

Dr. Nobuko Mataga Full Transcript

Unit Leader (Ph.D.)

Support Unit for Bio-Material Analysis

Research Resources Division

RIKEN Center for Brain Science

This interview took place on September 20, 2022, in Wako, Japan, at the RIKEN Wako Administrative Headquarters Bldg. Room 612.

Career summary

1978 B.S. in Chemistry, Department of Chemistry, Toho University

1989 Ph. D. in Pharmacology, Showa University

1985 Research Associate, National Institute of Neuroscience,
National Center of Neurology and Psychiatry

1988 Research Associate, Osaka Bioscience Institute

1992 Assistant Professor, Medical Research Institute,
Tokyo Medical and Dental University

1997 Staff Scientist, Lab. For Neuronal Circuit Development, RIKEN BSI

2001 Research Specialist, Lab. For Neuronal Circuit Development, RIKEN BSI

2009 – March 2023 Unit Leader, Support Unit for Bio-Material Analysis,
Research Resources Division (RRD), RIKEN Center for Brain Science

April 2023 - present Research Consultant, Research Resources Division (RRD),
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Adachi: This project, in which we speak with senior female leaders to hear helpful stories for young researchers and female researchers, is thanks to Dr. Yuko Harayama, former Executive Director of RIKEN, and an Elsevier Foundation board member, who was eager to start up this project. Our discussions will be about management topics such as team building

and leadership skills, rather than science *per se*. Thank you for taking the time to talk with us.

Mataga: I'm looking forward to it.

Adachi: Dr. Mataga, looking at your CV, I saw that you obtained your bachelor's degree in Chemistry in 1978 from Toho University.

Mataga: That's right, I did my undergrad at Toho University.

Adachi: And then you started working at the National Center of Neurology and Psychiatry (NCNP). At that point, what sort of career path did you have in mind?

Mataga: At that time, Toho University did not have a graduate school. And all the professors there advised me that an undergraduate university stood at the summit of educational institutions, and what I learned there was all I needed to spread my wings in the working world. So I was thinking about getting a job immediately after I graduated.

Adachi: You ended up spending about 10 years working as a research assistant and research associate in NCNP.

Mataga: That's right. In thinking about what to do for the future, I saw three choices. Become a teacher at the high school of which I was an alumnus. Take a corporate job. Or work at a laboratory. I had always enjoyed experimental work. How can I put it? Helping with the work of a laboratory just appealed to me. When I was in my fourth year as an undergrad, for my graduation research project I went outside Toho to a medical university. And a professor there said, "A new national research center is being established, can you be a part of it?" You see, that was right when the National Center of Neurology and Psychiatry was founded. So I hopped on board just as it was getting off the ground.

Adachi: Did your work during those 10 years give you the chance to take what you had learned as an undergrad, put it to use, and develop it further?

Mataga: To be precise, what I specifically learned was analytical chemistry. The scientists that I was working with were psychiatrists, so analytical chemistry was not their field of expertise. They asked me to build the center's capabilities in the area of analytical chemistry and that's exactly what I devoted my efforts to for 10 years.

Adachi: What was the team you worked with back then like? Would your bosses directly assign to you whatever they wanted you to analyze?

Mataga: The head of the laboratory was a lecturer of the university. One of the deputy laboratory heads was an assistant professor of the university, and there were also a number of psychiatrists who were studying at the center to obtain their Ph.D.s. Plus me and some lab assistants. So in this environment, I was the only one who had the experience of doing experimental work every day.

Adachi: So you conducted various investigations and experiments yourself while responding to requests for various analyses... would you say the work was similar to what your current unit does?

Mataga: Yes, and there are skills from back then that I still use today. Reading scientific papers and assessing whether they could be applied to our work, making adaptations as necessary, that was how I often pioneered new experimental systems for the lab.

Adachi: I see. Thank you. After 10 years there, in 1988 you moved to Osaka Bioscience Institute (OBI). And it was while you were working at OBI that you also obtained your doctorate, right?

Mataga: Right. The doctors at NCNP and OBI knew each other well. At the time, there was a Ministry of Health and Welfare Research Group Meeting, and I was on it with them too, so

I also knew the OBI doctors very well. Again, OBI was a brand-new research institute that was just starting up, and they recruited me to help get it off the ground. I took the offer and went to Osaka. At the time, there was research going on to search for biomarkers for a certain disease, but it was hard to find a person in Japan who had the training to use the necessary lab equipment. So I was assigned the mission of establishing the use of that equipment in the lab. They were counting on me to get it done for them from scratch, not just to be part of the effort.

Adachi: So for quite a while, in parallel with doing research for your doctoral dissertation, you were also holding that job.

Mataga: Yes. Fortunately, by tying together a number of things that I had developed previously over the course of my career to that point, I was able to earn my doctorate in Pharmacology. Working while writing a dissertation, needless to say, meant many late nights and weekends. And because I didn't finish my doctorate until after taking the job in Osaka, I sometimes flew back to Tokyo on the weekend to attend grad school and boarded a 6 a.m. flight on Monday to get to work in Osaka by 9 a.m. It was a grueling schedule. I was very lucky that I was able to obtain my degree without changing the subject of my research.

Adachi: I can't even imagine how busy your life must have been back then.

Mataga: I guess I was young, so I managed it somehow.

Adachi: Was there a supervisor who sparked your decision to pursue a doctorate?

Mataga: Actually, I think for years people had been telling me, "You've been working in research institutes for so long already, but not having a doctorate will eventually limit you. You should get your doctorate!" And I had come to the same conclusion myself. So I went ahead and got my doctorate.

Adachi: It sounds as though at a relatively early stage, you resolved to get your doctorate because you wanted to dedicate your life to chemistry and to the field of R&D.

Mataga: Back then, there were not many posts for technical staff. For example, there were a lot of people who ended up taking jobs working for corporations. I've been around a long time, and way back then, workplace equality between men and women did not exist in Japan. Just to give one example, when I was considering joining one private-sector research organization, I was told, "Women are not allowed in the isotope room." And there were no women's bathrooms in the research building there... you had to go over to the administrative building. There were other restrictions too... women weren't allowed to work past 10 p.m. It seemed difficult for me to do what I wanted to do. But at NCNP and OBI, it was possible to work without worrying much about the workplace equality issue. So I decided to get my doctorate and move up in those places.

Adachi: Were there any memorable moments when you felt a difference, or said to yourself, "I'm glad I got my doctorate after all!"?

Mataga: At OBI in particular, when it was newly founded, in the same research team with me there were a lot of people who had their doctorates and were doing a second postdoc after returning from a postdoc outside of Japan. And that placed them on a totally different level from me. I wanted to catch up to them, so I was really glad when I secured my doctorate. I should also mention, at that time, having a doctorate was a huge advantage in acquiring external funding for my own research.

Adachi: At OBI you were given a mission to deploy new lab equipment, and you were really pioneering the use of that technology, right?

Mataga: That new technology was in parallel with, or rather the basis for my work. And as I was allowed to get my doctorate, I started doing independent research for the first time, with my own research topic.

Adachi: What was the balance between the time you spent on your own research and the time you spent supporting the research of the lab?

Mataga: I was young enough back then that I was able to handle a massive workload. I have the sense that I worked a lot of hours. And it was probably split about fifty-fifty between the two. I divided my efforts evenly between developing and supporting the lab, and my own research.

Adachi: After spending four years in Osaka, you moved to Tokyo Medical and Dental University (TMDU) in 1992. What spurred you to make that career move?

Mataga: My posting at OBI was originally a fixed-term, 3-year commitment, but they extended it one year for me. So I knew I would need to find a new post after my 4th year in Osaka. Which turned out to be TMDU.

Adachi: And your job title there was Assistant Professor.

Mataga: Right.

Adachi: Was that a position where your own research would be the mainstay, rather than research support for scientists?

Mataga: Yes, exactly. The work I had been doing at OBI was really fascinating, and I wanted to continue pursuing that line of research. Since that time, I had a feeling that to understand a variety of mechanisms and make new discoveries in your research, you couldn't rely on just one technology, you had to bring together many different technologies. I was aware of my weak point, a capability I lacked. So I went looking for a laboratory where they were very actively pursuing exactly what I needed to learn. By chance, an acquaintance of mine was a friend of the professor there, so I knocked on that door and asked them to hire me. There I was able to add new technologies to my portfolio as well as pursue my other goal, which was to continue my research. That's what brought me back to Tokyo.

Adachi: You ended up spending five years at TMDU before moving to RIKEN in 1997. Your first post here was Staff Scientist in the lab of Dr. Hensch.

Mataga: Yes.

Adachi: Could you tell us the story behind that?

Mataga: At TMDU I continued doing the same work that I had been doing at OBI. I mentioned learning new technologies; I was able to acquire them, and I was getting to understand mechanisms in a broader scope through my research. Then, just when I was wishing I could expand the scope a bit further, I found out that Dr. Takao Hensch was coming from the U.S. to join RIKEN. And the technology he was using was really at the cutting edge, so I was especially eager to learn about it. That was one factor. In addition, the conditions at the university were far from ideal. There were financial problems, human resource problems: it was extremely difficult to hire staff or secure a budget. Meanwhile RIKEN was establishing the Brain Science Institute (as it was called then), and they were bringing in a researcher who was tackling the same research topic as I was but using a different approach. That was another factor that made me want to be at RIKEN, so I made the move.

Adachi: When you initially joined RIKEN, you weren't doing research support work. Rather, you were pursuing your own research in collaboration with Dr. Hensch, right?

Mataga: In reality, I did do a lot of work that amounted to research support, but yes, I had my own research topic that I was pursuing. You see, Dr. Hensch, being from the U.S., was not very familiar with how things worked in Japan. Moreover, his team was small at first and made up entirely of other non-Japanese people; he had no one Japanese on his staff. And RIKEN, no matter how they might try to accommodate him, ultimately was run with a Japanese management style. That meant that there were all kinds of administrative things which needed to be done in a uniquely Japanese way to get his lab up and running. Well, I

ended up taking on all of that stuff, from compliance to safety management to you name it. I basically did double duty: doing my research job, and being what's called the "lab manager" in the U.S. I did that kind of work before and always enjoyed it, so although I didn't formally have dual job responsibilities, in reality, I did.

Adachi: So you were a member of Dr. Hensch's lab at its inception?

Mataga: Yes, he brought me on board before his lab had actually been launched, in fact about six months before the Brain Science Institute (BSI) officially formed.

Adachi: You were doing your own independent research, while effectively supporting the management of the lab simultaneously. How would you say your time was divided between the two?

Mataga: The research was 80 or 90%, and the lab management took up about 10%.

Adachi: I would imagine you sensed at that point that you were faced with two choices. One path leading to having your own research lab, and another path leading to full-time research support, where you could put all your experience to use. Is that right?

Mataga: Yes, I was conscious of that.

Adachi: And what was your thought process?

Mataga: If Dr. Hensch had ended up staying in Japan long term, I would have continued my research in his lab while also helping to manage the lab. I might have naturally assumed a position where I oversaw the Japanese staff since the number of Japanese people in the lab had been increasing. But Dr. Hensch took a faculty position at Harvard University, and went back to the U.S. At that point, we discussed whether I would go with him. But I felt that by then, I was too old to uproot myself and go to the U.S. So I had to figure out what I was going to do instead. I had been doing technical support all these years, and all along I had

been thinking that I wanted to reach the end of my career doing that. It just so happened that RIKEN had a unit, which is now known as the Research Resources Division (RRD), though it was tiny back then. I had been thinking that I should go there. I figured that would be the final stop in my career. I had two chances to join that unit. The first chance was before there had been any talk about Dr. Hensch going back to the U.S., so I did not consider quitting the lab. I was wrapped up in my own work and so I decided to wait a while longer, to wait for the right opportunity. Then, the following year, there were big changes at Dr. Hensch's lab, and fortunately, there was an open position at RRD at the same time. I figured that it was now or never, and told him, "I want to join the RRD." It was an open-application position, so I had to apply like everyone else, but fortunately, I got the job.

Adachi: I would imagine that when you chose the research support position, it meant that the amount of time you could dedicate to pursuing your own research topics diminished considerably. Is that right?

Mataga: Yes. When I was making the decision, I took everything into consideration. Fortunately, I was able to prove that what I had believed for about 20 years was true in my own research, and it paid off. So just when I was contemplating what to do next, Dr. Hensch, whom I had been working under, went back to the U.S., and a position as Unit Leader in the Support Unit for Bio-Material Analysis opened up. The timing of everything was perfect. So I felt that the time had come to shift my career focus from supervising research to leading a unit that would provide technical support.

Adachi: As the leader of a technical support unit, you would be working with a variety of people. What style of management did you adopt for your team there?

Mataga: First of all, since the unit was a technical support unit within an organization conducting research on brain science, I had long been thinking that it needed to become more specialized with respect to brain science, in order to provide more valuable support to researchers working in that field. So that is what I set out to do, providing new support right from the start.

Adachi: Ever since you came out of Toho University with your bachelor's degree, you saw how technical support was carried out at the various institutions where you worked over the years. Do you have any example of putting what you wanted to follow into practice after taking charge of a support unit yourself?

Mataga: From the beginning, and still to this day, I made this our motto about the data we supplied to researchers: "Accurate, rapid, and beautiful." People often asked me, "What does 'beautiful' data mean?" The thing about data is that if it is not handled consistently in all procedures, you will end up having variation among data sets. And I felt it was our mission in doing research support to eliminate any such variation coming from our work with the data. Because we are a technical support unit. Another principle is to keep things simple. Don't complicate things. Always approach things in the simplest way possible, and when considering why a result turned out a certain way, look for the simplest explanation, always the simplest, to find the answer. That's what I would tell my staff time and time again.

Adachi: You oversee quite a large number of staff. How successful have you been in instilling that motto? What has worked to make it stick?

Mataga: After reorganization, my unit has shrunk somewhat and now we have 17 people. About half of those 17 are doing research support on the protein analysis side, and the other half are supporting genetic analysis. Whenever we hold all-hands meetings of both groups or either of those groups, and whenever I meet with staff members one-on-one, I don't mean to brainwash them but I make myself clear. I say, "This is how I think data should be handled. Do you agree?" There were people who have come to share a similar framework, and others who did not, and of course I respected people's way of doing things. But gradually, bit by bit, after 13 years now, I feel like I have brought everyone on board with that motto.

Adachi: Being in charge of so many people, there must have been times where there was friction. Looking back, are there any incidents where you would have done something differently in retrospect?

Mataga: When I first joined the unit, the staff there were not employed by RIKEN itself. There was a nonprofit entity, and formally they belonged to that organization, not RIKEN. As a result, even though I was the unit leader, there were duties that technically weren't within my authority, such as giving the staff a day off, or putting the official stamp of approval on documents. But I was the leader of the team with respect to the technical work. As such, on the human resources management side, I felt that it was my job to observe everyone and assess how they were getting along. But that was a tricky gray area. It wasn't always clear whether I was formally authorized to say anything directly to the staff along those lines, because they technically were employed by a completely different organization than I was.

Adachi: Certainly giving your team guidance on the technical aspects of the work was a major feature of the job. Do you have any wisdom to share with us about how you approached that?

Mataga: Initially, the staff of the Support Unit in the BSI started out handling samples that were provided to them by researchers, so they had never looked at entire brains. So when I took over there, the first thing that I did was to show everyone a whole brain. That it wasn't just a big round lump, but was made up of distinct regions like the cerebral cortex, the hippocampus, and so on. I also held a few educational seminars about the brain. Of course, our unit is extremely unusual in that we do not provide technical support only to the BSI, but to all of RIKEN. Currently, we serve researchers from all across RIKEN; actually, we handle quite a large number of teams and tasks. We analyze both plant samples and animal samples, for example. And the animal samples include animals of all sizes. Since we are not exclusive to BSI, there are aspects of the work that I personally can't follow in terms of specialized knowledge. At the same time, for researchers who are part of BSI, though we aim to give everyone in-depth support, I would like to go a step further in accommodating the needs of brain science researchers in particular. For example, the scientist placing the request, the unit staff members taking on the request, and myself will meet in advance and talk about how it will be carried out. And we continue to hold discussions as the work moves

along. In that way, I have tried to encourage the staff to deepen their understanding of the brain.

Adachi: So you were encouraging the staff to expand their knowledge, but you were not technically their boss, because they were employed indirectly via the nonprofit entity. That sounds like quite a tricky management challenge. Would you agree?

Mataga: In fact, I missed my chance to say, but that setup with the staff working for the nonprofit entity only lasted a year. When I took the job, it was a transitional period. By my second year, the unit's staff had been formally employed by RIKEN itself—not every person, but at least the key staff members. And currently, they are working as official RIKEN staff in the unit just the same as I am.

Adachi: Within a unit whose function is to support cutting-edge research, I would imagine that a constant eagerness to learn new things is necessary. Have you had staff who didn't seem to be able to keep pace with that? If so, how did you deal with it?

Mataga: Among my current staff, many of them have been working there for almost 20 years, or around 10 years at a minimum. I feel that those who have a heartfelt dedication to supporting research, and those who are eager to learn about a wide range of new things have remained with us to this day. Even though it is demanding, I encourage staff who enjoy learning new things to actively seek and study them. And if I see that someone is struggling a lot with some technical topic, I might reassign them to something else, or set up specific rules or patterns tailored to that individual.

Adachi: I can imagine that something like reassigning a staff member requires extremely sensitive handling. What types of factors do you keep in mind when such situations arise?

Mataga: People coming from the fields of chemistry and biology bring different skill and knowledge sets. So as a matter of course, chemists are going to go into the chemistry rotation, and biologists are going to go into the biology rotation. In very specialized areas,

there will be only one person on my staff who is qualified to handle it. If the staff was a bit larger, we could have more back-up personnel. With these specialists, all I can tell them is, "Do your best!" and count on them to keep up with the latest developments in their area of specialization. They are like sponges for information, and some of them catch on to new types of work much faster than I do, and undertake it in discussion with their teams. When making changes, I use rotations. I put staff through rotations to two or three different kinds of work in order to see which they feel more suited to, or that I think they are more suited to. But I don't put people on tasks that they don't want to do.

Adachi: Did you arrive at that style of management over time, through a process of trial and error?

Mataga: Since the organization's operations are constantly evolving, that inevitably gives rise to situations where I have to shuffle people around. Little by little. I often say to my staff, "Things have changed a lot, haven't they?" when reflecting on how things were 10 years ago. But I don't feel that we made drastic changes, it all happened incrementally.

Adachi: I understand that you carefully considered the fit based on the individual characteristics of each staff member when deciding how to assign them. But surely there were occasions when someone expressed dissatisfaction at how they were being utilized, in comparison to other staff members? How have you dealt with that kind of trouble?

Mataga: The way that technical support actually works is not really as simple as the researchers just handing over samples to us. These days we have 13 or 14 so-called shared equipment rooms, which hold around 160 big research instruments there. So recently, although we are the Support Unit for Bio-Material Analysis, we have acquired lots of major lab equipment for many different fields with nothing to do with sample analysis. This includes a large number of extremely high-resolution microscopes and equipment for physics experiments. Those pieces of equipment are used by members of various research teams, of course. And we don't just say, "OK, have at it." I ask the staff to explain, like, "Here is how you operate this."

So even when my staff have absolutely no experience with these types of equipment, I try to assess which of them are suited for it, tell them, "Give it a shot," and put them in charge. I aim to expand the scope of their work more than they have and do it in a way that doesn't feel unfair to anyone. That was extremely challenging at first. I myself didn't have a perfect grasp of every staff member's exact situation at first, so I may have made quite a few decisions that were unfair. But now, 10 years into my term here, and with staff who have been here for close to 20 years, I think we have worked through any feelings of unfairness. And there are members of the staff who are unexpectedly frank with me. If they don't want to do a certain task, they will say so. And I will say, "OK, that's fine if you don't want to. How about this instead?" I want to keep a friendly footing with my staff.

Adachi: In terms of leading your staff to extend their capabilities and try new things, I imagine that it is difficult to walk that fine line. You have to avoid asking for something that is just too difficult, that will make them say, "No, that's impossible."

Mataga: That's true. However, at the unit I lead now, the basis for the workflow was already in place, and everyone there is a professional. It was not like I had to start by doing interviews to hire on a whole new staff from scratch. So, when requesting people to take things on, I could take the long view and assess whether a person was likely to master that new skill over time, even if it might not lead to actual research support for many years, if ever. Each individual is different when it comes to uptake speed, and each individual is busy to some degree with their core work of providing technical support to researchers. I take all that into account and also give my staff some freedom to choose how to extend their capabilities.

Adachi: What have been your happiest moments as the leader of a research support unit?

Mataga: In terms of things that are internal to the unit, nothing makes me happier than when one of my staff takes the initiative to tackle something before I even have to ask. "Dr. Mataga, don't worry about such-and-such, I'll take care of that." Or, "Oh, you don't have to do that Dr. Mataga." And I reply, "There's not going to be any work left for me to do!" It

makes me so happy when my staff take the initiative. And of course, I'm delighted when a researcher we support publishes a paper in a highly ranked periodical, then comes to us and says, "I couldn't have done it without the support of your staff here at RIKEN, without your research support unit." At RIKEN, there is a really high rate of turnover of researchers, with people heading off to other institutions after 3 or 4 years, or going to someplace like the U.S. to do a postdoc. It makes me happy whenever someone, before they leave, comes to say goodbye. Some people even email me after they leave, with questions. I get emails saying, "Until I left RIKEN, I never realized how much I depended on your unit. There is no such support at where I work now." Sometimes people come back to visit and tell me that in person. Of course, I'm delighted whenever that happens.

Adachi: On the other end of the spectrum, what kinds of things have given you a hard time, or made you unhappy?

Mataga: I worked as a researcher myself for many years and secured plenty of external funding during that time, so I brought quite a large collection of lab equipment to this unit with me. And I have always readily offered the use of that equipment to researchers, saying, "Oh, if you're doing work on so-and-so, let me lend you my such-and-such." But there have been cases, when a long time passes after lending something out, and the equipment hasn't come back yet. I'm wondering about it and then I find out, "Oh, that researcher moved to XYZ university." And I have no idea what happened to the equipment that I lent them. It's not that it happened a lot, but whenever it did, I felt sad about it. Every so often, I or my staff will comment, "I haven't seen so-and-so around for a while, and it turns out they left RIKEN." That always feels a little sad.

Adachi: What is your biggest concern when bringing on new staff?

Mataga: Since we are a support unit, having a cheerful personality is the most important. Second is being able to get the work itself done promptly and properly.

Adachi: Are there any questions you always ask when interviewing job candidates?

Mataga: Because our unit has extremely low turnover, we have almost never done any hiring through public job postings during my time here, just a handful. I'm speaking about the technical staff. In the end, technical support is really a different kind of job from regular research, and in that respect, a person's attitude and demeanor play a bigger part. As for interview questions, I always ask about work-life balance. It's important that they can get the work done right, but also that they take the right amount of leisure time. I want my staff to have a life outside of the lab, and outlets for relieving stress. So I never fail to ask about that.

Adachi: In a workplace where turnover is very low and people stay on for a long time, is there anything special that needs to be done when you do bring in a new hire?

Mataga: If the new hire is coming in to work in an area where one or more existing staff are also working, I ask the existing staff to watch over the new person and show them the ropes. We have never hired people fresh out of school, because in technical support, we typically need people who can hit the ground running. So even if someone is a new hire, they usually already have some technical skills. They don't need much guidance on that. Instead, we bring them up to speed on, say, maintaining a proper level of politeness when interacting with the researchers, or on the importance of complying strictly with nondisclosure and information security rules. If you are a researcher and you've hit a roadblock, you might go over to the lab next door and informally ask, "Any advice on this?" Such discussions can take place. But for us in the support unit, we handle samples from all the researchers and know what they are doing to some degree, so it is essential that we do not release any information about the work we are doing to anyone but the researchers involved in that specific request. We are very strict about that.

Adachi: Do you have any tips on how to build a team that will have low turnover?

Mataga: A big part of it is simply that they are all nice people. Our staff has a very high proportion of women. And at the time I took over, they were all young as well. Many of

them over the years got married and had children. Generally, every year someone on staff was having a baby and taking maternity leave. RIKEN is extremely supportive of that as an organization, which made my job much easier. I am determined to create a work environment that is friendly to people raising children.

Adachi: So you continually maintained a focus on work-life balance.

Mataga: Yes, absolutely. I want my staff to be able to have a good home life, especially those with kids. But also those without kids. Nowadays, unlike in the past, it's not taken for granted that people will work through the weekends too. We want people to get their work taken care of efficiently, not reward just spending long hours in the office as something good in and of itself. Play hard, study hard, work hard. That's how it should be, and I believe my staff is doing well.

Adachi: And how about your own personal work-life balance?

Mataga: (laughter) I wish I could say, "Just right, of course!" But as you see, not long ago we had the whole COVID situation, and people were stuck at home. Usually, I enjoy traveling, and often take trips, which I like to chronicle by taking photos. But without that, my life is probably more unbalanced these days. So I guess my answer is, "I try my best."

Adachi: You mentioned earlier in the interview that when you were young, you worked a lot of hours. How about now?

Mataga: You're asking about my work-life balance in my younger years?

Adachi: How about your work hours in comparison to your younger years?

Mataga: I'm sure I work far fewer hours now. When I was young, for some reason, everywhere I belonged I ended up having numerous colleagues who were tennis players. And I myself was also a member of a tennis team back in school. So on Saturdays, we would

have a gathering to read and discuss papers in the morning and then play tennis in the afternoon. During the winter, when we went to academic conferences, we would ski in our free time. In other words, I had colleagues who were very good at relishing their leisure activities, and I was no exception. I would take driving trips to Kyoto, to Kyushu, all over Japan. Now that I'm older, I feel like I have lost that balance and I should probably fix that.

Adachi: In managing your team, do you encourage socializing, like when everyone does leisure activities together as a group?

Mataga: In the old days, the common practice was to socialize over drinks out on the town, or during workplace events like New Year's parties.

RIKEN has a planned 3-day electrical outage. During that time, we used to hold a family barbecue at a nearby park, before COVID came along. Of course, attendance wasn't mandatory. It was for whoever wanted to come. As I mentioned earlier, our staff were having children over the years. Probably close to 20 kids total among them, as the number of kids grew from the time I took over the unit. I can tell you that those kids really had a good time at the barbecue, all playing together. They addressed me as "Boss." I know all the kids on sight. So we enjoyed having this family barbecue every year. Since the kids are small, it's difficult for us to go on a trip together. So instead, at Halloween and Christmas and other occasions, we would turn our meeting room into a party room by decorating it festively and holding parties during lunchtime.

Adachi: With the COVID situation, have you tried to find substitutes for those in-person events?

Mataga: Nowadays we mostly just talk on Zoom. And we also give out candy or dress up as Santa at Christmas. That kind of thing.

Adachi: Due to COVID, it's been hard to have face to face meetings, and I assume that has made it harder to keep the research support operations running smoothly. Could you talk about your experience with that?

Mataga: There are times where it is just not possible to carry out our support function without having in-depth, in-person meetings with the researchers that use our services. Fortunately, Zoom and WebEx and other web applications became available. Even before COVID, we had videoconferences when working with people outside of RIKEN. So we made the best of videoconferencing and web conferencing tools to move our work forward. In fact, one unexpected benefit was that in the past, for our educational seminars, we had to bring everyone together to sit in a big lecture hall and listen to invited speakers. For example, a representative of a company that makes microscopes, demonstrating how to use their new product, pointing out its features and providing tips, etc. Once COVID hit, we had to hold those over Zoom instead, and that enabled colleagues from other RIKEN campuses like in Kobe and Yokohama to also access those lectures. That has actually been a positive thing.

Adachi: Looking back over your long career in research support, what was the toughest thing that you went through?

Mataga: The toughest thing? Hmm. I'm sure there were a lot of tough situations, but I tend to quickly forget about them afterward. Not that I intentionally try to forget them, but I only recall them if somebody mentions them: "Oh, yes, there was that situation that happened." But nothing specific leaps to mind.

When I joined the unit as leader, I had already been working at RIKEN so many of the people there knew me already. But it was challenging to prove to those who didn't know me yet that our technical support work was valid. Achieving that was tough in some ways. It took quite a while before our unit reached a point where we could present example cases of our capabilities: where we had analyzed samples and could show our results as proof to the researchers making use of our services. Before I came, I myself didn't like the idea of receiving support and being told, "This should be fine," without having any proof. It took some time for me to implement reforms. You could say that process was a tough thing that I went through.

Adachi: In what way did becoming a unit leader change you?

Mataga: It's obviously a heavy responsibility to be supervising a staff of almost 20 people. I felt the weight of that in the job.

Adachi: Is there anything you, the current you, would say to yourself back when you first started the job as unit leader?

Mataga: Hmm. I wonder... Maybe just, "Do your best!" (laughter)

Adachi: That concludes the questions from me. Thank you, Dr. Mataga.

Mataga: You're very welcome.

Matsuo: It struck me that when you moved between labs, you were always actively making connections. You mentioned that, in one case, you approached the lab directly. In another case, you had a professor you knew make the introduction. Networking with people is obviously a huge factor which influences one's career path. Is that something that you were conscious of when you made connections with people back then?

Mataga: Although I was part of the technical support staff, I made it a point to attend academic conferences. So if, say, I was presenting a poster, I would always make sure to network with anyone who stopped to ask about my presentation. I would follow up later on with whoever I had met that way.

Matsuo: You mentioned that your unit's responsibilities for technical support have expanded beyond just CBS to all of RIKEN. I imagine that you have been able to deliver on that new mandate by drawing on your work connections. Is there anything that you were able to achieve because you were a PI?

Mataga: You mean as a PI on the technical side?

Matsuo: I mean, in terms of achieving results, expanding the scope of your unit's work, and expanding your success.

Mataga: In working as a researcher for more than 10 years at RIKEN, there were countless things that I found myself wishing existed in technical support. Each one of those items on my wish list, I wanted to make happen once I became the PI for a support unit. As a unit leader, I report to the director of CBS. I would often go to the director and say, "I want to do this," "I want to do that." Moreover, being in technical support gave me many opportunities to get to know people across all of RIKEN: people on the administrative side, the research side, technical side, all parts of the organization. So, I always tried to secure support from all corners, especially from people in administration, to expand the scope of the support that we provide.

Matsuo: It sounds as though Dr. Hensch returning to the U.S. was a major turning point in your career. You say that you had always wanted to make technical support the last stop in your career. Could you say a little more about why it appealed to you?

Mataga: The reason that I wanted to do technical support in the end is that I know science is not an individual effort. What a single scientist can do on their own is very limited. But I was very blessed to master a wide range of lab technologies and be entrusted with equipment by various researchers. I wanted to make those technologies available for other researchers to use. So rather than continuing with my individual research, knowing that there are many people who are more eminent, I wanted to support the work of a large number of researchers. Instead of setting the pace, I felt that my personality was more suited to falling a step behind to help those who are the pacesetters. I really enjoy doing that. And that's why I always felt that I wanted to circle back to technical support in the end.

Matsuo: You mentioned starting your career in an era without equality in the workplace between men and women. You chose an environment where you wouldn't have to worry about that. Did your experiences from back then influence your philosophy of lab management now?

Mataga: I'm really showing my age when I say this, but I started my career in a world where workplace equality just did not exist. I went to an all-girls high school but did my undergrad at a school where chemistry majors were only 20% female and 80% male. Because of this imbalance, I may have become less conscious of gender. Today when we talk about balance, the issue is that women outnumber men in my unit. I think of myself as being the frank and straightforward type, but maybe it's different for the other women who work for me.

Matsuo: So is there anything you keep in mind when it comes to men and women, gender equality and diversity?

Mataga: When I was working in Dr. Hensch's lab, there was diversity in the sense of "not many Japanese people and a lot of foreigners." Also, the male-female balance improved over time there. I assume that is because Dr. Hensch was consciously aiming for more balance. Whatever the case, there were people from many countries. In that setting, I feel like I became less and less conscious of whether a colleague was a man or a woman, whether they were Japanese or from another country. And the unit that I work in now, although predominantly staffed by women, has a working environment where people can do their work without worrying about gender. The staff don't relate to each other on the basis of whether someone is a man or a woman. Women take maternity leave, and men take paternity leave. And there is nothing awkward about it. So if someone on staff who is male says, "I'll be taking parental leave," or "My child has a fever so I'm taking leave," I gladly accept their requests. It makes absolutely no difference to people whether the colleague is a man or a woman. And I have a lot of men raising children on my staff.

Adachi: Touching on that same issue, you talked about how working women faced difficulties back then. Do you feel that things have changed a lot?

Mataga: Yes, they have changed. In part that may be because my career has been in the scientific world. In research labs, I don't notice any kind of discrimination between men and women.

Adachi: You lead a team that does have many women on it, and it's a fact that a lot of women work in technical support. As such, there are sometimes arguments like "women should stick to support roles". Personally, my response to that is, "It's a group of brilliant professionals. Why do you say that?" What would your response be?

Mataga: It is true that there are a lot of women in technical staff-type positions. And one reason for that is that, after all, men's brains and women's brains are different. Which means that there are tasks men are more suited for, and tasks women are more suited for. I said that these days, in the technical workplace, there is no gap in treatment at all between men and women, at least not that I have noticed. But it can be argued that to some extent this precondition exists that there is work that men are more suited to, and work that women are more suited to. As such, the fact that the technical staff tends to have more women, is—how can I put it—a reflection of diversity in terms of the work itself. Some types of work involve juggling a wide range of different tasks, and women's brains seem like they might be suited to that. Of course there are men who thrive on that kind of work also, but in the big picture, generally speaking, women might tend to be the ones for it. So I don't see it as any kind of negative bias that "women should stick to support roles," but more so that those positions are going to attract more women, simply because women might tend to be suited to that type of work.

Adachi: In light of all that you've said, in closing, what would your message be to young scientists with a choice to follow the path of research support? Is it something you would want more people to consider?

Mataga: That's a difficult question... The thing is, in order to aim for a career in technical support, you have to be able to get your work done with total consistency. Of course, that is true of every job in some sense. But in our line of work, we are entrusted by researchers with samples of immense scientific value. In some cases, the samples are one of a kind, irreplaceable. And carrying the weight of responsibility for that is a requirement of the job we do. You have to be able to hold that attitude. I believe that people who can do that need

to have a certain degree of courage. I suspect people who are worriers, who are always anxious, might find working in technical support very difficult. It would be hard to perform the necessary work on the precious sample a researcher has given you if you are constantly fretting about what could go wrong. Experience also comes into that. With experience, people gain confidence in themselves. Those who are able to bring self-confidence to the work that they do, or those who are backed by a belief that self-confidence will come with experience, I think those kinds of people are well-suited to a career in technical support.

Adachi: Thank you for taking the time to talk with us.

Mataga: It was my pleasure.

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