

the quantity of sugar has considerably diminished. A portion has been destroyed. This is by the action of a glycolytic ferment. This ferment shows itself fairly active in cow's milk, but slightly less so in other milks. Moreover, in 1901, Luzzati, Biolchini, and Marfan, and in 1902, Gillet, as well as Spolverini, separated still another ferment that belongs to the family of hydrolytic ferments. Under the influence of this ferment monobutyrim resolves itself into butyric acid and glycerin. These authors operated by distilling a mixture of milk and monobutyrim, and in then determining the acidity of the distilled products. They encountered this reaction of splitting up monobutyrim in the milks of the woman, dog, cow, goat, and ass, stronger in the former, and less energetic in the latter. They have agreed upon giving this ferment the name of lipase, a name which Bourquelot had given to a ferment of the same nature, which Hanriot was the first to discover in the blood.

Summing up the various researches and discoveries made in connection with cow's milk, we find then, that this milk contains numerous ferments. We have determined definitely the presence of trypsin and of pepsin, of the lipase and oxidizing ferments, and of a glycolytic ferment. There is, moreover, reason to expect further discoveries in this direction, and this is not improbable when the extremely complex nature of milk is taken into consideration.

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*Medical Record.*

## Correspondence.

## PROVINCIAL MEDICAL BOARD MATRICULATION EXAMINATION.

TO THE EDITOR MARITIME MEDICAL NEWS:

DEAR DR.—Would it not be the correct thing to assume that this examination is not only designed to test the student's knowledge, but that it is also intended to be a guide to him so that he should direct his attention to learn those subjects which would best fit him for the study of medicine and its future practice?

I recognize the examiners' difficulty, but would also suggest that as general knowledge is so extensive it is most desirable that the greater attention be given to those subjects most likely to be of use to the neophyte, and which it is possible for him to obtain in our public schools and by home reading. Though it is desirable that all should have a college degree, yet this is not practicable for many reasons, and by insisting on it or its equivalent many of our brightest men would be excluded, for but a modicum have the facilities for its acquisition.

In looking over the questions of the last examination, I think I am safe in saying that not one per cent. of the medical men now in practice could now or at any previous time be able to satisfactorily answer them, or that it would be of any use to them if they could. The profession is crowded and to raise the standard of general education is desirable, but it should be so raised as to be of most practical service in the future life of the student and practitioner. As to the crowding it will cure itself, and I do not know but that a medical education is a good groundwork for any department of science or life-work, towards which many medical men drift when from many causes they leave the field of practice.

To illustrate my argument I will give a few questions from last examination papers which have an air about them of educational athletics; and I would also add that did the student have the requisite knowledge, the time given for the examination, unless he were a rapid thinker and writer, is ridiculously limited.

*Geometry.*—"The two triangles formed by drawing straight lines from any point within a parallelogram to the extremities of its opposite sides are together half the parallelogram."

*Algebra* (a)—"Simplify by removing brackets and collecting terms:  $2a[3b+(3b-c)-4c+\{2a-(3b-c\div 2b)\}]$ ." (b) Find value of  $ab-[bc+\{ac-b(a+b+c)\}]$ .  $a=1, b=5, c=4$ ," and others of same stamp.

*Arithmetic* (a)—"Simplify  $1\frac{1}{2}$  of  $2\frac{2}{3} + 6\frac{7}{8}\div 2\frac{1}{4} + (5\frac{1}{2} + \frac{2\frac{1}{2}\times 53}{2.2-.64})$ " (b). Extract to 4 places decimals square root of .00064, 00127, .9" etc.

These might be all right, given plenty of time for a student up for an honor examination, or for a prospective astronomer or electrical engineer; but these men in practical life would most likely look up their tables. Even assuming proficiency in such knowledge, how long could it be retained in memory unless the student were to be so situated as to from time to time call it into use.

*History.*—"Name the kings of the house of Anjou with dates of reigns of each (how many can recollect dates?) and give a full account of any one of the Stuart sovereigns" (italics are mine). Would it not take a qualified man not less than a week to answer this question and would he not require a good reference library at his command? There are several others similar.

*English.*—"Brief sketch of Chas. Lamb, Thomas Carlyle or Robt. Browning." "Who is the heroine of the Princess?" "Why do you think so?"

If this be a requisite knowledge of English, so much the worse for it in the fierce practical work of the day.

*Geography.*—In a previous examination paper was a question to this effect: "Give capitals of countries nearest the 40th parallel of latitude." I question if an admiral in the navy could answer this without referring to his charts, but questions in last examination were not so objectionable.

Medical men are sadly lacking in book-keeping and general business knowledge, commercial law, even common caligraphy, etc., but these subjects, though of the greatest practical importance, are in no way even referred to. And if a prospective doctor sends \$1 for a copy of the questions of the last examination to guide him towards the knowledge of what the medical man requires on outside subjects, he would

lamentably fail in his future life, even could he make 100 p. c. on the papers, did he not have another and a better general education.

It will likely be said, "we don't expect the student to have a perfect knowledge but the questions are to test his range." If so, is it wise to ask conundrums at such a time? No question should be given to which a fairly full and correct answer is not required. Let the grade be raised, but I would repeat it should be on useful practical lines that a young man of fair ability can acquire in our public schools and by home reading. He wants an intelligent knowledge of geometry, algebra, arithmetic, physics, history, geography, English composition, caligraphy, the rudiments of a business course, etc., etc., but puzzling questions that require an expert to solve are not useful, are not business, and are not required.

In the words of the manager of the Chicago bank (who by the way lived a time in Halifax)—"My experience with the education of the day for active life is that it is not of much moment. But few applicants for a position can do that which we most want:—

1st—Write a good legible hand.

2nd—Put figures properly below one another in the column.

3rd—To add up a column of figures correctly."

The education for the prospective medical man should be on the lines that the bank manager indicates.

I find no fault with the examination on account of the failure of a son to pass, because on enquiry I found him insufficiently posted, and there is no better time for a young man to get up his general education than before he enters the special study of his profession. But what I think forms a just source of complaint is that taking the examination papers as a guide to direct future study, for a great part it would be impossible under common conditions to comply therewith, and assuming that it were attainable they would require difficult and absolutely worthless work from a practical point of view.

After an experience of 30 to 40 years as an examiner, rightly or wrongly I cannot recall the giving of a question that did not directly bear on the probable future of the candidate, and to which if I did not get an intelligent answer I would assume the candidate to be insufficiently informed.

A. P. REIN.