



UNIVERSITÉ
DE GENÈVE

FACULTÉ DE MÉDECINE



Reform of the Swiss Medical Curriculum: Balancing Quality Assurance with autonomy of medical Schools

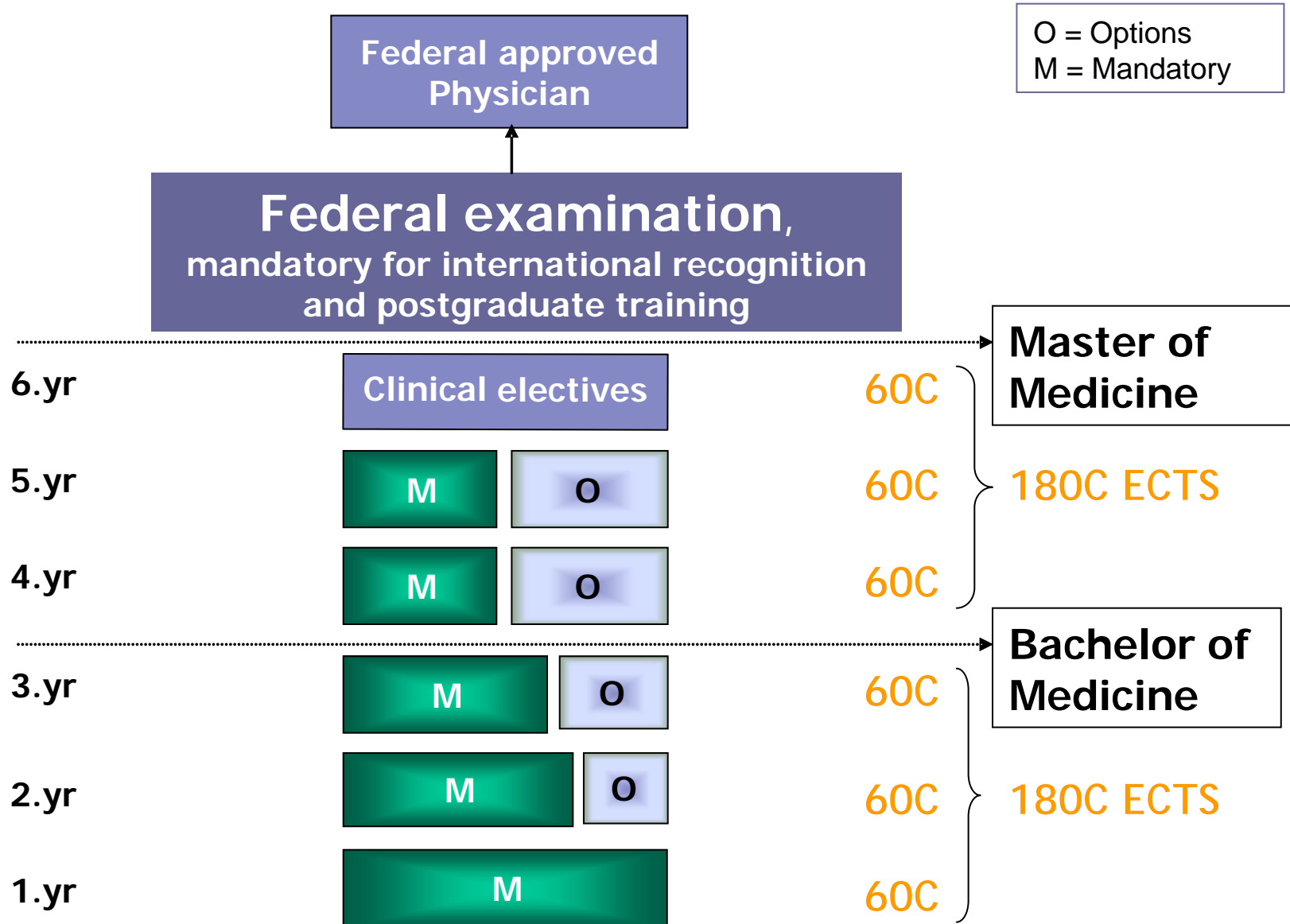
Prof Charles Bader

Vice-Dean, Faculty of medicine, University of Geneva

Chairman of the Joint Commission of the Swiss Medical Schools (JCSMS)

Organization of the track in human medicine in Switzerland

Guidelines of the Swiss Universities guidelines (Bologna)



Reason for the 1995 Report “*The necessary reform of the medical curriculum in Switzerland*” published by the JCSMS

The society needs doctors able to:

- Adapt to an ever evolving society and rapidly progressing science
- Extract in an autonomous way the information required to solve the health problems of their patients and of the society
- Establish a confidence-based relationship with patients that are more and more informed
- Interact efficiently and in harmony with colleagues of other health professions

Questions asked at beginning of the years 1990 by the medical schools

- Are we preparing our students for this future ?
- Are we helping them to adapt autonomously to a continuously evolving field?

Serious doubts were expressed :

- Teaching was mainly by disciplines with lack of coordination and integration
- Plenary lectures maintained students in a passive role
- No significant pedagogical changes introduced since the beginning of the 20th century
- No adaptation of teaching based on knowledge derived from studies of adult pedagogy

What does adult pedagogy teach us?

Adult learning and retention is better when the context of learning is *pertinent to the final objective of the studies chosen*

What is the goal of our students? Survey in Geneva at the beginning of the 2nd year of medical school (260 students; return 80%):

- **94% intend to dedicate later most of their time to treating patients**
- 6% consider other activities such as research

Conclusion?

- To be efficient
 - *We should motivate medical students by putting teaching in a medical context even for basic sciences (such as physics, chemistry, etc.)*
 - *Whenever possible, teaching should be organized around a problem, as medical activity is centered on solving patient's problems*

Develop skills early !

- **Learning of a skill is a long effort: in golf, chess, violin, e.g., it takes 10 years to become an expert**
- **The efficient Doctor must be at ease when he**
 - dialogs with a patient while trying to figure out what the patients' medical problem is
 - tries to convince his patient of the importance of modifying his living habits
 - tries to convince his patient of regularly taking a drug
 - has to announce a bad news

We train medical students to the doctor-patient relationship with standardized patients from the 2nd year on (with video recordings)

State of Reforms at the Swiss medical schools

- **Geneva** started in **1995** a reform of **years 2 to 5** (PBL). The **1st year** was reformed in October **2004**.
- **Bern** started in **1996** a reform of **year 1** (PBL) and progressively extended to entire curriculum
- **Basel** started its reform in **1998** (**years 3 and 4**). Now, the reform is extended to entire curriculum
- **Lausanne and Zürich** began in October **2004** a complete reform of their curricula

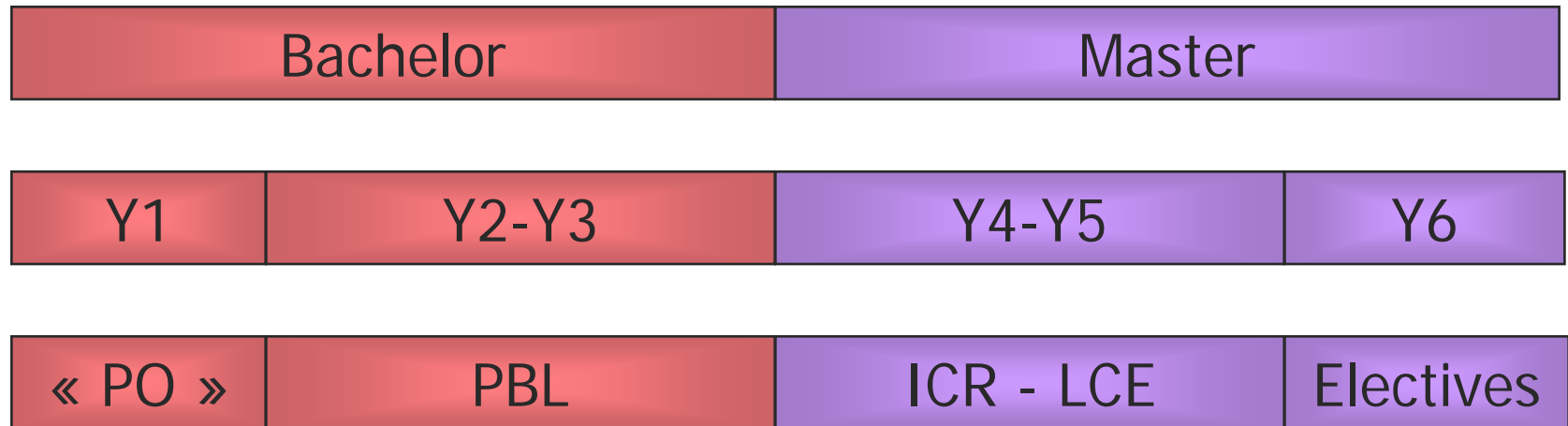
State of Reforms of medical teaching at the Swiss medical schools

- Swiss medical schools have changed their curricula ***according to their own philosophies, contexts, and possibilities*** but all have decided for ***an early exposure of their medical students to clinical skills and competences in doctor-patient relationship***

[Take home messages:]

- Reforming a curriculum is a political process
- Initiate it in the part of the curriculum in which you detect an interest for reform
- The process will later on spread by itself

Overview of the Curriculum in Geneva



- PO: Problem-Oriented
- PBL: Problem-Based Learning
- ICR: Introduction to Clinical Reasoning
- LCE: Learning in Clinical Environment

PROBLEME N°9 : SERGE

CNS Unit (3rd year)

Le jeune Serge, un garçon de 8 ans, se réveille un matin avec des maux de tête et des vomissements subits. L'enfant n'a pas de fièvre, mais sa mère signale qu'elle a remarqué depuis quelque temps qu'il arrivait à Serge de s'étouffer à table en "avalant de travers". En réponse aux questions du médecin, la mère rapporte également que, ces derniers temps, l'enfant paraissait osciller en marchant, faisant brusquement un pas latéralement, comme pour se rattraper.

Le médecin qui examine l'enfant constate qu'il est apathique et bradycarde à 50 pulsations/min. En examinant le fond d'œil, le médecin remarque que les papilles sont floues. Cependant, malgré cela, Serge voit tout à fait distinctement. L'enfant a de la peine à se tenir debout les pieds serrés. En effet, à l'épreuve de Romberg il oscille de façon importante, mais la fermeture des yeux n'entraîne pas la chute. Les réflexes myotatiques sont normaux, le réflexe patellaire étant toutefois pendulaire, à droite. L'examen de la sensibilité est normal. L'épreuve doigt-nez présente un crochetage net à droite et Serge a de la peine à faire des mouvements répétitifs rapides avec sa main droite ou son pied droit.

Le médecin fait admettre l'enfant d'urgence à l'hôpital. Après une imagerie par résonance magnétique (IRM) qui indique la présence d'une lésion tumorale, les neurochirurgiens posent un drain dérivant son liquide céphalo-rachidien. L'état de l'enfant s'améliore notablement. Les céphalées de Serge diminuent et il est moins apathique.

- *Pouvez-vous situer la lésion et expliquer l'effet bénéfique du drainage?*
- *Quelle serait, selon vous, l'évolution sans drainage?*

Organization of students (groups of 8-10 students)

- One animates the discussion
- One is at the blackboard
- One is the secretary
- The others contribute to the discussion
- Eventually the students should define their learning objectives in relation to the problem
- The tutor can re-orient, ask for clarification but he does not give lectures!



Reforms at the federal level

- The new law on medical formation (2006) did greatly benefit from the on-going Reforms in the medical schools
- **Autonomy** of medical schools was recognized as important to allow for **constant and rapid adaptation & innovation**
- ***BUT there was a need for a federal quality control***
 1. **Core curriculum is** defined in the **Swiss catalog of learning objectives**
 2. **International accreditation** based on standards of the **World federation for medical education**
 3. **Federal examination to** control of the « final product »

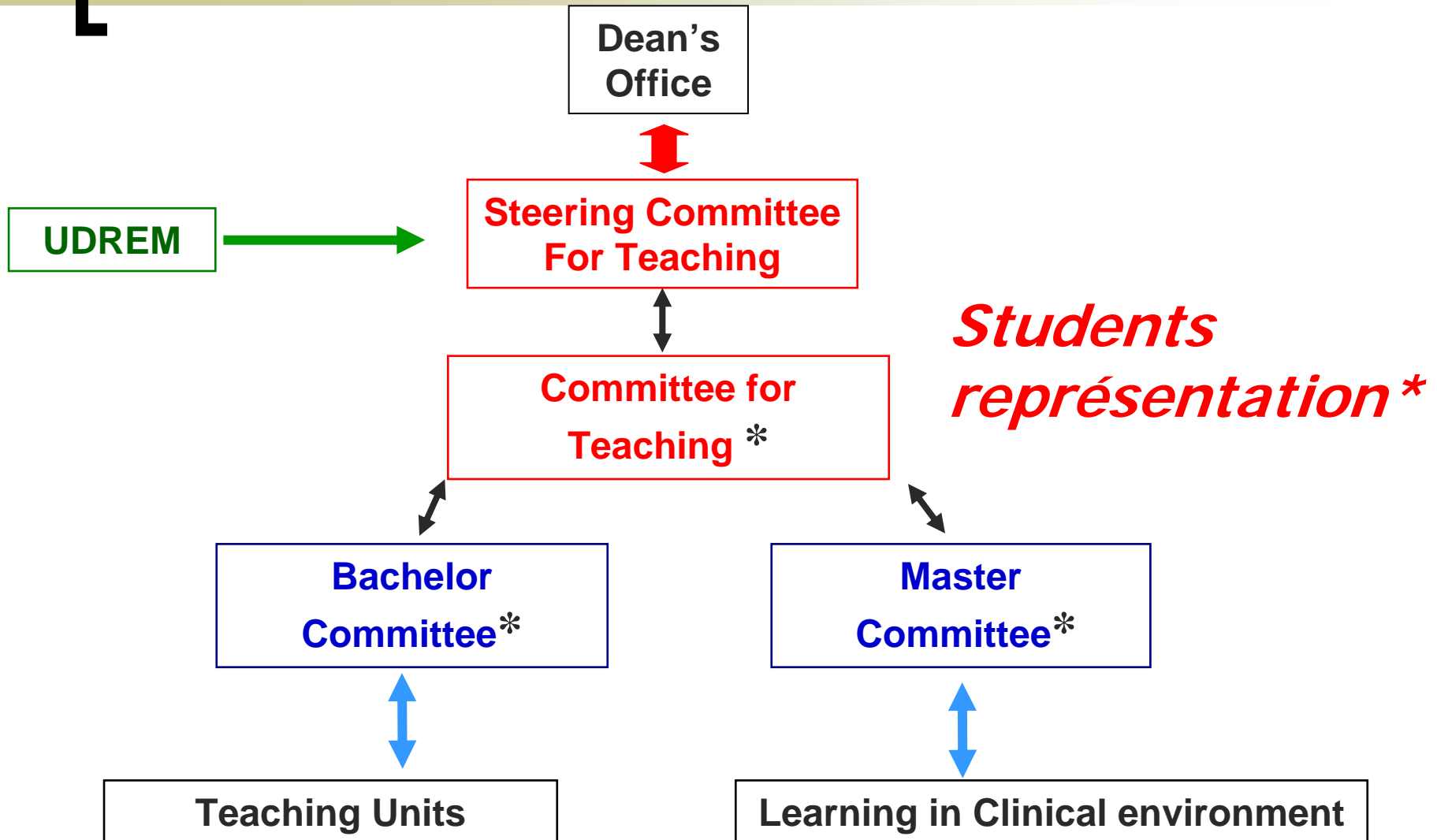
[Federal examination]

- MCQ for general knowledge (6h)
- Clinical Skills examination
 - OSCE with SP
 - Basic life support
 - Technical skills (venous puncture, etc.)
 - CBA

Caveat

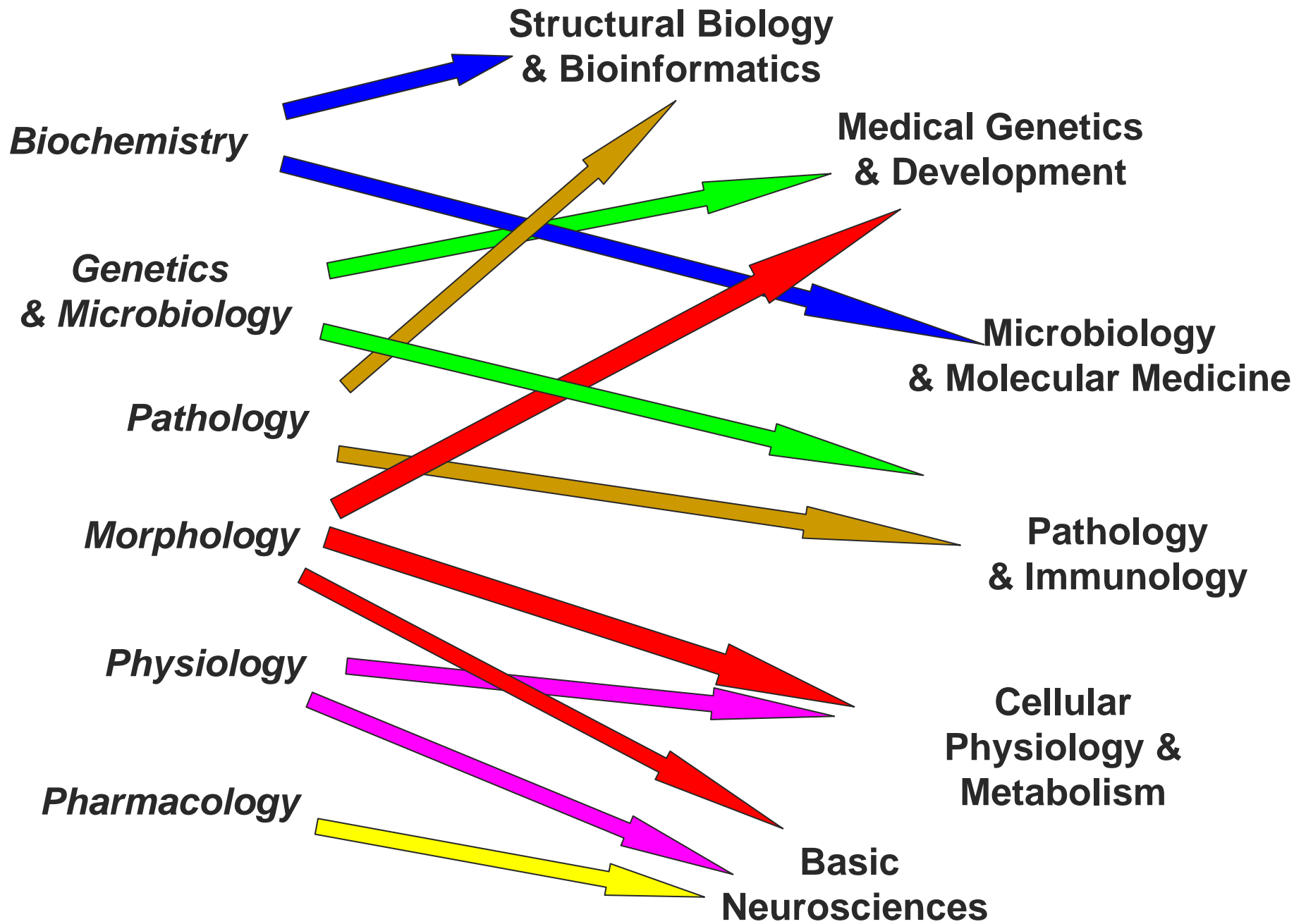
- Curriculum Reform never ends!
- ➔ The reform of a medical curriculum must be designed as a continuously evolving process
- ➔ Structures must be created that will allow for continuous adaptations and adjustments of the medical curriculum

Teaching Organization in Geneva



Unexpected Side effects of the Reform on Research activities: Reorganization of the Departments of the basic Sciences Section

- Departments were not anymore formally in charge of teaching (**The Teaching Committee is in charge !**)
- This led to a reorganization of Departments by research thematic rather than disciplines



[Final take-home messages]

- Students are crucial partners when doing a reform of the curriculum
- do not underestimate them when initiating a reform and try to convince them
- Also, when you have outstanding teachers, do not hesitate to let them give plenary lectures! It can be an illuminating complement to PBL and may help students to tie the bunch
- In other words: **don't be too dogmatic!**
- **Do not forget to evaluate and valorize teaching activities**

Swiss Catalogue of Learning Objectives for Undergraduate Medical Training

Under a mandate of the Joint Commission of the Swiss Medical Schools



H. Bürgi
B. Rindlisbacher
Ch. Bader
R. Bloch
F. Bosman
C. Gasser
W. Gerke
J.P. Humair
V. Im Hof
H. Kaiser
D. Lefebvre
P. Schläppi
B. Sottas
G.A. Spinas
A.E. Stuck