

In reply to your question as to how we feel thought on this side is developing the following information may be a partial answer. As a result of the pressure from lay groups of the Canadian Cancer Society, a sub-committee of the Board of Directors of the National Cancer Institute of Canada are presently preparing a report which will be a review and summary of the evidence, statistical and otherwise, in connection with this whole problem of smoking and health. This report will also presumably include their interpretation of the evidence and conclusions therefrom and should be ready for presentation to the Board and subsequent public release within the next couple of months. We feel that their conclusions will not be particularly adverse, but we could of course be wrong. Copies of the report will be made available to us. As far as the general body of medical doctors is concerned, who are not necessarily too well informed on the subject, we believe that their opinion is tending to harden and that they are looking at smoking with a somewhat more critical eye.

With kindest regards,

Sincerely,

L. C. Laporte
Research & Development

LCL:bm

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pronounced undesirable odour and had to be discarded. The odour was subsequently traced to impurities in the solvent, due mainly to contamination of the Anachemia still which had not been thoroughly scrubbed out.

Regarding the question in paragraph "2" of your letter, it is possible that the tars from the hexane extracted tobacco will show less activity than the tar from the control tobacco as measured by mouse reaction. However, we have arranged with Dr. J. P. W. Gilman, Ontario Veterinary College, Guelph, to check this point and will have to wait for his findings before we can give you a rather more authoritative answer. You will, no doubt, recall meeting Dr. Gilman when you were here last year. For your information we do not expect that Gilman will find too much difference because condensed smoke tars from unextracted Canadian flue-cured cigarettes have a very low activity as measured by mouse reaction.

We are quite in agreement with your view that it is unlikely that there is any one agent in smoke of sufficient concentration and of sufficient carcinogenic activity, the removal of which would still all criticism. I feel sure that Dr. George Wright is now also of this view since he has not been able to find any such agent. It appears to us that Dr. Wynder has largely come around to this view as well from the fact that in his recent publications he is emphasizing tar reduction. Even though it may only be of academic interest, we think it noteworthy that with a n-hexane extraction of only 4% of the tobacco constituents that this resulted in a decrease of some 23% in whole tar in the cigarette smoke. The findings on other types of tobacco than Canadian flue-cured might, of course, be quite different. Furthermore solvents other than n-hexane might have more significant effects in this direction but we have not as yet looked into this. In other words, at the present time we also hold the view that the problem is more one of reducing the tar while preserving the taste than it is of removing some precursor of polynuclear aromatics.

In connection with our smoke work I believe you will be interested to learn that we are rapidly getting quite well set up, equipment-wise, to push this programme with vigour. One of the things we are planning to do is to take tobacco extracts, separate them into various fractions, pyrolyze these fractions and check the products of combustion. We will also work on condensed tars from smoke. Another approach we have in mind is to investigate the effects of additives on combustion conditions in the cigarette from the point of view of taste, amount of tar, etc. Changing the temperature of combustion, if this is possible, or making some change in other combustion factors could prove to be very useful information. Incidentally Dr. George Wright is acting as a consultant for us in this work.

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AIR MAIL

IMPERIAL TOBACCO COMPANY OF CANADA, LIMITED

MONTREAL TO

PRIVATE & CONFIDENTIAL

March 12, 1958.

Sir Charles Ellis, F.R.S.,
Westminster House,
London.

Dear Charles,

Further to your letter of March 7, herewith for your information are copies of the following:

Research Laboratory report dated February 7, 1958
"Large Scale Extraction of Canadian Flue Cured Cut Tobacco"

Research memorandum dated October 10, 1957.
"Determination of the weight of Whole Tar"

Our reasons for experimenting with the solvent extraction of tobacco are quite well covered in the report of February 7. The principal factor involved was that we learned through private communication that the paraffins, phytosterols, etc. in the tobacco were precursors of polynuclear aromatics in smoke. The carcinogens, if any, were presumed to be contained in this latter fraction. Furthermore we found in some small scale experiments that n-hexane extraction of cigarettes significantly reduced the tars in the smoke. Regardless of the first point, the latter to our mind was most interesting. We thought it desirable not only to check these points, but to also obtain some idea of the effects of the hexane extraction on the physical properties of tobacco and its smoking qualities. Incidentally, from recent information it does not appear that the paraffins are to any significant degree precursors of any active polynuclear aromatics.

On the smoking tests it is to be noted that our panel found a significant difference between the control and the treated cigarettes, but did not express a significant preference indicating that the taste of the treated cigarettes was in no way disagreeable or objectionable. I must admit that I do not recall whether any reports from Wynder have stated that the taste of extracted cigarettes was objectionable or not. I think that Hugh Anderson may be confused between Wynder's experiments and ours, in that when Anachemia Chemicals first did this extraction for us the tobacco did have a

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