

**Joint press release: French National Academy of Medicine (ANM)/National Academy of Pharmacy (ANP)/Association of Professors of Biology and Geology (APBG)**

**Warnings about the orientation of high school graduates leaving aside studies in pharmacy and medicine [1]. There is still time to react.**

**February 26, 2024**

For several years now, it is to be deplored a steady decline in the number of high school diploma (baccalaureate) graduates wishing to pursue scientific studies, particularly health studies, and more specifically pharmacy. The reform of entry into health studies, and that, simultaneously implemented, of science teaching in high school, have worsened the situation: more than 1,100 places were vacant in the second year of pharmacy in 2022 and 500 in 2023, exacerbating the forecast of "pharmaceutical deserts" over the next decade. It is also vital to safeguard the national pharmaceutical industry, a strategic area for France and Europe. One of the reasons for the lack of interest in these professions among baccalaureate holders is the increasingly obvious knowledge gaps in scientific subjects in general before the baccalaureate, and especially those related to health. There is also an obvious lack of appropriate information for student guidance in both secondary and high school. Concerning medicine, the very selective entrance "competition" leads to the major problem of the number of young people leaving to study abroad.

Faced to these challenges for the national health system, teachers, and, more specifically, those of "Sciences de la Vie et de la Terre" (SVT; "Life and Earth Sciences"), have a major role to play within the education system. It is the only scientific discipline which integrates and must explain, through its know-how, methods and knowledge, the complexity of the relationships between Man and his environment, with the clear and essential aim of preventing environmental and human health problems. Physics, chemistry, and also biochemistry, taught by SVT teachers, complete this training, particularly for pharmacy and medical care.

Paradoxically, there is a systemic impoverishment of science teaching in general, and SVT particularly in their experimental aspects since the reform of secondary school in 2015 and then of high school in 2019, which is the exact opposite of what is needed in these areas and what is at stake for the future of France. Until the end of Year 13, a pupil will only receive an average of 1:30 hours of SVT per week, i.e. a total of 270 hours.

Another reason for the lack of interest among secondary school students in the health sector is the reform of the "baccalauréat" (high school diploma) in 2019, which has suppressed the S series, the main source of medicine and pharmacy students. In the first year of "baccalauréat" students are required to choose 3 preferred specialties for 6 hours out of a wide range (12), and only 2 are kept in the final year. For some uninformed young people, this results in a loss of interest in scientific specialties, as the combinations chosen sometimes seem illogical for following scientific health courses, what high school students realize when they choose their orientation in the higher education.

The public authorities have stated their intention to "raise the level of basic knowledge among pupils". It is essential to integrate the "health" dimension into these fundamental skills, and to include, in addition to mathematics and French, knowledge of the human body and the prevention of multiple health risks. These disciplines form the basis of the related health professions.

Faced to these facts

- an in-depth review is essential, led by the relevant ministries (national education, higher education and health) to enhance the role of science, human biology and health teaching in lower and upper secondary schools, in particular by strengthening tutorials and practical work.

- it is essential and urgent to better inform young people, at least from the first year of secondary school, about the diversity of healthcare professions and their values, with the help of healthcare, research and guidance professionals, in order to explain the different possible career routes.

[1] This text was validated on 26 February 2024.

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