

University of Illinois at Urbana-Champaign

College of Liberal Arts and Sciences
DEPARTMENT OF GENETICS AND DEVELOPMENT

515 Morrill Hall
Urbana, Illinois 61801

February 20, 1977

Dr. Viktor Hamburger
Department of Biology
Washington University
St. Louis, Missouri 63130

Dear Viktor:

Ever since I read with great pleasure your Nineteenth George H. Bishop Lecture in Experimental Neurology on "Changing Concepts in Developmental Neurobiology", I have intended writing to you. Thank you for sending me a reprint. I especially enjoyed the second paragraph summarizing your own feelings about the developing nervous system which I share with you in spite of my largely second-hand acquaintance with it, and the fact that you gave it in "a rather personal and informal way." I didn't know the circumstances that brought Rita to your laboratory and enjoyed the ways in which you expressed praise of her. You were always so far ahead of the times in having both Florence and Rita on your faculty. I tried very hard to get a couple of outstanding women in development on our faculty when I was at Northwestern, but no way would NU agree to this. It was so good to read again about H. Spemann, R. Harrison, Hilde Mangold, S. Detwiler, R. Sperry and others from different times. You probably never knew that when I went to graduate school I was offered a fellowship to go to Yale to work with Dr. Harrison, which was my first choice, but went to Rochester instead to work with Dr. Willier only upon learning that Harrison would retire at the end of my first year at Yale and would not be available as my major advisor. (I also enjoyed your insert about substituting the term "programmed" for "determination" "with little net gain in basic insight"!)

What really motivated my writing at long last was the notice that you had received the F. O. Schmitt Lectureship Medal and Award from the Neurological Research Program at MIT. My most sincere congratulations! No awards are more richly deserved than those that come your way. I hope you are well, that you remain well, and that your top-quality and fundamental papers continue to appear regularly for many years to come.

Mrs. Willier wrote that you had contacted her about more information concerning Dr. Willier to use in your biography for the National Academy of Sciences. Although I was given permission to examine his files at Johns Hopkins, this was after Jim Ebert had been asked by the family to remove all materials concerning his students or others that might be embarrassing to those concerned. I have never understood why I was picked to do this difficult writing by Developmental Biology or why so many of Dr. Willier's students expressed the opinion that I be asked to do this job. I think it was the most difficult writing I have ever attempted and suspect that you may be experiencing some of the same feelings, if you have not completed the difficult task. I am most anxious to see what you have written when you have finished and because of the long delays in publication of these biographies, would like to ask, as a very special favor, whether you could lend me a copy that I might have xeroxed before returning it to you. I have either reprints or xeroxed copies of all the biographical memoirs of embryologists published by the National Academy and on two occasions have used them as the basis for seminars to give our graduate students some acquaintance with the lives of these investigators, as well as with their work. And from time to time I read some of them again because their work becomes so much more personal in light of their lives. Writing the brief biography I did on Dr. Lillie was so interesting to me because I could see how many of the ways Dr. Willier handled his graduate students resembled the ways Dr. Lillie handled his, and his major professor before him.

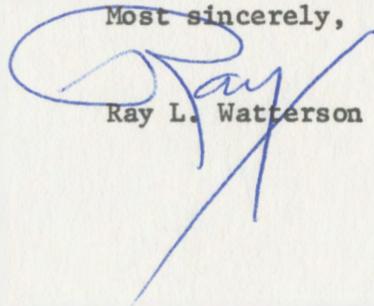
Currently I am on sabbatical leave for 12 months until next Aug. 20th. Since 1971 I have taken a very active part in the development of our School of Basic Medical Sciences, serving as chairman of the search committee in all faculty appointments in morphological areas, teaching the human embryology discipline throughout the year, writing the study units in human embryology for their curriculum, etc., while continuing to teach the undergraduate embryology course to about 100 students each semester, etc., etc. Since 1971, because of this overload, I have been on 12-month appointments, so I really needed a change of pace. The first part of this leave was to give me time to prepare a symposium paper and book chapter on "Origin and Morphocytologic Differentiation in Vivo of Some Cells of the Nervous System" for the 30th Annual Symposium on Fundamental Cancer Research coming up shortly. Later I was to prepare the manuscript of the 4th edition of our laboratory manual, which is so widely adopted, and to complete some research manuscripts for publication. I made some bad errors in judgment about my capacities, much to my chagrin. I failed to anticipate the state of my physical, mental and emotional exhaustion after so many years of working without a real vacation and of working under the difficult circumstances of coping with Evelyn's continued annual or more frequent breakdowns, one of the worst occurring during February and March of last year, but a bad one occurring during October and November of this past year as well. My plan was to review the literature since 1963 making full use of available computer services for literature searches on pertinent topics. This I have done. And I have read carefully incredible numbers of papers from this literature, and enjoyed doing so, but as time went by I became more and more fatigued, less and less able to concentrate, began suffering excruciating headaches that put me to bed two days at a time, was having problems with my right eye (on which I had had a detached retina operation done about 1½ years ago), etc., and it became all too painfully evident by January 11th that there was just no way I would be able to complete the writing and the illustrations by the deadline date or be in any shape to present the symposium paper, and I was forced to withdraw from the program. Fortunately I took this action in time for the organizing committee to find an excellent substitute for me, although on a different topic. I am now feeling well enough to attend the symposium, so will be in Houston the first week in March for this meeting. In fact, after a week of resting after withdrawing from the program, I picked up where I had left off in my reading and preparation of illustrations, and because I had become so engrossed in the topic and didn't want my understanding and store of information to be completely wasted, I submitted a new course proposal on NEUROEMBRYOLOGY, a two-hour lecture course, to cover in depth the basic topics listed on the enclosure. This is a course which will be taken primarily by Ph. D. students in our interdisciplinary program in Neural and Behavioral Biology, but by some of our senior premeds and some of our medical students as well, and the various curriculum committees and individuals who have had to approve this course proposal have done so very enthusiastically. I will be 62 in April, so don't have too many years before retirement and I felt such a course, even though it increases my already too heavy teaching load, would be very stimulating to me and a challenge after teaching so many basic, lower level courses so many years so many places. Teaching, rather than research, is clearly my forte. I knew this when I entered graduate school, and this has been brought home to me repeatedly in the past few years when I have received quite a number of awards, both from the College of Liberal Arts and Sciences, from the School of Basic Medical Sciences, and in addition from various preprofessional societies, all for quality of teaching. (So what have I been doing in a number of major universities? Dammed if I know!)

I want to add a few words about our daughter, Jean, and our son, Jim. Jean and her husband both took their Ph. D. degrees here in Economics and have both been teaching in the Department of Economics at Iowa State University, Ames, Ia. Here they were rated the best male and female students ever to take their advanced degrees in Economics, and at Iowa State they are rated as the best male and female faculty members for their age, not only in Economics but in the university at large. Jean's husband has done so much to fill the terrible void created by the accidental death of our Dick, our eldest son. Jim has spent much of his time in France at the Sorbonne, and then 3 years at Science-Po studying French Political Science and Economics. He was the first non-Frenchman ever in the 105-year history of the latter institution to graduate at the head of his class.

He is back here now completing his doctorate in Comparative French Literature, and is being given many responsibilities and much freedom in the teaching he is doing here on an assistantship. He loves what he is doing and is attracting much attention for the excellence of his courses and for his originality in presenting course content to students who earlier had not been too interested. With his very broad background he feels that if, when he is finished here, he can't get a university appointment, he can surely find employment in government service or perhaps in industries with plants in France. He is married to a young woman from here who is completing her doctorate in History of Art in Italy through Yale University, living in Italy with her mother while doing so because she and Jim have a most beautiful 18-month-old son, whom we have yet to see.

I had no intention of writing such a lengthy missive. But before closing I want you to know how crystal-clear are my many memories of my first encounter with you as a student in the embryology course at Woods Hole, of my joy in working with you in that course as an assistant and later as a colleague, of the Summer you and your family were at the U. of Chicago and our trip to the Zoo, of the many times I have heard you speak about your work and have seen you in action in other ways. I also want you to know how much I have always treasured your friendship.

Most sincerely,

A handwritten signature in blue ink, appearing to read 'Ray', is written over the typed name 'Ray L. Watterson'. The signature is stylized and somewhat cursive.

Ray L. Watterson

Enclosure

Proposed Lecture Topics in Neuroembryology and Time Allotted *

1. Neural plate, neural tube and neural crest formation.....	1
2. Ventricular zone (primary proliferation zone); its structure and..... cell behavior during mitotic cycles	1½
3. Release of young neurons from ventricular zone; formation of intermediate.. and marginal zones	½
4. Development of cell types in the spinal cord.....	2
5. Migration and differentiation of neural crest cells: spinal ganglia..... and ganglia of autonomic nervous system including adrenal medulla	3
6. Myelination of peripheral nerve fibers.....	1
7. Brain stem development; formation of related cranial nerves and ganglia....	2
8. Development of ear mechanisms and acoustico-vestibular nerves..... and ganglia	2
9. Development of pons and cerebellum, including effects of mutations on..... development of latter which reveal apparent causal relationships between certain cell types	5
10. Diencephalon development: emphasis on thalamus, hypothalamus and..... neurohypophysis	1
11. Diencephalon development: emphasis on hypothalamic-hypophyseal..... relationships	1
12. Diencephalon development: emphasis on formation of eyes and optic..... nerves, especially on retinal development	2
13. Development of cerebral hemispheres and olfactory nerves.....	3
14. Development of brain ventricles, choroid plexuses and meninges.....	1
15. Development of neuroglia (macroglia) and microglia.....	1
16. Myelination of fibers within the central nervous system.....	1
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	Total.....

28

*Probably time allotted to the above topics will be reduced by two hours to enable Dr. William Greenough to discuss some modern aspects of synapse specificity. He is currently in charge of our Neural and Behavioral Biology Training Program.