation to flourish. We strongly urge the Commission to dispel the uncertainty created by the Preliminary Report and to confirm the rights of innovators to protect and enforce intellectual property rights.

II

SPECIFIC COMMENTS

1. Originators' "Tool-Box"

The Commission lists in the Preliminary Report a number of "instruments" used by originator companies as part of a collective "tool-box" to delay or prevent generic entry to the detriment of public health budgets and ultimately consumers. The implication is that these activities are reprehensible and are used by the research-based industry to prevent competition from the generics sector. In fact, these "instruments" amount to no more than the legitimate and fully legal rights and measures available to every industry and individual to protect and enforce intellectual property and to bring new and improved products to the market.

(a) Patent Strategies

The Commission claims that originator companies are increasingly filing a very broad range of patent applications surrounding an original compound and that these patents may then be used to prevent or delay generic entry.

- Clearly, the reason for granting patent protection for an invention is to reward innovation by granting a period of exclusivity to the inventor. By definition, therefore, an originator's aim in filing a patent application is to obtain a patent

which will prevent others from practising the protected invention for the period of patent exclusivity. Patents are granted only after rigorous investigation by independent administrative bodies has established that the invention demonstrates novelty, inventive step and industrial applicability. We see no basis whatsoever for criticizing the research-based pharmaceutical industry for applying for and being granted patents for inventions.

- The Preliminary Report features prominently the example of a single INN relating to which a total of 1300 patents and patent applications have been granted or filed. As is clear from the Commission's own data, this example is far from typical - the statistics provided in the Preliminary Report list the midpoint for INNs investigated as 41 patents / patent applications. In quoting these statistics, the Commission fails to point out that the figures include all patents granted in each of the EU Member States. In order to arrive at a more accurate picture of the number of patents protecting a compound, the Commission's figures should therefore be divided by about 27 because most inventions will be filed for and granted a patent in all 27 member states but still remain one invention.
- Even in cases where an originator has been granted a high number of patents relating to a single compound, all that this conclusively demonstrates is that the originator has been highly innovative in developing new uses or other innovative improvements to that compound. For example, in the case of the compound for which Bayer has filed most patents, a significant number of these patents relate to a novel delivery system which we hope will enable the product to be used for the first time to treat cystic fibrosis, an indication to which orphan drug status applies.

The Commission also criticizes the practice of filing divisional patent applications. A divisional patent application may be filed of the applicant's own volition or at the request of the patent office to meet an objection that the application lacks unity.

- A divisional application may be filed only in respect of subject-matter which does not extend beyond the content of the earlier ("parent") application as filed – it should therefore not contain any "surprise" for third parties.
- A divisional application takes over the effective (filing) date of the parent application – there is therefore no extension of the patent term.

Again, we do not see any basis for arguing that the filing of divisional patent applications unfairly or illegally delays or blocks generic market entry.

(b) Patent-Related Exchanges and Litigation

The general conclusion which the Commission appears to draw on this topic is that "patent-related exchanges can have a dissuasive effect and thus affect planned generic entry". We believe that it is perfectly appropriate and good legal practice for an originator to inform a generics company if the originator considers that launch of a generic will infringe the originator's patent rights. As professional business enterprises with access to thorough expertise in patent law, generics companies are not likely to be dissuaded by such a communication from pursuing their commercial objectives unless they conclude that the originator's claim is valid.

The Commission also comments that patent litigation and, in particular, injunctions can have an impact on market entry by generic companies. Litigation is time-consuming, ultimately unpredictable and expensive, and no pharmaceutical company enters lightly into this process. An applicant for an interim injunction assumes an especially high level of risk as the applicant will be required to compensate the other party in full if the applicant ultimately fails to win his case. However, if an innovator's patent is challenged, the innovator has few options if it wishes to enforce its valid intellectual property rights – the innovator must either litigate in court or pursue some form of settlement. The figures quoted by the Commission in the Preliminary Report demonstrate that originator companies and generic companies initiate litigation on a fairly even basis (378 / 320) and do not indicate any reluctance on the part of generic companies to engage in litigation.

Bayer would support any constructive proposals to reduce the cost, complexity and duration of patent litigation in Europe. The Commission comments in the Preliminary Report that these elements create uncertainty for the generics industry but the fact is that it is the originator companies, who have invested substantial resources into the development of a medicine, that are most adversely affected by uncertainty as to the validity or enforceability of intellectual property rights. As these intellectual property rights constitute the primary assets of the research-based pharmaceutical industry, we also consider it absolutely legitimate and appropriate for originator companies to enforce and defend these rights.

(c) Oppositions and Appeals

In our view, the information presented by the Commission with respect to oppositions and appeals filed by generic companies against patents held by originator companies demonstrates that the generic companies are active and vigorous in challenging patents that they consider invalid. According to the Preliminary Report, in 2007 only 5.2% of “weak” patents were challenged, of which 38% were fully revoked after opposition, so that only 1.9% of granted patents were in fact proven to be invalid by opposition. Even if one includes cases of partial revocation – where patents are actually upheld in amended form, very often protecting the core of the invention as filed – only 68% of 5.2% were revoked, bringing the total to 3.5% of all patents as granted. These figures show the strength of the European examination proceedings and demonstrate that more than 90% of patents as granted are indisputably valid and therefore deserving of the benefit of the legal rights provided with such patents. Bayer would welcome a reduction in the time taken for opposition proceedings as the research-based industry can only benefit from a quicker resolution of any legal uncertainty as to the value of intellectual property rights.

(d) Patent Settlements

As neither originator companies nor generic companies benefit from expensive, long drawn out litigation, reasonable settlement agreements are often the best way to proceed in order to establish certainty regarding intellectual property rights. Courts generally encourage settlement of litigation for this and other reasons. Each settlement agreement described in the Preliminary Report needs to be evaluated on its own merits. We believe that the resolution of disputes by agreement should generally be encouraged.

(e) Other Practices Affecting Generic Entry

The Preliminary Report lists a range of “other practices affecting generic entry” on which we would like to comment briefly as follows:

- Interventions before Marketing Authorisation / Pricing and Reimbursement Bodies: Although it is not possible to comment on the value of such interventions without knowing the facts of each case, we think it is important that originator companies, who are most familiar with their own products, should not be inhibited from raising concerns over the safety or quality of generic versions of these products. As pointed out in the Preliminary Report, no causal relationship has been demonstrated between any such interventions made by originator companies and any delay in granting of approvals for generic products.
- Promotion Strategies of Originator Companies: As the Commission points out, the research-based pharmaceutical industry does spend significant resources on providing information and training with respect to medicines, especially when new products are first introduced. These efforts are necessary in order to educate and inform prescribers, in particular when dealing with novel, complex medicines. The marketing of medicines in Europe is highly regulated. It would make no sense for originator companies to engage in unfair or inaccurate messaging campaigns with respect to generic products as the laws of the various member states provide easily available remedies to challenge any such misleading or inaccurate statements.

(f) Product Improvements

As we have pointed out in our general comments, major contributions are made to the wellbeing of European patients by innovative improvements to existing medicines. To dismiss such improvements as an attempt by the pharmaceutical industry to delay or prevent generic intrusion is grossly inaccurate and unfair. Only those improvements which meet the test of novelty, inventive step and industrial applicability will gain patent protection.

Similarly, the argument that the filing of patent applications covering improvements to a new chemical entity subsequent to the launch of the first product containing such chemical entity serves to delay generic versions of the original product is unsustainable. Such patents cannot claim or extend patent protection for the original product – such claims would be disallowed for lack of novelty – and generic companies are therefore free to launch bioequivalents of the original product without any regard to such later patents.

The Commission appears to criticise the timing of launch of “follow-on” products and the fact that the research-based industry supports improved products with marketing and distribution resources. The research-based pharmaceutical industry has no incentive whatsoever to delay the launch of improved products. These new products are often the result of many years’ development and any delay in market introduction will reduce the number of years of patent protection remaining for these products. There is naturally a greater need for information and training with respect to improved

products that are newly introduced to the market than is the case for products which have already been on the market for some time.

We do not see how the work carried out by the research based industry to produce continuing improvements to medicines can be interpreted as some form of offensive against the generics industry. Even if earlier forms of a product are withdrawn by originator companies, generic companies may nevertheless proceed to launch generic versions of these withdrawn product forms. By introducing improved versions of products, the research based industry brings more choice to patients and ensures that advances in technology and science are brought to the market.

We categorically reject the conclusion reached in the Preliminary Report that “cumulative” use by the research based industry of several “tool-box” instruments “increase legal uncertainty to the detriment of generic entry and can cost public health budgets and ultimately consumers significant amounts of money.” To characterise the legitimate and appropriate pursuit of patent protection for inventions, the enforcement and defence of intellectual property rights and the introduction of improvements to existing medicines as harmful to public health is a gross and unfounded distortion of the facts.

2. Competition between Originator Companies

In launching the pharmaceutical sector inquiry in January, the Commission highlighted its concern at a perceived decline in innovation in the pharmaceutical sector. We are disappointed that the Preliminary Report does not address any of the real and urgent challenges being faced by the research based pharmaceutical industry in its efforts to bring innovative medicines to the market as efficiently as possible. Instead, the Commission appears to conclude that innovation is being hampered by the actions of innovator companies themselves in filing patents, engaging in litigation and agreeing to settlements. We totally disagree with the Commission’s diagnosis of the factors impacting innovation and we would like to comment briefly on the following two issues.

(a) “Defensive Patenting Strategies”

Bayer does not pursue a strategy of “patenting an invention that the patent holder has no interest in developing and bringing to the market...” and we would be surprised if such a practice was widespread within the pharmaceutical industry. Our R&D efforts are focused on identifying and bringing innovative products to the market and we are not interested in dissipating our resources by pursuing patent filing strategies in areas that are not of interest to the company. In practice, one cannot always know, particularly in the early stages of research and development, which discoveries will become the focus of later development and commercialization. Innovators file patent applications for inventions which show potential at the date of filing but which later may fall outside the scope of the innovator’s focus. As the Preliminary Report demonstrates, innovator companies are then willing to enter into licensing or other agreements so that the subject matter of these patents can be exploited by others. We see no reason why companies should be criticized for enforcing these valid intellectual property rights or for negotiating royalties or other payments for the sale or licensing of these assets.

(b) Patent-Related Exchanges

The Commission reports “at least 1100 instances across EU Member States where the patents held by an originator company relating to a medicine ... might overlap with the R&D programme and/or patents held by another originator company for their medicine” and states that this overlap “creates significant potential for originator companies to find their research activities blocked, with detrimental effects on the innovation process.” As most R&D efforts are directed at finding treatments for the major diseases affecting Europe’s population, we are not surprised that overlaps occur in R&D programmes and patents but we completely disagree with the Commission’s conclusion that this congruence of R&D focus adversely affects innovation.

The fact that innovator companies compete vigorously in this area is a spur to innovation and not a brake on the innovation process. Even in those cases where an innovator has a patent which is needed by another innovator in order to pursue a particular line of research or development, the Preliminary Report demonstrates that in the overwhelming majority of cases where licenses are sought, these are granted. The actual figure for litigation between originators as reported by the Commission was only 66 cases and the number of INNs involved was only 18 or 8.2% of the total. It is the patent system’s achievement to make patented areas transparent for competitors. Every researching company may, through freedom to operate analysis, obtain full and accurate information if there is a risk of being held liable for patent infringement.

3. Regulatory Framework

We regret that the Commission has failed to propose any measures to address other serious deficiencies in the current regulatory framework – such as delays and volatility in procedures for approval, marketing and reimbursement of medicines – that contribute to significant delays in the launch of innovative treatments. We also consider the examinations carried out by the EPO to be of high quality and disagree completely with the comments of the generic companies and the Commission to the effect that certain patents are granted too lightly. As already pointed out, to merit patentability all inventions must fulfil the same criteria of novelty, inventiveness and industrial applicability. That said, and as mentioned in the opening paragraph of our comments, we fully support the Commission’s recommendation for the creation of a Community patent and a unified and specialized patent judiciary. We would welcome the opportunity to contribute to a discussion on how this recommendation should be implemented.

We would also recommend a change to current patent law to allow patent infringement proceedings to be initiated as soon as an application for marketing authorization of a product is submitted. Currently, a patent holder must wait until an infringing product is on the point of being launched before filing suit. Such a change would reduce uncertainty for both innovator and generic companies by enabling an earlier resolution of patent disputes.

III

CONCLUSIONS

We agree with the Commission that pharmaceutical innovation is essential to the health of Europe's citizens. The focus of the Preliminary Report on patents as a cause of decline in innovation is unsupported by any evidence and is inconsistent with the generally held and common sense view that patents act as an incentive for innovation. The criticisms made by the Commission of legitimate and appropriate practices such as patent prosecution, enforcement and defence are unfounded and can only generate uncertainty as to the value of patents and so discourage innovation. The research based pharmaceutical industry can only continue to invent, develop and bring to market safe, innovative and affordable medicines if a strong efficient patent system exists to reward innovation.

In this Preliminary Report, the Commission fails to address the lack of price competition in the generics industry, which contributes substantially to the cost of generic medicines in Europe. The Report fails to substantiate the claim that any delay observed in generic market entry is caused by illegitimate conduct on the part of innovator companies; instead, the data reported demonstrate that the key factor in determining time to entry for generics is the commercial value of the opportunity.

While we regret that the Report fails to include any proposals to remedy evident shortcomings in the processes for regulatory approval, pricing and reimbursement that lead to significant delays in the launch of innovative treatments, we fully support the Commission's proposals on creation of a single Community patent and a specialized patent judiciary and we hope that the Commission will build on these constructive proposals in the final report.