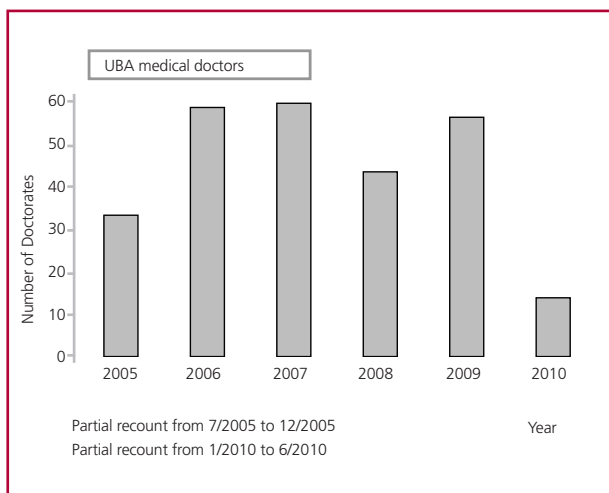
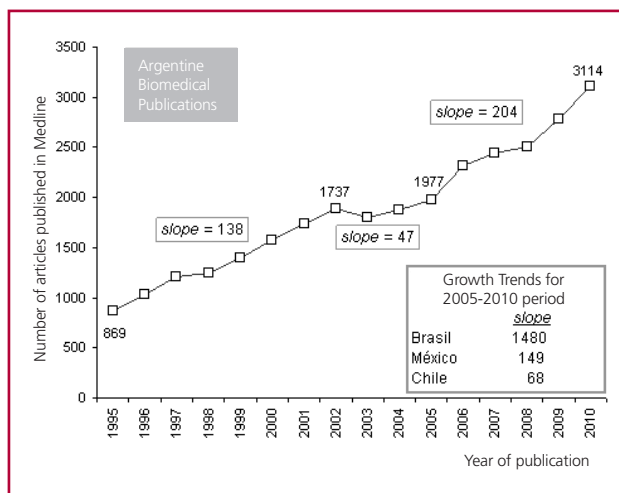


Growth in Biomedical Publications in Argentina. A Better Time for Investigation

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Beyond ads, and official figures on applicable investment to research in Argentina, scientific productivity as measured by the number of national biomedical publications appeared in Medline suggests a significant increase from 2005. After a period of stagnation between 2002 and 2005, the number of biomedical articles, both clinical and basic and applied research, resumed the rising trend that it already had since before 1995 until the economic crisis of 2001-2002 (information prepared from PubMed / Medline data, www.pubmed.com):

that are almost exclusively medical care and promote preference for professional activity expense of academic careers and the very small number of professionals that reaches a doctorate in their post-graduate degree (less than 1% for the country). In the case of the University of Buenos Aires, the total number of doctors who achieved a doctorate in the last 5 years was only 232 and its distribution over time (data supplied by the UBA Doctoral Committee) was as follows : Returning to the subject of publications, and on the type

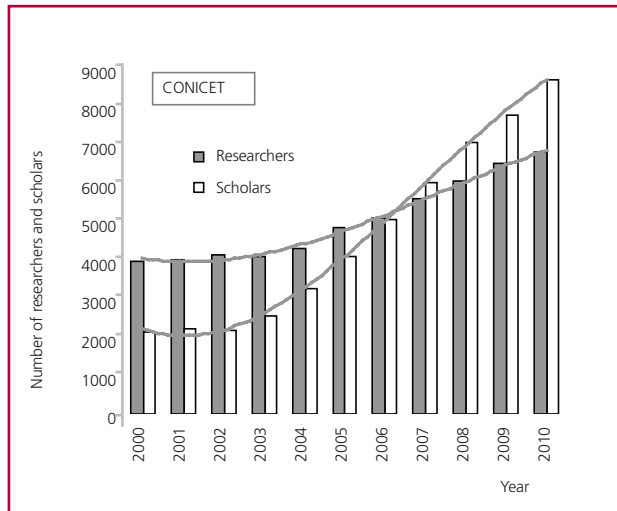


Furthermore, the slope of growth from 2005 overcame the trend previously observed to 2002. This situation seems to be even more interesting when we compare these trends with Mexico and Chile, two Latin American countries that lead the region in terms of number of biomedical publications (see box in the figure). In comparison with these two countries, since 2005 Argentina increased 56% the number of articles, while Mexico and Chile did 31% and 30%, respectively. But this comparison would be misleading if we did not consider that at the same period Brazil grew 88% and this trend comes from more time ago. This difference not only be awarded to the scarcity of local financial resources, but also the small number of graduates who choose to engage in research, to the curriculum profile of the universities

of article, its composition does not vary substantially between 2005 and 2010. Thus, publications that included only researches in human beings corresponding to 38% of all articles and the mean composition of these for 6 years was as follows: 3% randomized clinical trials, 7% non-randomized ones, 13% clinical case presentations, 17% reviews and 60% other kind of articles. This distribution highlights the low proportion of clinical trials and the high rate of revisions and case presentations. Meanwhile, clinical trials in phases I to III never exceeded the ten articles in each year. As it will be discussed below, most of these trials in Argentina are developed hand in hand with the pharmaceutical industry, in general as incorporation of patients and without significant participation in the publications.

As an additional parameter associated with the growth of publications, one could analyze the situation of the main national body for the promotion of research. As shown in the graph below, the number of researchers and scholars associated with CONICET also increased from 2004-2005, with a more pronounced increase in the number of scholars (information prepared from the CONICET data, www.conicet.gov.ar):

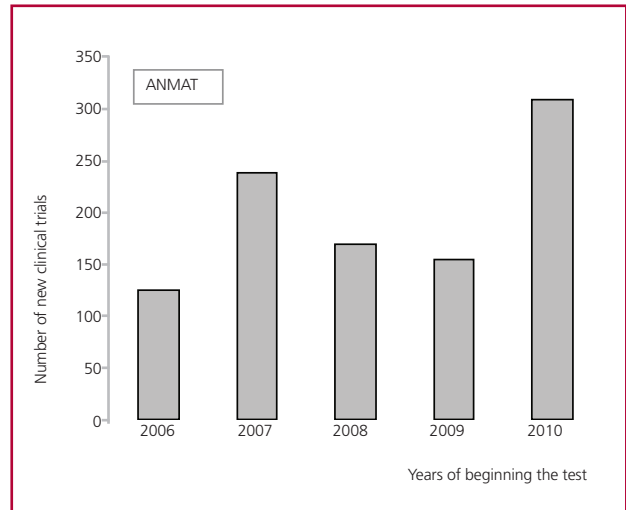
The figure also shows a stable period with no growth between 2000 and 2004. As regards the field of medicine



and biological sciences, the distribution of number of researchers and scholars for each branch in 2010 was as follows: medical sciences 1,391, biology 2,148, biochemistry 824 and veterinary 245. This means that just over one third of the staff of CONICET researchers works in the area of biological sciences or health.

I share the view that ‘to fill the industry protocols is not doing research,’ and that those involved do not participate in the conception of the idea or design or analysis of the data. However, the proliferation of clinical trials subsidized by laboratories of medical specialties brings together a mass of young physician assistants who are trained in the task of thorough collection of data, they learn to use computer databases and protocols, are introduced in the subject of design and randomization, and they also make money. At present there are about

1,000 clinical trials in process approved by the ANMAT covering almost all areas of medicine (11% corresponds to the thematic area of cardiology and cardiovascular diseases). The amount of these protocols entered every year since 2006 is shown below (information prepared



from www.anmat.gov.ar data):

In this case, the frequency distribution does not follow the pattern of growth observed in the previous figures. Although some of these protocols are purely local, there is a clear dissociation between genuine research revealed by the growing number of publications and researchers linked to the CONICET and the simple addition of health centers to enroll patients in clinical trials of industry. The remaining question to ask is whether this contingent of young pseudo-researchers used in pharmacological studies are subtracted from the few vocations to science.

It is well known that the history of science is often accompanied by the criteria of each country’s political history. However, some of the trends observed in recent years could be interpreted as a better time to scientific research in our country. And with a vision to interpret the locally developed science as a fundamental attribute of autonomy and independence, we would revive in the near future the excitement of a new national project of ‘big science’.