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IN MEMORIAM

Conversations With Dr. Oleh Hornykiewicz, Founding Father of the Dopamine Era in Parkinson’s: How Do You Wish to Be Remembered?

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ABSTRACT: On May 26, 2020, Dr. Oleh Hornykiewicz died at the age of 93 years. His twin discoveries in the early 1960s of dopamine deficiency in the brains of subjects with Parkinson’s disease and the amelioration of patients’ symptoms by levodopa therapy represent milestone events in the history of medicine. These breakthroughs enabled much-needed relief for millions of patients suffering from neurological disorders every year and have given rise to the field of dopamine signaling in the regulation of complex behaviors in primates. What did Dr. Hornykiewicz, who was actively engaged in research until shortly before his 91st birthday, wish to pass on to younger scientists? What were his thoughts regarding the elusive cause of Parkinson’s disease? How did he wish to be remembered? Here, the authors, one a former student and the other an admired colleague, recall messages conveyed by Dr. Hornykiewicz in public lectures; they also share the content of conversations and letters exchanged with him since 2004, as he began to reflect on his legacy. Through Dr. Hornykiewicz’s own words and writings, the picture emerges of an extraordinarily committed scientist, who was exemplary in his professional integrity, who knew how to deploy a gallous sense of humor, who displayed little patience for physicians offering advice, and who kept any sense of pride over his monumental contributions private. When asked at the age of 91 years about the secrets of his long and fulfilled career in neuroscience, he identified himself as “a mad scientist… I am someone who continuously fantasizes. I am someone who chases fantastical ideas and who keeps on dreaming…”, and as a man who was supported by the loving companionship of his wife, Christine. © 2020 The Authors. Movement Disorders published by Wiley Periodicals LLC on behalf of International Parkinson and Movement Disorder Society.

Key Words: obituary; dopamine

A Request

On March 14, 2018, a meeting between Drs. Oleh Hornykiewicz (OH) and Michael G. Schlossmacher (MGS) took place at a café near the former man’s home in Vienna, Austria. Various topics had been covered over lunch, when the following issue was raised by the host:

OH: “I need to ask something of you. I have previously asked Ann Graybiel whether she would write a tribute after my death.”

MGS: “I don’t know how to respond, Herr Professor.”

OH: “Maybe you could assist her?”

MGS: “I have never received such a request… it feels surreal.”

OH: “It does not have to. You know each other.”

MGS: “There are others who would be more suitable… They could work with Ann.”

OH: “Yes, others will write about me, too. However, you and Ann could collaborate. Besides, you both live in North America.”
MGS: “Are you implying that Ann and I are more familiar with traditional obituaries published in North American print media outlets?”

OH: “Yes, and I do like the culture of North American obituaries…including the example you have just shown me [Dr. Hornykiewicz was shown a tribute to an accomplished neuroscientist using a mobile phone]. However, there is something missing in traditional obituaries, in my opinion.”

MGS: “I am listening.”

OH: “They don’t tell me what I, as the reader, am most curious about: Namely, what was the personality of the deceased? Was he respected? What made him or her tick? Was he difficult to work with, and so forth?…Just write something about me!”

MGS: “I promise, I will reach out to Ann. I do hope this moment will be in the distant future.”

Ann M. Graybiel (AMG) readily agreed to join the effort (see later).

Methods

The purpose of this tribute is an attempt to do justice to the request of Dr. Oleh Hornykiewicz to capture traits of his persona as a scientist. The authors, one a former student (MGS), who first met the professor during a graduate course and kept in touch with him over the years, and the other a colleague (AMG), felt that this task was best achieved by letting him communicate in his own words. In the following paragraphs, the authors recall the content of public lectures delivered by Dr. Hornykiewicz between 1993 and 2014 and share elements of conversations they have had with him between the 1980s and 2019. Some conversations had taken place without any written documentation at the time; as a result, comments attributed to Dr. Hornykiewicz are paraphrased. Other exchanges were retrieved from handwritten letters. Select recollections were reviewed with two children of Dr. Hornykiewicz; other information was verified with several of his trainees. Where unknown, in lieu of a precise date, a best estimate was provided. The exchanges, as sampled later, were selected in pursuit of three objectives: (1) to reflect on conversations that the authors hope Dr. Hornykiewicz would have enjoyed reading, (2) to choose topics of general interest to the readership given limitations in space, and (3) to supplement efforts by other writers that have focused on biographical details and scientific accomplishments of the deceased.\(^1\) Encounters and exchanges are supplemented by a brief contextual introduction or an afterthought; others are interwoven in a coda near the end of the tribute.

On Being a Scientist

On March 14, 2018, over a cup of coffee, Dr. Hornykiewicz was asked the following questions:

MGS: “How would you describe yourself?”

OH: “I am a mad scientist….I am someone who continuously fantasizes. I am someone who chases fantastical ideas and who keeps on dreaming. Without fantastical ideas, a scientist will not make important discoveries. Without dreaming, he will remain a realist, and as a realist, he will not achieve his goals.”

MGS: “How did you interact with trainees?”

OH: “I promise, I will reach out to Ann. I do hope this moment will be in the distant future.”

Ann M. Graybiel (AMG) readily agreed to join the effort (see later).

Advice for the Young

In the early 1980s during a conference held in Japan, Dr. Hornykiewicz approached a young scientist, Dr. Ann M. Graybiel:

OH: “I am very interested in the work that you are doing.”

AMG: “I am honored that you knew about my work, Prof. Hornykiewicz. But how could you possibly have learned of it?”

OH: “…We do not know enough! We need more research. You are young, and you have a specific question to go after, and you show passion for science. That means, keep on going!”

AMG: “Thank you!”

During the 1992/1993 winter semester, Dr. Hornykiewicz delivered a neuropharmacology course to a group of naïve graduate students at the Institute of Biochemical Pharmacology of the then Faculty of Medicine at the University of Vienna. The topic of one lecture was the role of basal ganglia and their dysfunction in neurological disorders. The lecturer drew no attention to his own groundbreaking work.

MGS: “You have reviewed for us complementary pathways within basal ganglia circuitry by which dopamine seems to facilitate movement. Has that concept been fully established in various neurological conditions of the human brain?”

OH: “Well, this is the current model, as developed by neuroscientists all over the world with leading researchers now located in North America. You should think of it as a working model; we will only know whether it is accurate, or not, after more research has been carried out!”
In late July 1999, Dr. Hornykiewicz delivered a plenary lecture at the 13th International Congress of Parkinson’s Disease in Vancouver, Canada. Near the end of his presentation, he addressed trainees (as remembered by MGS):

OH: “I was encouraged by the organizers to share with you what I’d consider essential factors for a successful career in laboratory-based brain research. I am not sure whether I am the most suitable person to speak on this subject, but here are five recommendations that I can share with you: First, pursue an exciting research topic to which you are willing to apply all of your energy to. Second, listen attentively and respectfully when your supervisor and teachers give you advice; but after that, you should pursue an experimental plan that you think is the best, even if it differs from their opinions. Third, be prepared for the likelihood that when you have made a new finding, such as from the careful analysis of three brains, and you go running to your supervisor to share the news of an important discovery you have just made, that he will tell you, ‘Well, that is nice to hear, but now go back and examine more diseased brains and show me all the proper controls.’ Note, this happened to me many years ago.” Fourth, when you have submitted your research results for publication, and the reviewers heavily criticize the work, as well as your experimental outcomes, then you must not direct your anger at them or even feel sorry for yourself. Instead, you will return to the laboratory, work harder, produce more results, and then go back with the additional evidence that you have generated to convince the reviewers of the relevance of your findings. And fifth, for a fulfilled career in laboratory-based brain research, which is unlike any other occupation I know of, you need to have the right partner. Without your spouse’s support, it will be difficult for you to carry on.”

Between August 30 and September 1, 2007, Dr. Hornykiewicz attended an ad hoc meeting of neuroscientists at the University of Saskatchewan in Saskatoon, Canada. The gathering had been hosted by the former Chairman of its Division of Neurology, Dr. Ali Rajput. Among the topics of discussion was the importance of using human autopsy material for brain research. During a visit to the morgue, the conversation focused on how the human brain should be properly cut.

MGS: “I am surprised by the tissue processing method that you have chosen. It is a different protocol than the one we are taught today by neuropathologists. Why do you remove the brain and freeze an intact half for future biochemical studies? Why not dissect that half immediately after its removal?”

OH: “It is important for scientists who start a concrete experiment to carefully dissect the entire brain [half], to then be able to collect multiple specimens at once [from coronal sections of the frozen half], rather than to selectively retrieve specimens from the freezer that are not integrated anymore within the proper neuroanatomy... I believe our past successes with biochemical findings using post mortem human brain justify this methodology.”

MGS: “However, couldn’t you carry out the same dissection before the first freezing step? In doing so, one avoids any freeze-thaw-related delay that could generate artefacts.”

OH: “No, it is better to do it at the time when the scientific question, which you seek to answer, is right in front of you. It will guide your dissection, which is then followed by the analysis.”

On the Cause of Parkinson’s Disease

In early November 2004, Dr. Hornykiewicz was invited to deliver a Grand Rounds in Neurology lecture at the Ether Dome of the Massachusetts General Hospital at Harvard Medical School in Boston. There, he shared a clip of a grainy video depicting the intravenous administration of levodopa to a bedridden woman with marked rigidity and bradykinesia, as first published in his landmark paper of 1961. Following the completion of his lecture and several minutes of an exuberant ovation, he took questions from the audience, of which the last one was:

MGS: “After all those years and with the remarkable insights you have generated, some of which you have just shared with us, Dr. Hornykiewicz, you haven’t told us yet as to what actually causes Parkinson’s disease?”

OH [laughs]: “There are 100 theories out there regarding the cause of idiopathic Parkinson’s disease, which means that in the end at least 99 of them will have been incorrect. I will not add another one to that list.”

In mid-November 2011, at a café near his office at the Center for Brain Research at the (renamed) Medical University Vienna, the discussion focused on research activities exploring the cause of Parkinson’s disease (PD):

OH: “So, tell me, what are you currently working on?”

MGS: “We are building an animal model that carries two distinct risk alleles linked to PD; the first encodes mutant, human α-synuclein, the second encodes a knock-in mutation in the GBA1 gene that encodes a lysosomal enzyme. We have discovered an interaction between the two proteins biochemically, in mouse brain and in dopamine cells.9,10 We are very excited about this link and want to study it further in animals.”

OH: “Hmm. I am of the opinion that these genetic forms of parkinsonism have nothing to do with idiopathic Parkinson’s disease.”

MGS: “But some of the mutant alleles clearly increase the chance to develop typical PD, and these forms are often indistinguishable from idiopathic PD at autopsy, as is the case for GBA1-linked cases.11 Other PD variants, eg, those linked to LRRK2 mutations, indicate that there is heterogeneity.”
Here, we have to agree to disagree. Who is right or wrong, that question will be answered by people younger than me.

OH adds to that in a handwritten letter dated December 22, 2011: “Congratulations on your successes in 2011…Nevertheless, I would dare to challenge you into a friendly debate on the ‘still underappreciated heterogeneity of idiopathic PD’—and everything (?) that follows from it.”

On September 8, 2016, during a visit to his home on the occasion of his upcoming 90th birthday, Dr. Hornykiewicz was delivered a personal letter from the Prime Minister of Canada, Justin Trudeau (Fig. 1A), as well as framed greetings by a group of Canadian neuroscientists working in the field of PD (Fig. 1B). He studied signatures, examined each scientist’s affiliation, reminisced of interactions with some of them, and carefully analyzed the congratulatory note by the Prime Minister.

OH: “Thank you for these thoughtful gifts and your plenary lecture yesterday. How did you arrange for these [gifts]?”

MGS: “You are welcome, Herr Professor. Your fellow countrymen are delighted to send their greetings on this special occasion.”

OH: “Have some cookies!”

MGS: “Thank you. Speaking of the lecture [on PD variants]. I have asked you this as early as 2004: ‘What do you think causes idiopathic Parkinson’s disease?’ You have not given me an answer yet.”

OH: “…and I have said to you before that I do not want to add more speculation to an already long list of theories…and by the way, you are also one of those who thinks Parkinson’s can be studied in rats. I disagree with that, because [examining] a rat can never replace [the study of] a human being.”

MGS: “Don’t you think that among all the neuroscientists in the world you have actually earned the privilege, in particular at age 90 years, to speculate on its cause? I am curious as to what you think. None of us has a crystal ball. Plus, I believe that others also would like to know what you think.”

OH: “All right, because you are forcing me…here is my answer: I think that idiopathic Parkinson’s disease is caused by an endogenous toxin that arises from the gastrointestinal tract.”

MGS: “Oh, do you mean via a process linked to the Heiko Braak and Kelly Del Tredici concept?”

OH: “Well, Braak states that the α-synuclein deposits start there. That could fit with your thinking and my hypothesis.”

MGS: “Would you care to elaborate on such an endotoxin’s mechanism of action?”

OH [laughs]: “Listen, that is something that you have to figure out, not me; enough of it!”

FIG. 1. Photographs of Dr. Oleh Hornykiewicz and Mrs. Christine Hornykiewicz holding framed greetings from (A) the Prime Minister of Canada Justin Trudeau and (B) several members of the neuroscientific community in Canada (photographed by M. Schlossmacher on September 8, 2016). [Color figure can be viewed at wileyonlinelibrary.com]
FIG. 2. Two pages (A, B) of a typewritten acceptance speech edited by handwritten notes delivered by Dr. Oleh Hornykiewicz on October 2, 2014, on the occasion of the Warren Alpert Foundation Prize. Note the final sentence on page 2, as added by hand, reads: "For the time being, proclaim: Neuroscience research forever!—probably." (Original letter was sent by Dr. and Mrs. Hornykiewicz to Ann M. Graybiel.)
Looking back, I realize that more than a half-century has passed since the day when I dissected and analyzed my first brain of a patient who had died of PD.

Busying myself all these years, as I did, with the normal and abnormal human brain, I could not avoid being confronted — as were many others before me — with the question: What is the human brain? Is it the seat of the soul, as some used to they, or is it a supercomputer, as others contend? Throughout the centuries, this question has been asked again and again by philosophers and biologists alike.

The study of how the human brain is structured and how it works appeared to me a good way of teaching the young brain researcher the beauty of the proper sense of wonder at the organizing principles of purposiveness and orderedness — principles that so manifestly run through and of nature as perceived, read out, and reflected by that part of our entity that, for lack of knowing what it is, we call "the human mind", and that evidently has something to do with the brain.

But where precisely lies the enigma of this perceiving and "mindful" brain of ours? Isn’t our brain, after all, itself only a piece of the nature perceived? — Setting this quite momentous question aside —

— when dissecting the human brain and cutting from its intricately patterned structures the areas to be analyzed, I have always been sharply aware of the possibility of my taking to pieces the by far most essential part of not only the human machine but to no lesser degree the human person, our memories, our feelings, and thoughts...

Musing thus on notions such as "the human person" — clear abstract notions that we only can have by our brain’s unique capability for abstract thought and cognition — I asked myself the question: Which part of our entity, what is it that actuates and maintains the neuronal activity in our brain when we ponder upon questions like these?

Nothing that we at present know suggests an answer to this question. This aspect of the function of the human brain appears to infinitely transcend the human brain as it appears itself to our view and our inspection — a mass of not more than 1,300 grams which we so busily explore in our laboratories.

I suspect, I strongly suspect that our search for what the human brain is and how it works, will not so soon, if ever, come to an end.

FIG. 2. (Continued)
Dr. Hornykiewicz did refer to the elusive “solution of the PD riddle” in lectures (as highlighted later; see Fig. 2A).

On Prizes and Recognition

In the spring of 2003, Dr. Hornykiewicz was visited in his office at the Center for Brain Research at Medical University Vienna. He was surrounded by piles of type-written pages for manuscripts, figure drafts, journals, reprints of articles, and handwritten letters, but no computer.

MGS: “Good day, Herr Professor.”

OH: “You have to excuse the lack of order here. I am busy working on several manuscripts.”

MGS: “…It was disappointing for many of us to have learned that you were overlooked when the Nobel Prize Committee announced the winners in 2000. [On October 1, 2000, it was announced to be awarded to three neuroscientists, Drs. Arvid Carlsson, Paul Green-gard, and Eric Kandel, for their work on neurotransmission.]

OH: “Oh, yes. However, did you see what they did for me? [He readily hands the visitor the reprint of a paper coauthored by Rajput and colleagues.] Friends and scientists from around the world signed this open letter, which was sent to the committee in Stockholm…a very thoughtful gesture.”

MGS: “Yes, I saw it. An impressive show of support that also provided perspective of your contributions.”

OH: “Only, it will not change a thing.”

MGS: “Couldn’t you be nominated again?”

OH: “…also, you don’t win a prize like that without the full support from your home country.”

MGS: “I am not sure I understand?”

OH: “That’s a story for another day.”

MGS: “If you allow me to ask, what are your thoughts today on the decision by the Nobel Prize Committee in 2000?”

OH: “To me, the irony of it all is that [Dr. Arvid] Carlsson received credit from the Nobel Prize Committee for ideas that he…[pauses] He opposed my thinking. Carlsson himself did not demonstrate dopamine deficiency in Parkinson’s disease, or that replacement therapy could work in patients; we had carried that out here [in Vienna]. I have written and talked about this before [eg, see Sommer6], but that’s the way it is in life.”

On October 2, 2014, Dr. Oleh Hornykiewicz together with Dr. Roger A. Nicoll and Dr. Solomon Snyder received the Warren Alpert Foundation Prize at Harvard Medical School for their “seminal contributions to the understanding of neurotransmission and neurodegeneration.” In a letter to MGS of October 30, 2014, Dr. Hornykiewicz writes:

OH: “Regrettably, you missed the event. You would have enjoyed yourself at this occasion…. [Dr.] Joe Martin, Dean Emeritus, functioned as a thoughtful and kind host, who on the eve of the symposium turned the celebration into a family event for my wife and I by organizing a Special Dinner with a small circle of friends…. PS: Excuse my poor skill at handwriting (my equally old typewriter is currently in worse shape).”

In written exchanges with AMG throughout October 2014, Dr. Hornykiewicz elaborates further on the event:

OH: “Dear Ann, I am so grateful to you and your husband for coming to the symposium at the Joseph B. Martin Conference Center last Thursday, giving me the opportunity to say ‘Hello’ to you (By the way: you were looking great!). Although I was so pleased to see you in the audience during my 10 minutes of an ‘idle, old man’s idle talk’ (Fig. 2), afterwards I completely lost sight of you—to the greatest of my regrets!…What a missed opportunity! But who was it that said: ‘In life it is the missed opportunities that really count’?…I will never forgive myself my stupidity!”

AMG: “Dear Oleh, dear Christine: It was my great, great pleasure to be there for your Prize on that day, and to hear the remarkable words that you spoke, Oleh, about the brain, about the human condition, about the privilege of holding a brain in your hands, of your deep [respect for the] mystery of life and its meaning…of what the mind could possibly ‘be.’ All this in addition to the vivid account of your discoveries. Your deep humanity shone through as you spoke” (Fig. 2).

OH: “…of what the mind could possibly ‘be’…I really like those inverted commas ‘ ‘. Bravo!!!”

On September 5, 2016, on the occasion of the Dopamine 2016 Congress held in Vienna, Austria, an evening reception had been scheduled at Vienna City Hall, to which the soon-to-be 90-year-old jubilee and his wife Christine arrived almost 30 minutes late following the formal opening.

MGS: “What happened, Herr Professor? We all started to get worried about you.”

OH: “Nothing happened; the tram on the Ringstrasse was late.”

MGS: “So, on this special occasion of an evening reception to celebrate your 90th birthday at this venue, you did not consider having a dedicated driver or taking a taxi?”

OH: “No, why should we? We always take the tram in Vienna.”

On Health and Physicians

At the March 14, 2018, meeting at the Café Oberlaa near his home, Dr. Hornykiewicz welcomed the visitor with a question:
On Legacy

In early December 2011, over lunch at a restaurant on the grounds of the former Vienna General Hospital campus, Dr. Hornykiewicz was asked about his dual citizenship status and whether fellow academics in Austria and Canada could honor him in a meaningful manner.

MGS: “How would you feel, if I and others were to push for the naming of a building or an institute in your honor, either here in Vienna or in Canada?”

OH: “No, thank you.”

MGS: “Why such a categorical ‘no’? Wouldn’t that bring joy to your heart?”

OH: “Isn’t such an honor usually bestowed posthumously? I do not think that this is a good idea.”

MGS: “What about submitting your name to the Governor General in Ottawa for an Order of Canada–type recognition?”

OH [in a written reply of December 22, 2011]: “I am honestly deeply touched by your intent to honor me ‘lastingly’ in some fashion in Canada, and of course, I cannot reject this without insulting you. The Order of Canada idea, I think, you should drop. (Why? I can convey that to you verbally).”

Note added: Dr. Ali Rajput of Saskatoon had nominated Dr. Hornykiewicz for induction into the Order of Canada in 1999, and again suggested such a recognition in 2002 by contacting the office of the Governor General, the official Head of State in Canada, but to no avail.

During the conversation on March 14, 2018, the issue was raised again:

MGS: “Herr Professor, how do you feel today regarding the naming of a building or an institute in your honor, such as here in Vienna, for example, at the Center for Brain Research, or a Canadian city, such as in Toronto, Saskatoon, or even Ottawa, where your daughter Maria lives? How should future generations of scientists and doctors best be reminded of your work?”

OH: “I remember you asking me this before. Nothing for me, because all of the information [about me] can be found in the published literature. However, to honor my wife, that would mean a lot to me.”

MGS: “For example?”

OH: “If something were to be done in that spirit, could it possibly be in the form of both our names or hers as a hyphenated name?”

MGS: “As in Christine Jablonowski and Oleh Hornykiewicz Institute, for example?”

OH: “Yes, something like that. You should know that my wife, Christine, is the person with the more interesting pedigree; she is of greater historical relevance to Vienna than I am. [laughs] Let me tell you about her famous Polish ancestor, Stanisław Jan Jablonowski. He was a nobleman and military leader who helped fight off the Turks during the second siege of Vienna in 1683.15 So, yes, it is a very generous thought, but it would have to honor my wife.”

MGS: “Understood. I shall communicate that.”

A Coda

From their first meeting in Japan onward, and then through rare occasions thereafter, Drs. Oleh Hornykiewicz and Ann M. Graybiel developed a deep friendship despite rarely meeting each other or even corresponding until years later. After their last in-person encounter in November 2016 in Vienna, Dr. Hornykiewicz, with the help of his wife, Christine, sent Ann a large envelope by mail. It contained pieces of correspondence and articles, such as a typescript of his lecture in Boston at the Warren Alpert Foundation Prize ceremony, annotated with his handwritten edits (Fig. 2). Some of the content in the envelope was
personal, and many other elements were related to his writings. Together, they provide a glimpse of the breadth and depth that this remarkable man had. The chosen exchanges are only snapshots and are not communicated in a Socratic style, but simply express the many facets of the persona that Dr. Hornykiewicz embodied and the complete devotion that he and his wife had for each other. Examples are provided in the following paragraphs.

Days before the Dopamine 2016 Conference, which had been organized to coincide with the celebration of his 90th birthday, AMG was greeted by the jubilee:

OH: “Welcome to my office!...I have new results to show you! Here, we have just found these interesting patterns!”

Dr. Hornykiewicz brought out paper charts and graphs filled with quantitative estimates of yet new biochemical signatures found in human brain specimens; his eyes were glowing and he was visibly excited. He reviewed some of the confirmatory results his team had recently generated in support of his famous paper by Kish et al.\(^\text{17}\) in 1988 on the remarkable gradient in the loss of dopamine concentrations across the rostral-caudal length, as well as across the width of the caudate nucleus and putamen in patients’ specimens (Fig. 3)—insights that are now foundational to our understanding of the pathological and symptomatic course of PD.

On September 5, 2016, following the reception at Vienna City Hall, Mrs. Christine Hornykiewicz invited a small group of guests, including the organizers of the conference, former trainees, plenary speakers, and colleagues of the jubilee, as well as spouses, to a private dinner at the Imperial Hotel. Once seated, Dr. Hornykiewicz took the menu card and quietly wrote a note in mirror script from right to left (Fig. 4).

OH [smiles]: “Ann, can you read this?”

AMG: “Oh...it is the title of a review that I have written, entitled ‘The Basal Ganglia: Learning New Tricks and Loving it!’”

On September 6, 2016, at the Dopamine 2016 conference, Ann was the speaker of a session when Dr.
FIG. 4. Mirror writing example from right to left by Dr. Oleh Hornykiewicz addressed to a guest at a dinner banquet on September 5, 2016. Note the top three lines read: “Basal Ganglia: Learning New Tricks and – Loving it. Ann Graybiel (ref. out of mind).” (Original note was given to Ann M. Graybiel.) [Color figure can be viewed at wileyonlinelibrary.com]

FIG. 5. Photograph of an undated, handwritten note by Dr. Oleh Hornykiewicz (OH) in response to an interviewer (INT) following deliberations as to how he wished to be remembered. (Photograph provided by and with permission from Dr. Stephan Hornykewycz.)
Hornykiewicz entered the lecture hall and sat down in the front row, where she would soon retake her seat next to him.

OH: “Ann, would you write about me after my passing? I will give you some information to help you do this.”

Upon her return to Cambridge, Massachusetts, the aforementioned information arrived in an envelope.

OH [in a letter dated September 26, 2016]: “Will these be of some (any?) help to you?”

On Love and Life

Near the end of the March 14, 2018, lunch meeting, Dr. Hornykiewicz was slowly getting ready to walk back home, unassisted. Before that, he was prepared to answer a few more questions.

MGS: “Herr Professor, what do you think has been the most important factor in your long and successful career?”

OH: “The loving companionship of my wife, Christine. Honestly, I realize that now more than ever. I sincerely hope that I communicated this to her sufficiently while she was still alive. Since her unexpected passing [on March 28, 2017], there remains this large emptiness. The lust for life, the lust for these fantastical ideas in science, all of it has ceased to exist with the death of my wife.”

MGS: “I am saddened to hear that. However, you are still in the process of grieving. It is normal to feel that way.”

OH: “I am not depressed….”

MGS: “Did you talk to your children about your thoughts, emotions, and wishes?”

OH: “No, I have not.”

MGS: “Why not, if I may ask?”

OH: “One must not burden one’s children with such a discussion. Instead, one has to find a friend to communicate these matters to.”

MGS: “How should we and younger generations remember Dr. Oleh Hornykiewicz?”

OH: [speaking deliberately slow and having switched from German to English] “You can write the following about me: He thought of himself as a lucky man…no, correct that, a very lucky man, who wandered through the world curiously, remained unscathed, lived through turbulent times, made discoveries, and who arrived at the end without any bitterness” [see also Fig. 5].

MGS: “I have taken notes. Thank you for the luncheon and this deeply moving conversation. Get well soon, and please, call your children!”

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Conflict of Interest

The authors declare no conflict of interest.

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