Pharmaceutical Innovation Challenges and Strategy (PICS)

Amina Berrached and Abderezak Benhabib

***Abstract*—The pharmaceutical industry is a particular industry which produces consumer goods of a different nature with an infinitely ethical packaging. Actually, the pharmaceutical industry is changing very rapidly. Indeed, the outline of factors behind the rapid transformation of this industry reveals a multitude of factors. Internal factors, which modify the methods of research and development, highly regulated structural factors, as well as a framework that affects strongly the upstream and downstream activity of the pharmaceutical industry. Furthermore, a new field of competition has arisen, for several years, between these latter and the generic pharmaceuticals, less expensive for consumers, creating a sharp decline in the prices of brand ones called Princeps. Adapting the strategy and the organization through new approaches contribute to the emergence of a new model of R & D, more conducive to innovation, in order to preserve the capacity of innovation, which constitutes a supporting pillar of the business model of this industry. This paper intends to identify the overall context in which the pharmaceutical industry tries with great difficulty to adapt itself to it, the solutions and the strategy to be adopted in front of transformations, while the latter part present a practical analysis built on a field survey involving consumers, doctors and medical visitors.**

***Index Term*—Innovation, blockbuster, credits, princeps, R&D, medicine.**

I. Introduction

The pharmaceutical industry is a full industry with its own peculiarities. Indeed, it produces consumer goods of a very particular nature since they concern health and therefore life and death of all human beings; on the other hand, the high-tech industry requires increasingly heavy investments spread over a very long term. To this constraint are added governmental plans to drastically reduce healthcare costs, since this industry is closely linked to the social welfare system.

In addition, the traditional pharmaceutical industry has faced, for many years, the market competition of generic drugs (cheaper for consumers) and the emergence of supermarkets which can be a threat to the rise of self-medication. The mode of drug consumption is, thus, going to change.

As a consequence, the role of pharmaceutical strategic studies is to develop appropriate strategies for at least maintaining growth while taking into consideration the original part of medicines, as well as technological, economic and social changes.

Our work, within this frame of reflection, is to analyze the concept of strategy and pharmaceutical innovation in front of more complex environmental issues. From there follows our next problem: What are the challenges facing pharmaceutical innovation, and what is the most appropriate strategy to be adopted to deal with it? To respond to those questions, this work is built on the main contributions in the field of medicine, pharmaceutical strategy and pharmaceutical, and it consists of three parts: the first will cover the global context within which the pharmaceutical industry is trying with great difficulty to adapt itself to, the second will focus on the solutions and the strategy adopted in front of transformations, and the last part will involve practical analysis based on a field survey involving consumers, pharmacists, doctors and medical representatives.

Manuscript received May 4, 2014; revised July 14, 2014.

Amina Berrached is with the Laboratory of Management Business and Social Capital-Mecas-Tlemcen, Algeria (e-mail: berrached-amina@hotmail.fr).

Abderezak Benhabib is with the Mecas Laboratory, Tlemcen, Algeria (e-mail: abenhabib@yahoo.fr).

II. Literature Review

A. Pharmaceutical Innovation and Challenges

The pharmaceutical industry is constantly evolving. In fact, the outline of the factors that bring about the rapid mutation of this industry highlights a multitude of factors linked to Blockbusters and patent expiry, inflation budgets for research and development, integration of biotechnology, the existence of strict regulations, development of effective marketing tools and especially to the expansion of the generic medicinal product in front of original medicines (Princeps).

B. Blockbusters and Patent Expiration

The application of patent laws, which began in the 1980s, has produced its first effects in the early 2000s.Since then, the first patents were due to expire and firms have progressively lost the monopoly rents they had. The collapse of sales was then particularly important for blockbusters [1], those molecules whose turnover exceeds the billion Euros [2]. As shown, the loss of patent protection of Claritine antihistamine Schering -Plough has generated a loss of more than 20 % market share to non-patented competing molecule, Zyrtec Pfizer / UCB and this within one year only [3], (Fig. 1).

Thus, the pharmaceutical companies must face a plunge once their molecules patent has expired. This can be even more important and damaging for the society since the molecule represents a significant percentage of its turnover (Fig. 2).

DOI: 10.7763/IJSSH.2015.V5.552

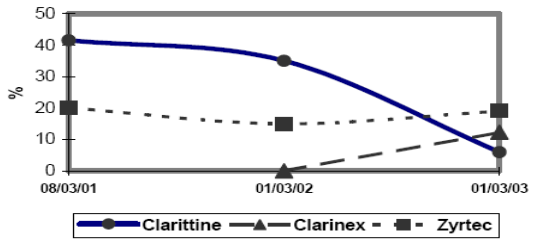

Fig. 1. The new competing prescriptions of a drug losing its patent.

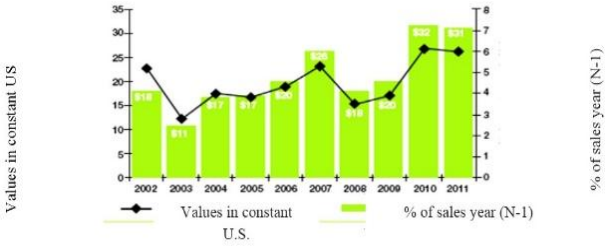

Fig. 2. Values of products losing their protection each year.

C. Inflation Budgets for Research and Development

The cost of the first placing on the market of a new molecule is estimated to approximately 850 million Euros for an international molecule [4], this amount being widely self-financed by the company [5]. Such an expense is explained primarily by the sophistication of the discovery process, which is now based on a massive investment in new technologies, both internal and through partnerships. This model then requires on laboratories to devote a significant part of their turnover to promote their products and to increase their workforce of medical representatives so as to achieve maximum profitability from the patented molecule, Table I.

Thus, the big pharmaceutical companies devote a twice higher part of their turnover to promote their products, 38 % on average, as the R & D [6]. The second factor, which contributes to the increase of budgets for R & D, is to increase the level of requirement of registration authorities, including taking into account the side effects in a more categorical way, resulting in a less important number of molecules on the market.

TABLE I: EXPENDITURE OF 10 LEADERS IN R&D IN 2006

Laboratory	R&D	R&D/turnover
1st- Pfizer	5492	16%
2nd-Gsk	4350	13%
3rd-Merck	2840	5%
4th-AstraZeneka	3256	17%
5th-Jhonson&Jhonson	4199	11%
6th-Aventis	3141	17,9%
7th-Novartis	2958	17%
8th-Bristol-Meyers	2353	12,2%
9th-Pharmacia	2503	16,2%
10th-Wyeth	2207	14,30%

Source: Activity report, IMS.

D. Integration of Biotechnology

The pharmaceutical industry has faced in recent years a major upheaval, the passage of technologies from the chemical industry to new technologies based on the development of biotechnology modifying the methods of research and the development of new medicines.

Developments in biotechnology in the sixties put into question the principle of chemotherapy showing that chemistry is neither the only therapeutic method nor the only source of innovation. Without giving up its chemistry based activities, the industry, motivated by the decrease in the number of new drugs set on the market in terms of the process of R & D, opens then , timidly and then more massively, to these new methods of innovation and the associated research procedures. Thus, the number of drugs derived from molecular biology (or bio-medicine) represented 18 % of the world pipeline of medicines in 2004 and 25% in 2006. The adoption of biotechnology enhances knowledge needs [7].

E. The Application of Strict Regulations

The pharmaceutical industry has to face a strict regulation because the industry depends on numerous non- economic factors. The medicine is a good severely restricted in terms of market access. It is characterized by a set of government regulations that strongly influence its activity and affect the entire industry. Among those regulations, manufacturing controls, patent law, and public registration procedures and placing on the market, pricing which can range from a "negotiated" freedom to an administrative supervision and the right of advertising [8]. A pharmaceutical promotion is often associated with some contemporary changes in the field of health: increased drug use in psychiatric practice (Lakoff, 2004); medicalization of aesthetic problems like baldness (Moynihan *et al.*, 2002); increased volume of prescribed drugs (Mintzes *et al.*, 2003); price increase of medicines according to the demand (Vogel *et al.*, 2003).

F. Development of Effective Marketing Tools

Directly or indirectly, pharmaceutical advertising is pointed out as a factor explaining the appearance of newly constructed diseases providing new markets for molecules discovered by pharmaceutical industry researchers as: baldness (Gotzsche, 2002), erectile dysfunction (Hart and Wellings, 2002, Healy , 2004; Moynihan *et al*., 2002. Tiefer, 2000), social phobia (Healy, 2004; Moynihan *et al.*, 2002)), emotional disorders (Dworkin, 2001. Sismondo, 2004; Williams and Calnan, 1996).

Direct marketing to consumers, recent promotional strategy of the pharmaceutical industry based on the concern of individuals who wish to play an active role in the preservation of their health is presented as being controversal (Avorn 2003; Mintzes *et al.*, 2003. AR Robinson *et al.*, 2004. Rosenthal *et al.*, 2002. Schweitzer, 1997; Sumpradit *et al.*, 2002).

However, such advertising is subject to a control a priori for advertisements intended for the general public and a posteriori for advertisements intended for healthcare professionals.

G. The Expansion of the Generic Drug in Front of the Original Brand One (Princeps)

With financing difficulties of health insurance expenses, the development of generic medicines is almost an ideal solution to improve the efficiency of public health expenses

[9]. The current period is characterized by a strong development of the potential market of generic medicines. So, in 2008, for example, generic achieved a worldwide turnover of 46 billion Euros and experienced a growth rate of 5 to 7%, identical to that of 2007 [10], but lower than those registered in 2005 and 2006. "This decline is explained by generic growth slumps in the U.S.A and Britain, where many competing companies in large therapeutic areas engage in a fierce price war which reduces manufacturers' margins."

Other countries, such as France and Germany as well as Algeria, try hard to increase the use of generics through various governmental incentives as the progressive delisting of drugs and the application of a reference rate.

Progressive delisting of drugs

This principle is applied by some EU countries. Medico-economic evaluation agencies of health products have been implemented to limit gradually reimbursement of highly priced innovative products if they did not ensure a significant medical and social profitability (in terms of quality of life, additional months of life etc.).

The reference rate

The practice of price reference with the aim of a refund is another strategy to promote the generic medicine. In several countries, reimbursement is limited by the price of similar products, so that patients can buy more expensive products, the difference remains under their respnsibility. This policy is called policy reference rate.

H. Pharmaceutical Innovation and Strategies

Various strategies are available to laboratories at all the procedural levels to thwart these transformation factors. Indeed, from the first process related to the conception, research and development of a medicine to its marketing and promotion, pharmaceutical companies seek on one hand to thwart the rigid regulations, and choose, on the other hand, for defense strategies favorable to the innovation through the development of effective responses to generic marketing strategies as well as the reconversion of the communication in the pharmaceutical innovation.

I. Marketing Strategies in Front of Generics

The rise of generics explains the implementation by pharmaceutical companies of many strategies mainly [11]: anti- generic marketing strategies of a diversified range, easy accessibility without prescription, generic production by the producing princeps laboratory, the reduction in the brand product price, and the integration of the consumer as a new target.

1) Diversifications range

This strategy can take different forms; the launch of a new product to overcome and take over patent expiry, the extensions of indication or range (eg the antidiabetic Glucophage BMS Merck KGaA under license in the United States the company launched after Glucophage IR, Glucovance, Glucophage XR), the hyper- segmentation lines called brand strategy (new dosage, new pharmaceutical forms ...), which are more global strategies , used on all markets . Without being exclusively intended to counter the arrival of generics, they allow to divert some of the prescription towards still protected products.

2) Making medicines available without a prescription

The passage to self- medication (OTC) is also one of the strategies used as tactical implementation to the introduction of generics called "OTC switch" (eg , launch by Schering Plough of a switch OTC of Claritine allowing them at first to capitalize on the originator brand keeping the same name) [12].

Generic production by the originator drugs laboratory Generic production by the producer of the originator drugs company is also a strategy to limit the total losses of the producer of the originator (Grandfils *et al*, 2004). Many laboratories have developed subsidiaries assigned to generics production: in this way Merck continues to market Lipha Glucophage while Merck Generics has launched its generic on the market: Metformin Merck). The innovative laboratory may also be available to the generic manufacturer its production line in exchange for royalties. GSK has, thus, produced paroxetine generic for Par Pharmaceuticals laboratories [13].

3) Reducing the originator prices

Cutting the originator price down at the same generics price can allow laboratories to keep the advantage acquired by the brand and keep a part of its market. This policy is only relevant when demand is price sensitive. In France for example, laboratories have been heavily used at the time of introduction of fixed price lists of responsibility (TFR) [14].

4) The consumer as a new target

No matter how numerous and technically complex, the firm's business strategies tend ,first, to be involved in a coherent overall strategy and ,then, to no longer be interested only in prescribers , but in the real consumers of their products . This is illustrated by the development of advertising campaigns for patients and the use of new media methods such as Web 2.0 health. The sites are not only kept by firms and public authorities but also by patients' associations or by patients themselves [15].

J. Pharmaceutical Innovation and Conversion of Communication

The role of pharmaceutical companies is to provide information about their healthcare medicines to professionals through various channels that can be intended for the general public (DTC) However and more especially the information is intended for healthcare professionals using different methods (medical journals and conferences...) [16], or a communication conveyed by medical representatives whose job is to form and inform health professionals in terms of innovative and new advancements in treatments.

But in front of these multiple changes, even the communication's strategy must be continuously innovative. Laboratories must convert their expenses and promotional methods to make profitable their investments according to the segments of the market [17].

Thus, in terms of consumer advertising (DTC) it has found new ways to divert his ban, adding to that the emergence of a new model of training and *medical* information such as e -learning and e -detailing for additional support to the medical visit, or to replace it possibly [18].

K. Reorientation of the Blockbuster Strategy

The growth model of the pharmaceutical company based on the blockbuster's culture seems to be put into question. Indeed, laboratories have mainly focused their research on mass pathologies, guaranteeing a large number of patients who will be prescribed the drug.

However, with the various drugs available in certain therapeutic classes (cardiovascular among others), the cost to provide innovation becomes higher. To launch a new medicine on the market, this one has to bring a real innovation. Furthermore, in this new context and with the adaptation of biotechnologies, we speak, now of blockbusters niche. Multinationals will gradually abandon mass markets to turn towards less lucrative specialties. Gradually, the pharmaceutical companies will opt for products treating serious diseases, intended to the hospital or medical specialists. These products with high added value seek rather the biotechnology and its ultimate development.

The advantage of these specialties consists of low marketing costs, since it is addressed only to specialists or hospital (a much smaller number of targets), greater support on behalf of regulators and less potential problems due to limited side effects. A new molecule will be much more easily accepted if no medicine exists on the market or within the context of therapies considered insufficient. More competition risk is very limited.

L. Reorganization of the R & D

In order to overcome the decreasing returns on the R & D, pharmaceutical companies are going to proceed to the same research *reorganization*. The objective is to move from a highly centralized, which characterizes the traditional structure of the pharmaceutical company, to the introduction of more reactive independent units, like biotech companies. The British GlaxoSmithKline (GSK) has reorganized its research in 9 excellent centers; each one specialized in a specific therapeutic area and works independently and in competition with each other on budgets. Roche grouped all its knowledge in a therapeutic area; from research to strategic marketing including clinical development; in five autonomous centers "Disease Biology Area." The Anglo - Swedish group AstraZeneca goes even further in its restructuring. In late 2007, the group's management announced its will to focus on research and development and drugs distribution [19].

The creation of new research centers is rare and is sometimes realized in the United States, but mainly in Asia, and particularly in China, because of a important potential market. The part of European clinical research sites has decreased by 5 points, going from 32 to 27 % between 2000 and 2006, and that of the United States by 6 points to 45% contrary to countries like India and China. These locations can be explained by the desire of laboratories to benefit from lower costs and to be closer to their future markets in order to understand better health and social authority's rules and for the sake of reactivity to the demand. Sanofi -Aventis has indicated a desire to make China its fourth global center for research and development.

M. Mergers and Acquisitions

As we have just noticed, acquisitions are also a good way for pharmaceuticals to integrate quickly the advances in biotechnology and to renew their R & D. Thus, after a period of quiet, the movement of mergers-acquisitions in the world pharmaceutical industry accelerated again from 2005. The American Pfizer has acquired Angiosyn, Vicurion and Bioren biotechnology companies. In 2006, the two German companies Bayer and Schering AG merged under the name Bayer- Schering Pharma. Takeda paid out about $ 8.8 billion for an American biotechnology company Millennium Pharmaceuticals to realize the biggest acquisition of a Japanese laboratory abroad.

N. The Choice of the Therapeutic Class According to Demand

In addition to the studied innovative capacity of firms allowing them to renew their portfolio of molecules, the choice of therapeutic classes is part of the strategy developed by the pharmaceutical companies. Companies are positioned on profitable markets, where the demand is high that is to say, the unsatisfied need and the large population and, if possible, in areas of chronic diseases. The market of high blood pressure is the most profitable with a turnover of 32.7 billion dollars in 2001 to 53.3 billion in 2008.The future blockbusters will be mainly in the cardiovascular field (43%).

O. The Method of Improving the Quality of Life and Survival «QALY»

In the future, the pursuit of the cost of R & D remains under question. The cost of biotechnology appears to be higher, but perhaps there will be less failure and more molecules in the final phase, allowing a return on expenses investment of R & D.

Whatever is the change waited with biotechnology, even if the costs of R & D are expected to stabilize at a high level, their allocation will necessarily change in the future. It is a new trend due to an evolving reality.

Costs relative to licenses will continue to grow owing to current shortages of pipelines of pharmaceutical companies, therefore , what was spent at the beginning of the research cycle (preclinical , phase I and sometimes II) , will be, henceforth, to develop (Phase III and IV) and / or acquire a given molecule license. The costs distribution of research and development thus become, different for companies, a larger part being devoted to the end of the development cycle, in particular Phase IV

Because Phase IV allows studying the molecule in reality, the data collected also lead to contain the actual costs of health, the advantage given compared to other competing molecules, leading to a pharmaco-economic approach of the medicine. This trend is already taken into account by the big pharmaceutical companies. This approach made by health economists is known as the "QALY" (quality life - years) or "year of life adjusted for quality." The QALY measures the number of years lived by the standard of living experienced during those years. The equation to study the cost is not only the price of the drug, but also its effectiveness. Because it is not only a question of lowering drug prices to contain health care costs, but also to have an overview of the cost of treatment. Expensive drug may allow the patient to visit the doctor less. So pharmaceutical companies will have to invest more in pharmaco-economic studies to demonstrate

the value of their molecule and allow their differentiation compared to the competitors.

III. The Algerian Context

Our empirical study involves a field of study is to shed light on the real issues of the Algerian strategy in the pharmaceutical industry?

Trying to answer it, this part of work will consist of a general description of the Algerian pharmaceutical market more precisely Saidal (the most important pharmaceutical producer in Algeria) , then through a questionnaire we would try to analyze the situation of medicines in Algeria and more precisely in Tlemcen city. Finally, this analysis remains exploratory and the findings should be confirmed or refuted by other studies based on a more important size of samples.

A. The Algerian Pharmaceutical Sector

The restructuring of public management in the sector of medicine in Algeria incited the authorities to raise the state monopoly and to practice a structural revision. The government has completed the implementation of a new regulation allowing national economic sector operators (public and private) to import medicines, with the commitment of a short term productive investment. This one, accompanied with attractive fiscal advantages, is supported and promoted by the Agency for the promotion, support and monitoring policies of investments, created for this purpose.

- Saidal main local national laboratory

Following the restructuring of the Algerian Central Pharmacy, national pharmaceutical production company, established in April 1983, became independent in February 1989 and gave birth to Sa ïdal group, described by the Algerians "national treasure."

Following the implementation of economic reforms, economic SAIDAL became a public company with the autonomy of management and was chosen among the first national companies to acquire the status of a corporation. In 1993, changes were brought to the Articles of the Company enabling her to participate in any industrial or commercial operations related to the corporate purpose through the creation of new companies or subsidiaries.

In 1997, SAIDAL company implemented a restructuring plan which resulted in its transformation into an industrial group on February 2nd, 1998 to which are combined three subsidiaries (Pharmal, Antibiotical and Biotic) issuing from this restructuring.

B. Research and Development within the Sa ïdal Group

The Centre for Research and Development SAIDAL Group, founded in July 1999, is a scientific entity responsible mainly for the design and development of generic drugs, research and development of pharmaceutical products, technological development of plant extracts and analysis performances.

The main activities are:

1) The drugs formulation and their compliance control (raw materials, finished products) during the different phases
2) The realization of research works
3) The realization of services analysis for customers in the food – processing industry, veterinary...sectors

It is in this context that the expansion of the private pharmaceutical sector, hitherto limited to retail selling, took place and it is for that reason as well that two series of data are necessary to understand the context in which the medicine operates: the data on the pharmaceutical market and the data on the economic situation.

Before continuing our description of the Algerian pharmaceutical market, it is important to note that this latter concerns only the production of the generic drug which does not represent an innovation in itself.

However, Algeria, as we will see, tries to develop an appropriate strategy for the generic drug that is new for the consumer who is accustomed to brand drugs. As to laboratories, these ones are trying to innovate in the communication strategy around the generic drug.

Thus, we will describe the local strategy around the generic at first, and then we will review the local communication strategy through a questionnaire to consumers, pharmacists, doctors and health visitors.

The generic drug promoted in Algeria

The generic medicine represents 37.92 % of the Algerian market of the medicine with a consumption of 33.6 % in 2004 to 37.72 % in 2006 and then to 41 % at end of 2007, while the rate is about 50 % in developed countries. Thus, the Algerian government has just completed a new national drug policy by taking measures favorable for the promotion and generalization of the use of this drug. Its policy not only popularizes the use of generic, but also attracts traders to invest in this niche. Indeed, investors wishing to produce “quickly and effectively " generics will benefit in a gradual way from important advantages.

State reforms concerning the generic medicine as the share of imports of drugs is significantly superior to that of local production, the government has opted for various strategies to regulate the latter particularly by prohibiting the import of drugs that are already produced in Algeria - This interest is motivated by the fact that the drug import bill is increasing 70 billion in 2009. Therefore, the government has drawn an ambitious objective which is to achieve a rate of 70% of the generic drug production for the period 2015-2016.

The bill , which was introduced by the Minister of Labor and Social Security, is to strengthen more and more the domestic production of generic drugs, and put an end to the waste of these products.

- The reference rate of drug reimbursement

The repayment method of drugs in Algeria knows development, in terms of the tariff plan. This arrangement consists in introducing the so-called reference prices that will serve as a basis for the management and reimbursement of the drug, for a better control of health costs. That is why, like many countries, the introduction of a reference price of the medicine in Algeria is a way intended to promote generics and consequently joins the pharmaceutical expenses rationalization, without affecting the availability, effectiveness, quality or safety of treatments. This measure

aims at controlling healthcare costs and encouraging the consumption of generics, the concerned laboratories as Saidal, main local produced declared, "For the first time, the majority of our products have been taken as a basis for reference rates .We have requested the application of this price, and we have finally achieved our aim. On 270 Sa ïdal products, 96 were price fixed. This will allow the generic to know a development and the sick people to pay cheaper for their drugs," Zaouani Rashid, managing director of Sa ïdal group. While, at the national level, the General Secretary of the Ministry of Health and Hospital Reform Chakou Abdeslam, asserted, in May 2009, that Algeria won between 200 and 220 million Euros since the application of the new law on the protection of Algerian and generic products and therefore the prohibition to import medicines produced locally.

- Medical information in Algeria

Any medicine is a drug; this is why its launch on the market and its marketing are subject to strict rules imposed by the World Health Organization and national laws. Laboratories have to set up, in countries where their products are marketed, directed information both to physicians and pharmacists as well as consumers. The budget for this information often exceeds 8% of the turnover of laboratories which explains the importance of this information [20].

At the local level, the physician is the most requested by the medical information applied by laboratories being indeed the potential prescriber. The most widely used medium for informing physicians in Algeria remains the medical visit [21].

So the medical sales representative as a laboratory representative in Algeria presents this medicine, its composition, its advantages, disadvantages, general practices and cost. He is a key link between medical and pharmaceutical professionals maintaining knowledge of new therapeutic developments [22].

C. Questionnaire

As we have previously mentioned, the purpose of this practical study is to know better the situation of the local pharmaceutical industry, so we asked a target population affected by the therapeutics ie, the general practitioners, specialists, pharmacists, health representatives and then consumers.

The sample set consists of 200 physicians (P / Private Specialists 18% ,P / Public Specialists 22 %,P / Private Generalists 21%,P / Public Generalists 39%), 50 pharmacists (5 % Public ,95% Private) 200 consumers, 50 medical sales representatives (70% local laboratories to and 30% foreign laboratories).

We will present the results of this survey according to specific vectors sought in the questionnaires;

• *The questionnaire REPS:*

*Technical communication experiences of REPS

*Criteria of the chosen target "doctor."

• *The doctor questionnaire:*

*Prescription trends (originator / generic) and the reason for this trend

*Which is the information mode he uses on the therapeutic innovation?

*The influence of the REPS on his therapeutic arsenal

• *The pharmacist questionnaire*:

*What is the information he uses on therapeutic innovation mode

*Consumption patterns of customers, originator / generic

*Prescription patterns, originator / generic

• *The consumer questionnaire:*

*Their perception of generic medicines.

1) Results and discussion

The Information-gathering was realized on the basis of a questionnaire to be filled by means of direct interview and the treatment results by SPSS, then among the numerous results that we have collected , we will present the most representative in relation to our study ;

2) Medical representatives

Medical representatives reported receiving training at the moment of their recruitment. By questioning them on the type of training they had, they answered that 52% of it focused on therapeutic interest, 22% on the medical visit techniques, 15% on communication.

We can notice that the majority of REPS receive training on the therapeutic they will then transmit to health professionals so that they form and inform them at the same time about the therapeutic innovation.

Then laboratories, in their communication strategy, indicate targets, all REPS questioned said that their laboratory targeted specific doctors, and this on the basis of various criteria as we reflected in the following diagram (Fig. 3).

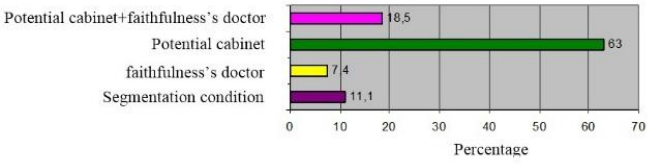

Fig. 3. The basis of targeting doctors.

The most dominant targets remain high potential physicians which may seem discriminatory and deprives the others of valuable information.

Asking REPS what does your lab offer to his best prescribers besides the information? Their responses were as follows Table II.

TABLE II: TYPE OF BENEFIT ATTRIBUTED TO DOCTORS

Type of benefit attributed to doctors	Meeting participation	Free subscription magazine	Free sample	Information day	Free sample+ meeting
Percentage	52%	4%	4%	7%	33%

3) The physician

Knowing the influence of the medical visit on the doctors' prescriptions is knowing the efficiency of the strategic communication plan drawn by the laboratories, and the question was as follows: do you vary your prescriptions for the same pathology?

The answers are: often 51.9%, 44.5% rarely, never 4.76%. However, and at first we wanted to understand the causes of this variation (Fig. 4).The medical visit is the main cause -as can be seen in the following diagram, then we have the State policy forbidding the import of some medicines which constrains doctors to change their prescriptions, and finally the other reason is the nature of the doctor who can always be looking for the latest innovations.

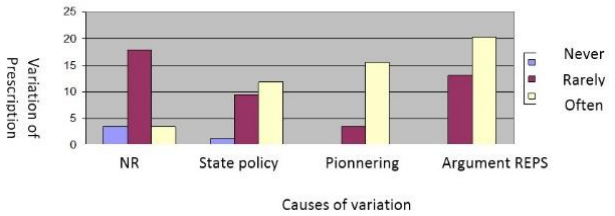

Fig. 4. Causes of variation in prescription.

For more information and details, we wanted to know which factor contributes to the prescription of a specific medicine, such as brand, a better knowledge of the product, cost, or therapeutic interest, the results are as follows Fig. 5.

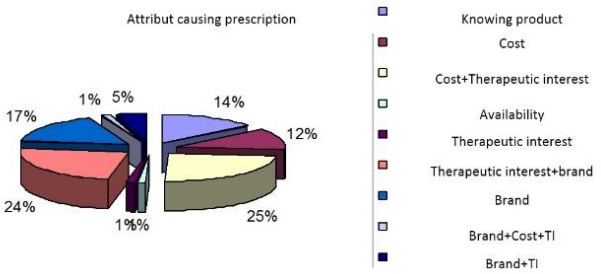

Fig. 5. The drug attribute which makes prescribe.

Then and in order to know what are the mean so fin formation requested by physicians, we suggested a series of proposals on the latter by measuring the degree of importance they attribute to each method.

The results are the following:

1) Focus on the medical quality and not quantity
2) Diversify the means of information
3) Perform medical visits at the level of all the doctors' segments because hospital doctors declared being in need for information about therapeutics

4) The pharmacist

The pharmacist needs to be informed about therapeutic innovation, however he can use several ways. On our questionnaire we proposed five ways as can be noticed in the following diagram (Fig. 6).

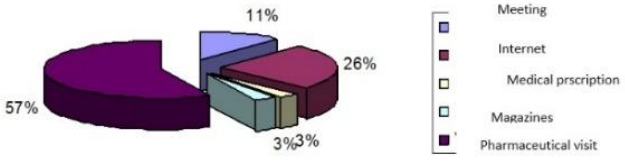

Fig. 6. Means of information pharmacist.

Then and concerning about local consumption modes i.e.; generic or originator, pharmacists reported that 80% of customer inquiries were for the originator , the rest 20% for the generic drug which highlights the consumer loyalty to brand name drugs despite the state and doctors efforts since 89% of doctors prescribe princeps.

5) The consumer

With the appearance of generic at a global level, then at a national level which allowed the state strategy to have a better control on health expenses, the consumer found himself confronted with a new medicine he didn't know before, sometimes prescribed by his doctor, often advised by his pharmacist, more available than the brand name drug and especially better reimbursed by social security. So we wanted to know the opinion of the consumer about generics.

Do you know the generic drug? The answers are: yes 72.73 % and not 27.27%, despite the fact that consumers are still reluctant in front of this new generic medicine.

IV. Conclusion

The world changes are more and more numerous and complex, because in addition to the economic and technological changes, we notice purely marketing mutations, and this through more accurate segmentations; concentrations on marketing strategies formerly neglected by the pharmaceutical industry as the strategic marketing or the reorganization of research and development .In front of such a rapid changing environment, the pharmaceutical industry does not stop repositioning itself in order to maintain its growth and innovation strategy which is the pillar of its business, and by opting for a variety of appropriate strategies to changes.

Putting themselves in a strategic long-term perspective, health and industrial policies must define a synthesis between conflicting short-term objectives: to promote equal accessibility to health care at an acceptable cost, and to allow the development of a highly innovative industry. Since innovation is considered as a leading source of progress in the field of pharmaceutical industry, it engenders enormous research and development costs that the industry must pay off.

The initial knowledge on the therapeutic acquired by physicians is insufficient and needs to be updated, that is why Algerian doctors and pharmacists rely largely on the communication strategy outlined by laboratories especially in terms of innovation.

Our country does not seem to escape this movement, and Algeria, as we have noticed, has witnessed a significant restructuring of the pharmaceutical industry. Because like many developed countries, Algeria favors the development of generics which is almost an ideal solution to improve efficiency and mastery of health expenses as well as the communication strategy centered on generic medicines which appear in a structured form playing a major role in the composition of the medical arsenal.

References

[1] P. Abecassis and N. Coutinet. Characteristics of drug and strategies of pharmaceutical companies. [Online]. Available: http://www.strategie.gouv.fr/revue/IMG/pdf/article_HS7PANC4.pdf
[2] The pharmaceutical industry meets its mutations. [Online]. Available: http://www.monannuairepro.com/pdf/MS09-026-041.pdf
[3] N. Weinmann. World pharmaceutical groups "ways" which alternatives. *Swiss Credit, First Boston*. [Online]. Available: http:// www.industrie.gouv.fr / pdf / pharm.pdf

[4] Bio health info Monthly Market Information bio-health-N17. (August 2008). [Online]. Available: http://www.eurasante.com/fileadmin/web/pdf-publications/2008/L-industrie-pharmaceutique-mondiale-en-pleine-mutation-Eurasante.pdf
[5] Pharmaceutical industry: Innovation and economic sector– Elements for thought. Study for the International Research Laboratories by JNB-Development SAand Annie Chicoye Economics, 2003.
[6] The pharmaceutical industry meets its mutations. *Consultancy Arthur D. Little for the IMS*. [Online]. Available: http://www.monannuairepro.com/pdf/MS09-026-041.pdf
[7] M. Hubert and A. hamdouch, *The New Industrial Economy to the Pharmacy: Industrial Strategies, Dynamic Innovation and Business Strategies*, ed., Biocampus, Elsevier-Paris, 2001, pp. 3-15.
[8] N. Kapferer, *Brandanddrug-Weight Mark on Medical Prescription*, ed., Organisation, 2002, pp. 21-30.
[9] The generic expectations to reality. (February 2005). [Online]. Available: http://www.annales.org/ri/2005/fevrier/66-68Lesur.pdf
[10] J. M. Peny. The challenge of generic. (2007). [Online]. Available: http://www.ubifrance.fr/galerie/extrait/multi_9782711769391.pdf
[11] Charles Harboun, *Pharmaceutical Marketing*, ed., ESKA, 2004, ch. 3, pp. 4-35.
[12] A. Olivier, *What Marketing for Any Drug*, ed., Vuilbert, 2008, pp. 10-15.
[13] A. Olivier, "Claude Hurteloup," *The Drug's Marketing in Question*, ed., Brochè, 2008, ch. 2, pp. 45-60.
[14] Grandfils *et al*. (2004). Pharmaceutical companies face the arrival of generics: What strategies for what effects. [Online]. Available: http://www.irdes.fr/Publications/Qes/Qes84.pdf
[15] P. Batifoulier, O. Biencourt *et al*. (2006). The economic health policy and the emergence of a consumer care: construction a market. [Online]. Available: http://www.ces-asso.org/docs/JESF_contributions/domin.PDF
[16] F. Lamontagne, G. Turcotte, S. Lemire, M. Plaisance, B. Coll, M. Brouillet, A. Adjaoud, and P. More, *When the Pharmaceutical Industry Woos Doctors*, Le Devoir, Montréal, 2003.
[17] C. Giroux, "The synergistic contribution of pharmaceutical advertising practices to transform the contemporary role of the drug," *Revue Internationale sur le Médicament*, vol. 1, 2007.
[18] H. Charrondière and S. Kerob. (July 2008). Promotional policies of pharmaceutical companies. Eurostaf-Direct Medica. [Online]. Available: http://www.pharmaceutiques.com/phq/mag/pdf/phq159_110_industrie.pdf
[19] R&D pharmaceutical companies: Breakage and mutation, Directorate General for Enterprise, Ministry of Economy, Finance and Industry, France, April 2008.
[20] M. Khiati, "Medical information and business," *Journal EL Watan ECONOMIE*, pp. 3-5, November 30, 2008.
[21] Y. Dellaoui, "Service of therapeutic," *Journal the Quotidien of Oran*, Faculty of Medicine for Oran, pp. 6-8, December 2009.
[22] E. Répérant, *Get a Respectable Commitment-Stages of Communication in Medical Visits*, ed., Heures de France, 2006, pp. 4-22.

Berrached Amina was born in Oran, Algeria in1983. She received a magister degree in marketing from University of Tlemcen (Algeria) in 2010, she has been an assistant professor in Preparatory School of economics and commercial sciences and been involved in several research projects at Mecas Laboratory. Her main area of interest is drug's marketing.

Benhabib Abderezak was born in Tlemcen, Algeria in 1949. He obtained a Ph.D. state in 1990 in management Clermont Fd, France. He worked as a professor of economics and management, then been designed a director of Tlemcen School of Economics. He is also the director of the laboratory MECAS (management des entreprises et du capital social). His research interests include: management, marketing, strategy, managerial economics, and poverty.