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Comments on the Pharmaceutical Sector Inquiry Preliminary Report

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Please find below my comments on the above Report. My comments relate to: 1) the focus of the Sector Inquiry; 2) explanations about the possible causes of the problems investigated in the Report; 3) analytical framework; and, 4) underlying assumptions. I acknowledge that the Report raises important questions that are worth following up. However, there seems to be a need to enlarge the focus of the investigation, and to re-examine the possible causes and consequences of obstacles to competition.

1. Scope of the Sector Inquiry

According to the Preliminary Report, the focus of the Pharmaceutical Sector Inquiry is to identify the obstacles to market entry: (i) for generic companies caused by practices of originator companies; and, (ii) for originator companies caused by practices of competing originator companies¹. The focus of the investigation may be too narrow, if the purpose of the Inquiry is to find out whether competition is restricted or distorted in the pharmaceutical sector in Europe².

One of the striking aspects of the European pharmaceutical sector is the relatively high prices of generics in comparison to the US, Canada and Japan, particularly in Germany (where there is no price regulation and the time it takes for generic medicines to enter is relatively short)³, France and Italy. The Report does not mention generic pricing issues, as if only the delay of entry causes loss of consumer welfare.

The reasons for the high generic prices in Germany include: 1) high prices of new

¹ Introduction, paragraph (8), p.22 of the Report.

² Preamble (3) of the Commission Decision of 15 January 2008 initiating the Sector Inquiry.

³ According to the Sector Inquiry, the average time for generic entry is: 6.4 months for Germany and 2.5 month for UK, much shorter than 14.6 months for Greece and 14.1 months for Spain, and 2.3 months for Denmark and 2.4 months for Finland (p.68).

medicines without subsequent relative price reduction and the size of the market⁴, 2) brand names of generics. In France and Italy, the main reason appears to be government price and reimbursement policies which do not properly incentivise generic entry and price competition. Generally, the prices of generics tend not related to competition but are rather dependent on the reference product prices of the originator products, the size of the market, the efficiency of distribution systems and price regulations in each country. Therefore, in order to find out whether competition may be restricted or distorted in the Sector, not only the behaviour of originator companies, but also that of generics⁵ and actors in the distribution chain (including pharmacists) should be investigated. In addition, an investigation of the impact of government price and reimbursement policies would be needed.

2. To what extent do delaying tactics delay the entry?

It seems that the Report is attributing obstacles to the speed and effectiveness of generic entry mainly to patent protection and delaying tactics by originators⁶. That these have played some part is probably undeniable. However, the Report does not assess the part played by other aspects of public policy factors, which vary according to countries and over time.

These factors include: (i) incentives or disincentives for generics in the regulation of pricing and reimbursement; (ii) regulations enabling or obliging pharmacists to substitute, and financial incentives or disincentives for generic substitution;(iii) patients' and doctors' trust of generic medicines; (iv) regulatory paths to drug registration and marketing approvals; and, (v) patent protection beyond the basic ('composition of matter' or 'product') patent to extend the effective duration of

⁴ 'Penetration of generic medicines is more successful in countries that permit (relatively) free pricing of medicines...than in countries that have pricing regulation...Higher medicine prices stimulate generic medicines to enter the market. This contrasts with regulated markets where pricing regulation drives down the originator price over the life cycle of the medicine. This lowers the potential profit margin for a generic medicine company and discourages market entry'. S. Simoens and S. de Coster 'Sustaining generic medicines in Europe', University of Leuven, April 2006 p. 67, and Table 1. Country experiences with policy tools to promote generic medicines use, p. 68.

⁵ Patent filings by multinational generic companies have increased rapidly in recent years (para 364 of the Report also refers to this). In large markets, companies can attain a great number of patents that specifically cover originator products, notably in crystalline forms and formulations.

⁶ Although the Report refers to regulatory delays also causes entry delays, nowhere does it assess its extent.

market exclusivity for individual drug substances, as investigated in detail in the Sector Inquiry⁷.

Paragraph (6) of the Commission Decision of 18 January 2008 initiating the Inquiry states that formal investigative powers are used 'in order to establish the extent of the above-mentioned practices and to assess them fully in their proper factual and economic context'. The Sector Inquiry should therefore explain how these practices are assessed.

3. Analytical Framework

What is missing from the Report is a framework for analysing anti-competitive behaviour in the Sector, be it the abuse of patent rights or settlement agreements. As the above generic pricing shows, the regulatory framework matters a lot in the sector and in these cases, competition law instruments may not be a useful tool. Part of the causes of the lawsuits in question can be attributed to the uncertain boundaries between different patent claims and rights, inherent in patent protection⁸. In other cases, such as the substantive value of 'secondary patents', it is normally patent offices and courts which are able to decide. The Report should explain what competition criteria are useful in distinguishing abuses from normal exercise of exclusive rights conferred by patents. It should also distinguish anti-competitive agreements from pro-competitive ones.

The Report focuses on the controversial issues relating to what it calls 'secondary patents' or 'follow-on product patents'. For example, crystals, esters, salts or isomers can be easily found and patented at a time not much later than the time when the original substance is patented. There are also those derived substances which could be valuable due to the therapeutic effects which are discovered and invented through lengthy and costly clinical research efforts. On the other hand, they may indeed be used as anti-competitive means to stop generic entry.

Normally, it is patent offices and courts which make decisions on the merit of such patents, based on the novelty and inventive steps of the patents in question. When public health interests are involved, health authorities and patent offices

⁷ H Redwood, 'Innovation - Patents - Generics - and Payers: the political dynamics of interaction', *Journal of Generic Medicines*, 2004.

⁸ See, for example, F Machlup and E Penrose, 'The Patent Controversy in the Nineteenth Century' *Journal of Economic History* (1950), 10(1):1-29, and more recently, J Bessen and MJ Meurer, *Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk*, 2008, Princeton and Oxford, Princeton University Press.

cooperate on policy issues and assess the therapeutic values of the medicines. Health authorities could look into economic data on prices, costs and net present values (NPVs - i.e., the total present value of a time series of cash flows) in order to evaluate the role of patents in recouping R&D costs, including for failed research projects. They could decide on the pricing of the follow-on drugs, based on cost-effective analyses. It is doubtful whether competition law offers an appropriate instrument for judging the 'quality of patents', i.e., novelty and inventive steps, or the therapeutic value of new medicines.

It would be helpful, if competition authorities clarified their thinking on these questions, although, in reality, this could probably only be done on a case by case basis.

It is therefore important to identify how a combination of *a priori* normal exclusionary behaviour based on patents could amount to illegal, exclusionary behaviour under competition law. However, the Report offers no such analysis. It only adds up the number of methods employed to delay generic entry⁹.

4. Underlying Assumptions

Preamble (3) of the Commission Decision of 15 January 2008 initiating the Inquiry mentions that '...competition may be restricted or distorted in the pharmaceutical sector in Europe, such as a decline in innovation as measured by the number of novel medicines reaching the market...'. The Report does not show a causal relationship between competition and innovation. In other words, the Commission appears to accept this as a given, without explaining the reasons underlying this proposition.

First of all, the 'number of novel medicines reaching the market' is not necessarily a measure of innovation. This number depends on the regulatory criteria and many of them, unfortunately, can qualify as 'not sufficiently innovative'. Drug innovation could be measured by 'high-quality' global and first-in-class new chemical entities (NCEs)¹⁰, but there is much room for discussion here.

Secondly, the factors causing the decline of innovation are numerous and it is difficult to assess the extent to which they influence innovation. Since the present slump which followed the last period where drug innovation flourished in the 1990s, various arguments have been advanced. The most important factor causing this

⁹ pp. 315-317 of the Report.

¹⁰ HG Grabowski and YR Wang(2006) 'The quantity and quality of worldwide new drug introductions, 1982-2003,' *Health Affairs*, Vol. 25, No. 2, March-April,

decline is the effectiveness of R&D, which is reflected in the productivity of R&D investments. Ineffective research may be due to poor research strategies and priorities (for example, a focus on short-term profits). Other studies argue that the huge size of drug companies is not suitable for biotech drug inventions¹¹ and others advocate wider scope for patent rights in order to promote biotechnology inventions¹².

If we retrace a longer-term history since the turn of the 20th century, the major factors promoting or affecting drug innovation seemed to be in the domain of science. Fleming's discovery of penicillin and Florey and Chain's demonstration of its antibiotic properties, followed by fierce competition without product patent protection, resulted in the fall of prices and marked decline of R&D¹³. Some of the discoveries in the 1940s and 1950s (chlorothiazide, tolbutamide, diazepam, cephalosporin, etc) ran into trouble clinically, as shown by the examples of chloramphenicol and thalidomide. Global market introduction of new chemical entities declined in the 1980s, gradually increased to reach another peak from 1995-97, only to decline again. As the geographical centre of innovation shifted from Europe to the United States in the 1980s, some argue that the peak of NCEs in the 1990s was made possible by the extension of patent protection by the Hatch-Waxman Act of 1984.

The surge of new chemical entities seems to have been driven by science which has offered new ideas about blocking mechanisms of disease-causing factors, such as statin, ppyr, CCB, PPI, MaB, CCR5, etc. Today, originator companies seem to be competing fiercely on a small number of these scientific ideas. On the other hand, the regulatory requirements enacted after the advent of genomics, genetics, and proteomics, have raised the hurdle for recognition of safe, efficacious, new medicines.

5. Conclusion

¹¹P Cuatrecasas(2006) 'Drug discovery in jeopardy' Journal of Clinical Investigation, Vol. 116, No. 11.

¹² DL Burk and MA Lemley(2003) 'Biotechnology's Uncertainty Principle, Boalt Working Papers in Public Law', paper 29, University of California, Berkeley.

¹³ JD Cooper (ed.) The Economics of Drug Innovation (proceedings of the First Seminar on Economics of Pharmaceutical Innovation, April 1969; P Talalay (ed.) Drugs in Our *Society*, Johns Hopkins University Press, 1964; H Redwood, The Pharmaceutical Industry- Trends, Problems and Achievements, Oldwicks Press, Felixstowe, Suffolk,1988.

As the Commission has repeatedly stated, the pharmaceutical sector is vital to the health of citizens. In all countries, patients need access to safe, innovative and affordable medicines, such as reduced cost generics. The Report would gain from offering a realistic therapy, based on the analysis of cause and effect which gives much greater attention to the part paid by economics and public policy in matters other than patents.