

Chapter 49

ULRICH (UTZ) BLASS

Basel

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VM = Vivian Moses; UB = Utz Blass; SM = Sheila Moses

VM: This is a conversation with Utz Blass in on the 21st of May, 1997.

Can I start by asking what your early career was in science and how did it take you to Berkeley?

UB: Well, I got to Zürich in the year 1945 and I could start...take studies, in chemistry there. After some years I was with Professor Karrer, made a PhD about ionon/iron (?) compounds which were used for carotenoid synthesis. When I had finished I asked Professor Karrer if I could get to America with a stipendium of himself. He was the leader of the stipendium fund in Switzerland. So he said "stay with me" and then you get it. I had to serve it off two years. I was doing some lectures for medical students and I had the laboratory for exercises for the medical students. In the same time I did some research work for carotenoid synthesis.

VM: Chemical synthesis?

UB: Chemical synthesis. In that last year, 1955, there was a huge congress in Zürich for chemistry and I was the press representative for Karrer and I was very proud of that. It was a unique experience. And then, at the end of the year I was asking again about America and he said "well, you can get your stipendium, but where do you want to go?" I asked for recommendations and he was recommending Professor Cram and one more. I said "what do you think about Calvin in Berkeley?" He said "oh, yes, that's fine." And so I got to Berkeley.

VM: You contacted Calvin and told him you wanted to come?

UB: Calvin was at that conference in Zürich and Karrer contacted him and so we met. Calvin was...oh, I don't know the word. He said "yes, come to us and I will order things".

VM: He encouraged you?

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UB: Sure, he encouraged me very much so. Then, going to New York I took the boat and then the Greyhound to San Francisco and Berkeley. With that my stipendium was almost used up. So one of the first things I learned with Calvin was that he was very helpful in getting finances. I was staying at the I House and came into the Old Radiation Laboratory and Calvin was proposing I should do some work about lipids, lipid and lipid colorants. Of course, the photosynthesis way. My first introduction was in the library and then with Al Bassham who showed me all the tricks with development of the algae and introduction of the C¹⁴ knowledge.

VM: What time of year did you arrive in Berkeley?

UB: That was at Easter, 1956.

VM: Bassham went to Oxford, didn't he, later that year.

UB: No, next year. He was there as long as I was there. I got a contract to stay through September '57 and so did I and then I left. Work in that field was rather unusual for me.

VM: You were an organic chemist?

UB: I was an organic chemist. Usually I did synthesis.

VM: But you had no biochemical, special biochemical experience.

UB: I had no biochemical experience at all. But I had studied with Professor (*indecipherable*) in physiology and physiological chemistry. I was very interested in that. So by midsummer '56 I was trying to separate the colorants of algae by chromatography.

VM: Paper?

UB: First on nylon powder and later on calcium hydroxide and aside on paper. When the separation was rather good on paper, we started radioactive experiments extracting radioactive colorants from algae. That seemed to be all right but after some studies we saw that the separation was not good enough, there were fine coloured spots on the paper but the radioactive correspondence was also aside of it, so there must be uncoloured compounds which didn't belong to the column. This was my whole work for at least half a year to get rid of those uncoloured compounds. Finally, I didn't really succeed but it got quite good. There were some signs of the ways the radioactive carbon went into the colours. The colorants were chlorophyll a, chlorophyll b, carotenoids, α -carotene, β -carotene and some oxygen-containing carotenoids like xanthophyll and (*indecipherable*) and something like that..

VM: Were you using two-dimensional paper chromatography?

UB: Yes also. But it wasn't really necessary. The best separation was on two-dimensional chromatography and following the trail of the radioactive carbon going into the

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colorants. There seemed to be the way, first, to the oxygen-free carotenoids. They were getting radioactive almost at the same time, α - and β -carotene were always the same amount of radioactivity.

VM: This was in algae?

UB: In algae, *Chlorella* and *Scenedesmus*/.

VM: Using the standard lollipop procedures that they used?

UB: Yes as Bassham showed me. We got the idea there must be an equilibrium between those two carotenoids. And for the other carotenoids there was ten times less radioactivity at the same exposure time in the molar amount of colorant than in the α/β carotenes. You got really the idea that the carbon is coming from the CO_2 of the surroundings, of the atmosphere for colorants first into α - and β -carotene, those colorants without oxygen, and then going on into oxygen-containing carotenoids. A similar picture was with the chlorophylls. If we compared the radioactive amount in molar amounts of chlorophyll a and b there was about at least double the time radioactivity in chlorophyll a than in b. This could mean that the chlorophyll b is built up afterwards from chlorophyll a. This work didn't really get to the last finish and Calvin gave it to Jan Anderson afterwards. She was a graduate student with him.

VM: That was after you left; after you finished working with it in Berkeley?

UB: No, even when I was there. He was trying other things with me. He wanted to see if I can find the way of radioactive iron into lipids, into colorants...We were trying very much, but I didn't succeed in finishing something. But it was very interesting work.

VM: Most of the time when you were doing what you have just described, were you working alone, mainly alone?

UB: Yes. I was working many nights. Well, I got help a lot from Al Bassham, from Ozzie with the algae and, of course, Jan Anderson, and Ning Pon was along even in the night. So it was a very interesting time. The atmosphere, you know, they were all together at the coffee table and it was overwhelming for me as a working atmosphere and an interesting scene to find out something really new.

VM: When you had earlier worked for Karrer in Basel, was there that sort of atmosphere?

UB: Not really. Students are coming and going together and it was a gay and nice atmosphere there in the Institute. The time I was in the Karrer private laboratory, there was Professor Euchster (*spelling?*), he was still in the laboratory and we both tried to do work together. Karrer was looking very often into the laboratory and I talked a lot when he came round.

VM: He would come in informally and talk to people?

UB: Yes; well, more so to the private laboratory than to the students.

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VM: I'm not sure I understand by what you mean by the "private lab.". Do you mean his research laboratory?

UB: His research lab.; well he called it *privat Labor*. What do you want to know more?

VM: Did you continue working in this area all the time you were in Berkeley? You said you went on to work on metals.

UB: Yes, on radioactive iron, Fe^{59} , and then we made some studies with O^{18} . We put targets into the cyclotron and took out the isotope but even this was not really coming out as I would like to have it. I think Calvin was — what is it *enttäuscht*?

VM: Disappointed.

UB: Disappointed, yes, but he was so nice all the time, even if he obviously was disappointed that it didn't follow his ideas.

VM: There was an experiment, or a set of experiments, I remember in which chromatograms were run and transferred to tantalum strips for irradiation in the cyclotron. Was that work you did?

UB: Yes.

VM: With Ingrid Fogelström-Fineman?

UB: After she left I did it for some time. Then my time was over also.

VM: Did you find anything out by using that?

UB: No. There were some signs but I really forgot it. There was no paper about it, there was...well I had to do a report but I don't have it.

VM: So you stayed until...

UB: ...September '57.

VM: So you were there a year and a half?

UB: Exactly.

VM: I remember during the time I overlapped with you that you were a very active member of the social activities of the group.

UB: Was I?

VM: You were a skier, a mountaineer, and things like that, outdoor type.

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UB: So outdoor...Almost every weekend I was off for the mountains for the seashore and for some excursion in society. I had to do some talks, conferences, for the Lions Club, for the Kiwanis and for churches...

VM: Really?

UB: ...yes, for the Lutheran Church, for a black church in Berkeley.

VM: How did all this happen?

UB: Well, I was asked for and I said “yes, I do it”.

VM: How did they know you?

UB: I don’t know. I think the Swiss were very well...they were welcome and I enjoyed it.

VM: Did people invite you to their homes as well?

UB: Yes, but much less. For instance, at Christmas I was invited to Alameda to Spanish-speaking people. There were some other arrangements like that. It was very nice but not often.

VM: When you were ready to leave Berkeley, I remember you met your future wife while you were there but I don’t remember whether you were married in Berkeley.

UB: Not at all. Yes, all right. I got to know my wife there and we left together from Berkeley. We were driving along the Canadian border to New York but the car broke down near Chicago and from then on we went with another vehicle. In New York was my brother so it was quite natural that I got there.

VM: When you left the US, you went back to Switzerland?

UB: Yes.

VM: Did you have a job waiting for you?

UB: I had a proposal to go to Sandoz and see them. But I didn’t just (*do*); I went to Britain first, Liverpool and London, and then to Holland to meet Nel (Prins-van der Meulen) and then to Germany to the Bayer company to have a look a Agfa-Gevaert, and two other companies in the Ruhr-Gebiet.. Then to Switzerland. They were proposing to me that I should visit physicians and explain medicals. So, I was doing an SOS call to Karrer and he said “well, I will ask in Sandoz if they don’t have something else”. So I got to the dyestuff company, dyestuff section and was doing dyestuff research there at Sandoz for 28 years, always in the laboratory.

VM: Until you retired from there

UB: Until I got to retire.

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VM: When you went back and began to work for them, what sort of a lab. was that you worked in? Was it also the Berkeley type of lab. or was it much more compartmentalised into small units?

UB: It was a commercial lab. but it was modern and there was everything in it I needed to start. Then I was rather free to buy and to have everything I wanted, not too much, but I had to look for what I needed for colour research.

VM: I presume it was your choice to stay in the lab. the whole of your whole career there, not to become an office manager or something of that sort?

UB: Yes. So I didn't want to go for medical explanations and then I got a lab.

VM: Did you go back to America? You visited the people in Berkeley on more than one occasion

UB: Thirty years later.

VM: You didn't go back for thirty years?

UB: Only at that meeting with Calvin in '89, I went back to Berkeley. The lab. wasn't there anymore.

VM: Indeed it wasn't.

UB: There was a completely new lab. building and everything looked very nice and it was fun to see the old colleagues, many friends and, of course, it was very nice to find Calvin there again. It was so short a visit and cold. It was never so cold in San Francisco before! We were invited to stay with Mel Look for that meeting and that was very nice of family also. I was so sad that he has died also in the last year.

VM: You sound as though you thought the building, ORL, was a very satisfactory place to work.

UB: Yes.

VM: What do you think was good about that building?

UB: Of course it was specially built for these photosynthesis experiments but there was everything which they needed; and, what for me was so nice, was the atmosphere with all the people. The secretary and Paul Hayes who was attending to everything what was necessary. I got many friends there.

VM: When you went back to see the round building — as you know the wooden building was demolished to make room for the chemistry department, the new chemistry department — when you saw the round building, do you think this was a reasonable success in recapturing the flavour of the old or was that really impossible to do?

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UB: Well, I didn't see the old flavour.

VM: You saw the flavour of ORL.

UB: Yes.

VM: But in the new building, you didn't sense what the building was like when you visited it?

UB: I knew that Calvin was very proud about it and I got some papers about it before. I was prepared to see it. But I think it was so big and there were other people now that I couldn't find the old atmosphere.

VM: Of course, you are right. The new building was not developed organically the way the old building was. It was built and people moved in by design, and so on. That was one reason why it was different. Another was that it was much bigger and did many more different things.

UB: Yes, that's the point. Calvin had so many more interests in the meantime and so there were more sections in it.

VM: The old building was much more focused on one very exciting topic and essentially everybody was working in the same field.

UB: Exciting and very successful. I think for the two of us it was so fine that Calvin got the Nobel Prize.

VM: Oh absolutely, yes. I think most people who were there during that period, up to 1960, approximately — a very exciting time, particularly in ORL — have thought of it as one of the most exciting professional times of their life.

UB: Clearly; for me that's clear. I had exciting times with Karrer also, of course, but that's a completely other atmosphere.

VM: Another big factor was the internationalism of the lab. in Berkeley, such a high proportion of visitors from other countries, or students from other countries. It was unusual, I think. Certainly Europe at that time did not have as many foreign students at that time, foreign visitors.

UB: You are right. But I want to say that the Swiss universities had always very international company of students...and professors. But it was much more friendly in Berkeley, I think.

VM: Is the atmosphere in Swiss universities, or was it then, rather a formal atmosphere?

UB: Yes and no. We as students tried to get rid of it to be formal, and even the professors also.

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VM: One of the things that struck me about Calvin's lab. was, with the exception of Calvin himself, everybody used first names. The students to the scientists who were much more experienced, still used first names. It was only Calvin that by some common consent everybody called "Dr. Calvin", although he didn't ask for it.

UB: I asked for it. I asked him and he said call me "Dr. Calvin".

VM: He did, did he! That's interesting. Because some years after you left, in the middle sixties, people already began to call him "Melvin". By then, of course, everybody was a bit older and we felt, and I was among them, we had known him so long that it was become excessively formal and we started...some of us started to call him Melvin. Not those people who had been his students —Bassham and Bennett and Lemmon, in particular, were much more hesitant. I don't think Calvin even noticed that we changed.

UB: Between friends, we called him Melvin. But I don't think I used the first name toward Dick Lemmon or...

VM: You did not?

AB: No. Speaking with Dick about Calvin about Calvin, I wouldn't name him Melvin.

VM: No, that's true. But you would, of course, call Dick by his first name?

UB: Yes, of course.

VM: Everybody except with Calvin. It was an interesting way the way that developed. Later it broke down: at the very end, Lemmon and Bassham and Bennett also called him Melvin, but that was much later. I don't know exactly when it started but in recent years, in the few years before he died, they certainly did that. They were the last ones to change. And Marilyn Taylor (you remember Marilyn Taylor?) *never* called him Melvin. We saw her last summer in Berkeley and she was still calling him Dr. Calvin. He seemed to regard that as normal and she did too. So that was their arrangement and they were happy with it. Aside from that, there was very little hierarchy in the lab. and people did not use any formality between one another.

UB: Not at all. For me the atmosphere in California was so unexpected that I came as a stranger and was welcome everywhere. I couldn't think of an atmosphere like that in Switzerland. A little more so now, but then — impossible.

VM: I think people were very open and very welcoming generally at that period. A factor, I'm sure, which contributed was the fact that we the foreigners were relative novelties in California at that time. It was fairly soon after the war and people were still excited by this movement of people.

UB: There were so many people around who were not Californians and they knew the hard times before when they came and so we were welcome to those people.

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VM: As we told you, we felt very much that it would be...we didn't want to lose all sight of this marvellous time in our lives and the only way we could think of doing it was to try and record some of the impressions that people had, what it was like for them, and try to build it into some sort of permanent record. So that's what we are going to do with this thing.

UB: I have another kind of record of the time, about a thousand dia pictures, and I still like them.

VM: We also have them but I must confess it's been a long time since we have looked at them, but while we were there last year we spent a lot of time looking through Marilyn's collection of pictures. You were one of the people who was recorded there.

SM: You mentioned some of your social arrangements that you went away almost every weekend with people from the group and so on, and you also mentioned your relationships through the churches, through lecturing and so on; did you visit other people, members of the group in their homes, do you remember that?

UB: Well, for instance, Karl Lonberg...who more? Oh yes Ozzie and, of course, Calvin and Dick Lemmon.

SM: So socially you enjoyed it and you found people were friendly...you seemed to be very busy.

UB: Yes, I was. I was busy also

SM: You were working...

AB: Of course, there are more but my memory.

VM: Well, I'm afraid it was a long time ago. Anyway, we would like to thank you very much for meeting us again and talking to us in this way. Your voice will now be saved for posterity.

UB: Thank you very much that you are coming here, such a long way.

VM: It's a pleasure.