St. Louis, July 8, 1946

Professor Levi, I have heard from Dr. Weiss and Dr. Harrison, that you got over the fever very well. I am rather happy and I should like to express my great joy that you could continue your activities despite the printings and handicaps. Last year, I had written a letter to you and sent reprints to an address in Florence which Dr. Levi had given me, but everything was undeliverable. In the meantime, I have received your and Dr. Levi-Montalcini's reprints by way of the Italian ambassador in Washington, and I thank you very much. Of course, I have read them with greatest interest. Meanwhile, several publications from my institute have appeared which I am sending you. I hope, will arrive in time. I hope, will arrive. I have ascertained with satisfaction that we agree on the following points:

1) Extirpation of limbs has no influence on the spinal cord (Hamburger and Keefe, J. exp. Zool. 96, 1944)

2) I have been convinced that in the central fibers of the spinal cord, the motor column is the spinal cord and that the motor column is controlled exclusively by extrinsic factors. Besides, the findings of Buckner (J. exp. Zool. 93, 1942) that a radical limb extirpation can produce up to 95% motor hypoplasia.

b) Isolated lumbar-sacral spinal cord segments in the adult develop a normal number of motor cells if a limb is transplanted with it. I have found myself that one can isolate the brachial spinal cord from the brain by a piece of tantalum without producing hypoplasia. My results agree completely with yours and those of Dr. Levi-Montalcini. I have also shown that the works of Williams, Betzler and Nicolas (unpublished manuscripts) are not valid counter-evidence.

We do not agree on one point. In the paper with Kiefer we showed that no cells of the ventral spinal cord disappear up to the 8th day. I don't doubt that late. So far neurons show already degeneration on the 8th day. As far as I know, I have never expressed an opinion of whether cells
I wonder what had been the cause of the late stages of my material. I have not had a chance to study it yet, but it is not very interesting. On the other hand, I am still convinced on the basis of the histological pictures, that up to the 8th day, the main effect of any action in the tissues is the suppression of differentiation. Why should it not be possible, that in early stages differentiation is suppressed, and in late stages, simultaneously, a regression and degeneration of already differentiated cells? While I have not prepared much material of early and late stages, I have photographed with silver, which awaits for analysis.

I believe that it would be very productive for both parties, if Dr. Levi-Montalcini would work for a year or two in my laboratoryst, and I should like to invite her as our guest. I have a Rockefeller grant and could pay her salary for 1-2 years. But the provision of travel expenses and perhaps also of the visa could be difficult. Rockefeller prize for Viola would be difficult. Do you believe that Dr. Levi-Montalcini would be interested in a longer stay in the U.S.A.? I believe that a short visit would not be very useful, since this would not permit much collaboration. Could you give me the address of Dr. Levi-Montalcini? Should I write her in German or English?

I hope that the deciphering of this letter won't cost you too much trouble.

I remain with my best greetings.

respectfully yours,

Viktor Hamburger

P.S. Dr. Gina Castelnuovo who is now in Italy, who knows me and the St. Louis Institute well, can give you information about the conditions of this place.