

Legacy Interview with Professor Emerita Judith Klinman, Professor of the Graduate School, Department of Chemistry, UC Berkeley

Interviewed by colleague and friend Professor Emeritus Paul Bartlett, Department of Chemistry, UC Berkeley

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Paul Bartlett 00:39

Paul, Hello, I'm Paul Bartlett. I am a professor of chemistry at Berkeley. I started a long time ago, but enough time to meet Judith when she arrived on campus in 1978 at that time, actually, we started interacting with joint group meetings with another colleague of ours. So I'm very happy to be able to introduce her today and to ask her some questions as a lead in for this interview.

Judith Klinman 01:13

I'm Judith Klinman. I began in the Department of Chemistry in 1978 as Paul just said, and Paul was one of my initial and ultimately close colleagues in the department of chemistry, and I'll be talking about that as we go through the various questions. I moved to molecular the department of molecular and cell biology halftime in 1993 so I'm actually representing both departments, but I have to confess that my primary department throughout my time at Berkeley has been chemistry. Also, I want to thank the organizers of this interview for the invitation, and I'm really pleased that you agreed to do it, Paul, thank you and the wonderful for the world. I appreciate the wonderful questions that you've compiled.

Paul Bartlett 02:01

I'm very much looking forward to Yeah. Now Judith, I recently attended one of the celebrations hosted by your former coworkers, celebrating your 80th birthday. I won't see how many years later that was, but it was quite a tribute to your accomplishments as a scientist and mentor, and what I would love to hear about is how your career developed, to gain some insights into the source of your amazing motivation. So let's start with your family details. Tell us about the family, the educational environment that you grew up in.

Judith Klinman 02:34

Okay, I grew up in Philadelphia. We call it Philly. I was raised by my mother and my stepfather. My natural father decided that there were greener pastures elsewhere, and left when I was two, and that was quite a shock to me, probably a very defining moment in my life, which I'll get to a little bit later. My mother did not go to college, but she was a voracious reader, and reading was a big part of my growing up. My stepfather went to Drexel University for his first two years. He wanted to be an engineer, and it was great because she was quite artistic. He was more mathematical. So they were, they were a good match, at least on that level. But that was the height of the Depression. And 1929, 1930 and he just didn't have the money to continue his education, so he had to drop out, and he became a salesman, and that's what he did to support the family. I think he was disappointed, but he was good natured about it. We grew up in the, I grew up in the 1950s and anyone who was seeing the movies knows what

growing up in the 1950s was like. It was a time of so called normalcy. We lived on in a row house in Philadelphia, a lot of row house communities. And we had a summer house. We went to the Jersey Shore, and, you know, we had a very good time. So I think when I look back, it was, it was a happy childhood to the extent that, you know, we could rise above earlier, um, and there was lots of music at home and books, but never the association of me with an academic career or and or a scientific career. I I was expected to grow up to be a nice Jewish girl and find a wonderful husband and have a good life. So the emphasis was on having a good life, and it was post World War Two in the US and our family was very much a part of that movement. So I think, and I had have a stepsister also, who means a lot to me. We're not genetically related, but are very, very close, and she is still alive, yeah.

Paul Bartlett 04:59

So. Do you think it was that set you on your path into university? For example?

Judith Klinman 05:06

Well, my mother struggled when my dad left, she struggled so much, and I was very perceptive. And I remember saying to myself at a young age, not I'm going to learn to be independent. Learn how to take care of myself. I didn't really know what that would look like, but the fact that she was a single mom at a time when that was very unusual, left me determined to not have to struggle the way she had. So actually, what I really wanted to be was a ballerina, and my parents sent me to a pretty high level Ballet School in Center City. I used to go down there my own and I was good, but I wasn't great. And the maestro let me know that, you know, it's very unforgiving these kinds of professional careers in the arts. I was I was on point. I had a role in The Nutcracker that was performed at Wanamakers, this great big department store in downtown Philly, but I knew I had to move on. So where was I going to put on my energy? I became very interested in France and French, French literature, French language. My family, on my mother's side, originated in Eastern Europe, and at the end of the 19th century, half of them went to Paris, and half of them came to Philadelphia. And so the families remained in contact, not close contact. So I thought, okay, France, French. That was also a very kind of a romantic fantasy, as was ballet. So that was my up to high school trajectory, and then I went to this large public high school and was tracked with a small group of academically interested, slash talented kids. And finally, I had a pair of teachers in physics and chemistry who lit me up. I mean, I was really, for the first time, things were clicking. And so I would say, junior year in high school, I said science, and never let go. And so it's, I think I wouldn't have predicted that, and it was kind of magic, and it just shows the importance of good teachers, really.

Paul Bartlett 07:28 So yeah, so

that really was the springboard from high school into university with a science major from the get go, yes,

Judith Klinman 07:35

yes, yes, yes. I went to UPenn. Actually, I went to the College for Women. There was a separate College, and we had high tea one afternoon a week, which I went to once. I think that wasn't my reason to go to college. And I did not get a Bachelor of Science. However, I really wanted to have a general degree, and I took a lot of history and art history and philosophy and, you know, all the classes that appealed to me. I had a good education in science, but it wasn't a Bachelor of Science, and that may

have played a role, you know, in subsequent years, certainly in terms of graduate school, but I recognize now that I heard the word Chemical Biology back in the 1960s people at UPenn were interested in this interface between biology and chemistry. Also, I was a commuter in the first few years, and I needed to earn money, and I worked at the Johnson Foundation for biophysical research, a really high powered unit run by Brit chance, who was this revered biophysicist, and I also learned about biophysics very early on. This was your going in your undergraduate as an undergraduate. Yes, I used to go in. I remember going in late at night and being in the cold room with all these strange looking people walking around. But I'd love the subject. And you know, I was just drawn in. So Penn was good for me. Penn was really good for me. When I applied to graduate school, you know, I didn't have a Bachelor of Science, I don't know I so I wanted to go to New York, Columbia would not, did not offer me a teaching assistantship. So I went to NYU, and I did a year at NYU, and during that time, I was dating, and I met the man who would become my first husband, and at the end of my first year in New York, we got married. So that changed things dramatically, and I moved back to Philly. He was a postdoc in immunology in the med school, and I re enrolled at the University of Pennsylvania for a PhD, which I completed in three years. So that was the undergraduate PhD experience. And then from there it took. There were a lot of things that happened before coming to Berkeley. First of all, we went on on on to our postdoctoral studies in. And we chose Israel as a place to go to, which, since then, people have questioned me and said, Why did you go to Israel for postdoctoral studies? And And my response was one, there was a research institute that had been established by Weitzman the Weitzman Institute. Haim Weitzman was a chemist in Manchester, England, and he was also one of the founders of the State of Israel. And so Israel, very early on, valued basic research, and we decided to give it a try. So at that time, the State of Israel, let's see, it was 66 was 18 years old, so it was a very young country, and yet they had a first class Scientific Research Institute, the Weitzman Institute. So we spent 15 months there, and then moved to London for another five or six months, where my husband worked at the MRC Medical Research Council. I didn't have a position, but I went to University College London. I found someone who would put up with me, Charles Vernon. And I took classes and studied, started to study biochemistry, and that's where I made this switch from chemistry to biochemistry at that point, okay, I went to I see the next step was back to Philly, where norm my first husband took up a faculty position in the medical school, and I became a postdoc with Irwin rose. Now that was an experience like none other. He was a really brilliant, quirky man who would not tolerate any nonsense, and people were known to run out crying. He and I had a good relationship, actually, after he got he adjusted to the fact that I was commuting from Center City, and I arrived at 9:30 in the morning, and I left at five o'clock and he told me he had his doubts about Me, but after a few years, he gave me the freedom to do my own research and publish on my own. That was really fun.

Paul Bartlett 12:13

You're at the ICR for 10 years, actually.

Judith Klinman 12:18

Yes, that's right, from '68 to '78.

Paul Bartlett 12:22

so you had a lot of independence there.

Judith Klinman 12:25

Well, after I began to publish on my own, they put me up as a staff member, staff researcher, which would be the equivalent of an assistant professor at a university. And at the same time, I got an appointment as assistant professor at UPenn. So UPenn again, and that's where I stayed for that period of 10 years. So that was the prelude to coming to California.

Paul Bartlett 12:51

So 1968 a big step. 1978 excuse me, you came out west to the UC Berkeley with a tenured position.

Judith Klinman 13:02

Yes.

Paul Bartlett 13:03

What was the stimulus for that move? Was it the nature? I'm curious what the nature of your initial contacts were, yeah, yeah, you contact Berkeley. Or did Berkeley reach out to you?

Judith Klinman 13:13

Or, well, let me just say that having lived through the 1960s and 70s, by that time, which was a period of tremendous upheaval in the United States. You're younger than I. You may remember some of that, but sadly, I ended up getting divorced from my husband, and I really wanted a new start somewhere, and actually, California was as far as I could get on the continental US, having been born and bred in Philadelphia, and I wrote to two institutions on my own. I wrote to UCLA and UC Berkeley. And UCLA said, we're not interested. And UC Berkeley said, Okay, come for an interview. And I remember Nacho Tinoco was person who was my host when I came. He picked me up at the airport, and he was extremely gracious, although, in later years he told me, he said, you know, we had, we needed to have a woman. So that was something I learned later. I'm glad I came later, not earlier.

Paul Bartlett 14:21

Also, amusingly, from one of our faculty members, who we proudly counted as one of our Latin X, you would

Judith Klinman 14:29

say, underrepresented, represented colleagues, faculty, right? Anyway, I was interviewed and offered a position, and at that point I said I had already been tenured, basically at ICR. And I said to them, I'm not coming from a tenure to an untenured position. And they agreed. The department agreed. I think they understood, in fact, I was coming in as the first woman in chemistry. And, as far as I know, the first woman in all the physical sciences at Cal and I think they understood, to their credit, that my coming as a tenured faculty would make it a heck of a lot easier than if I had come and had to get tenure.

Paul Bartlett 15:15

Did you appreciate the threshold that you were crossing when you came here with tenure first?

Judith Klinman 15:21

Yeah, I didn't fully grasp it. I'm not sure what I would have done if I fully grasped it. I was full of beans back then and ready for a new start. And I looked forward to being in California and being at a first rate institution, but I didn't anticipate what that would mean, because there were many rocky moments as you can imagine.

Paul Bartlett 15:48

Yeah, yeah we'll get into this in more detail later. But I'm curious as to did you perceive the reception of yourself as a female faculty member at Berkeley different than you had perceived yourself in your effectively tending position back in Philadelphia.

Judith Klinman 16:05

Yeah, we can get back to that too, maybe later on in terms of gender issues and stuff like that. But I was coming from an institution where there were a lot of women, okay, a lot of them were postdocs at that time, but ICR was committed to fair play, if you will. We had to gather ourselves together. We advocated for equal pay, and we got it. We ended up starting a childcare center. Those of us who were in that cohort, you know, Bea Mintz was there. She was, she just died recently at 100 she was kind of the senior woman we all looked up to. She did the first gene transfer study, and made hybrid mice by manually transferring genetic material from one mouse to another. Just extraordinary. Shirley Tillman was there as a postdoc. She went on to be president of Princeton University. We all hung out together. Helen Berman was there. She's the one who started the Protein Data Bank. I don't know. It was a really hardcore group of ambitious women coming to Cal was like, where's the ladies room, you know?

Paul Bartlett 17:22

So, yeah, you ask, Where's the lady,

Judith Klinman 17:23

and I still ask, Where's the ladies, right? But now, of course, I'm standing whole it's right around the corner, which is

Paul Bartlett 17:30

gender nonspecific. Um, so, yeah, since the time you arrived at Berkeley, the sciences, both biological and physical, have undergone a dramatic change as we both experienced this isn't but you played a significant role in the transformation of the sciences on campus. I mean, when, when you arrived, we had joint group meetings with your group, with my group, and with Jack Kirsch's group, down in biochemistry, exactly, and this was for some of us, probably the first bridge between what were two very disparate departments. We had chemistry at the southeast corner of the campus. We had biochemistry at the northwest corner of the campus, in different colleges. And yet, during the period of time that you've been at Berkeley, the whole thing has evolved. The colleges are still the colleges, but chemical sciences and biological sciences are now intertwined, joint faculty appointments, even shared buildings and so forth. How did you experience for you and George?

Judith Klinman 18:42

Well, the person who preceded me as a biochemist, because I came as a biochemist, actually was Paul Modrich, and so he was interested in base pair correction, and he didn't last long. He, you know, took

one look around, and I think he was down in the basement and in chemistry. He was in chemistry, the first biochemist appointment, the first biochemist appointment in chemistry. And he jumped ship. He went to Duke he ended up getting a Nobel Prize in Chemistry in 2015 and there I was, subsequent to his departure. And I think at that point the chemist recognized, well, they had to treat me a little bit more gently, perhaps not just being a woman, but being a biochemist. And they gave me Jim Long's old lab. He moved to Harvard, pretty nice space, not nearly as nice as later laboratories, but quite adequate, and I wasn't hidden away in the basement somewhere. So that was the history until I was appointed now, beginning in the late 1970s early 1980s **Kosh**. One began this transition. His goal was to integrate all the subgroups in molecular biology or biochemistry into one department. He used to look at the chemistry department. I think he was quite envious of the College of chemistry and the fact that it had consolidated so many sub disciplines, and really was a powerhouse on campus, and he ended up creating this mega department, which is currently the Department of molecular and cell biology. Took many years, but that was starting in the 1970s and 1980s and then in the 1990s in 1993 I was the first joint appointment between chemistry. True appointment 50/50, between chemistry and molecular and cell biology. And it was interesting, because Jack was interested in teaching and chemistry, so we ended up doing a swap. I got a half FTE in MCB [Molecular & Cell Biology]. He got a half FTE in chemistry, and that's how the first joint appointments unfolded. Now, the thing is that, yeah, you know, I think I was welcomed in MCB, but I do want to talk about that a little bit later in terms of my research directions, because being in two departments, you might have thought I would become more biological, but that wasn't necessarily the case. I want to say one of the biggest things about this joint appointment scenario was the sharing of graduate students. And so once the joint appointments began, people in different disciplines, people in chemistry, began taking graduate students who had entered into one of the the the subgroups within this large MCB department, and vice versa. And it was this exchange of graduate students I think that was a major promoter of interdisciplinary research on campus.

Paul Bartlett 22:02

The actual program in chemical biology, yes,

Judith Klinman 22:06

well, that was that's established when I become chair. So that program in Chem bio comes later after I'm chair and but it emerged from this, from this, yes, for sure, I want to mention also I moved to Stanley Hall in 2007 and that was also emerging of disciplines, because that was established largely as a research building and to house bioengineering, but also people from chemistry, MCB, physics and very multidisciplinary. So there's been this constant move toward more interdisciplinary research.

Paul Bartlett 22:43

Yeah, yeah. Do you think this movement changed the direction of your scientific interests? You still, you say you still consider yourself a chemist.

Judith Klinman 22:52

I do, I do. I do, I do. So at the time that I was offered a joint appointment, I'd really been working primarily as a biochemist, I would say. And I think we had discovered a new class of quinone, cofactors in enzymes. And it was on that basis, I think, that the biochemists welcomed me into MCB. But actually

at the same time, we were making some really curious observations about the role of non trivial quantum mechanics in enzymology, and the biologists kind of turned up their noses at that. They thought it was wacky. And why would the, you know, messy, wet conditions of biology support quantum mechanics? And they were pretty unsupportive of what I was doing. Was it too physical for them? Well, I remember going to a retreat, and I brought my students, and people said to me, why are you doing that? You know, what in the world? You know, what are you talking about? And so simultaneously, I started to move more in the direction of physics and chemistry. I realized that my interests were moving in a direction I didn't have that much training, really. I paired up with Bill Bialek, who was an assistant professor in the Department of Physics. He was the first biophysicist they had hired, and he started teaching me a lot about quantum mechanics. He ultimately left. He's quite a famous biophysicist at Princeton University now, but you see, instead of moving toward biology, I started to move toward physics. So I can claim that the joint appointment changed my research interest more in the direction of biology.

Paul Bartlett 24:29

So Judith, what do you think are some of the more significant changes that have occurred at Berkeley with respect to gender equity during your tenure?

Judith Klinman 24:40

Well, the first was something that you and I have talked about, which had to do with your battle as chair of the budget committee in order to stop the clock for tenure considerations for women who chose to have children while they were under that five year period. A review for tenure, and I know you succeeded, but you had to push back a lot against your fellow and occasional woman faculty member on the budget committee. But what really concerned me and needed a great deal of attention was the ways in which women would be free to care for their children after they give birth, and I think that only recently are we seeing some progress in that regard. In my own case, I went back to work within a week or two of having each of my two sons. And I think back and if there were, or if there's anything that I regret, it's not having had those early weeks months to bond with my two kids. So the question is, what kind of child care is available now? I went online before this interview to try to figure it out. It looks like there is paid release from teaching for six to eight weeks. But honestly, when I looked through the websites, I couldn't find a specific set of detailed instructions on how to proceed. So I don't know, and perhaps someone will fill me in later on the details of this. However, this issue has been reviewed, and the woman who comes to mind is Mary Ann Mason, who was dean of the graduate school, and she joined together with several other people, including Angy Stacy, who was a faculty member in chemistry, to write a book called babies matter. And what she pointed out was the enormous discrepancy in the likelihood of getting tenure for male faculty who did family formation and for female faculty who did family formation. And so there's this disruption at the beginning of family formation. You know, the necessity to have time to spend with your newborn infants in a way that's supported by the institution, and not having to rush back too quickly. And I mean, the US lags behind almost all European countries in this regard. So it's an issue that I care so very strongly about. And Mary Ann Mason's book really pointed out the impact of not only those early times, but then how hard people have to work to combine raising a family and pursuing their chosen career. So I think going forward, hopefully, this policy will extend from faculty members to postdocs to graduate students, but it really needs to be across the board.

Paul Bartlett 27:45

Speaking of books relevant to women's experiences at Berkeley, another one, which I know you're familiar with, is a book called *The Group* subject to a book by Ellen. Ellen Daniell, you want to tell us about the context for that and the relevance to Berkeley? Yeah, yeah, and your and your career, yeah,

Judith Klinman 28:10

I've been a member of a women's group for 43 years. The group preceded me the book that was written by Ellen Daniell is called "Every Other Thursday." That's because we have met until covid every other Thursday. And that means twice a month for 43 years, either remotely or in person. There were seven members. I was the seventh when I joined. And then Carol Gross, who was married to Harrison Echols, who was in the Department of Molecular and Cell Biology before he died, joined, and we've been eight for, I would say 35 or 30 of those, 43 years. The women come from different departments on campus. I don't have to go through all the names, but the book has been widely distributed throughout the world. There are many people who still come up to me from foreign countries, women in particular, but men also, who have used the book as a guideline strategies for success in science. How do you do it and banding together, sharing stories, helping each other get tenure, getting funded, you know, nuts and bolts. How do you write a paper? We were also young and naive, and we helped each other a great deal, so in a way, that replaced that strong female cohort that I had at the Institute for Cancer Research, and I had it starting two years after I arrived in Berkeley. So it's been very significant for me, and I'm very grateful one of the founding members died in July. She's the first to go. And she was actually my best friend. So, you know, it's all very raw at the moment, but we continue onward, and we have no inclination to disband, even though everyone is fundamentally retired.

Paul Bartlett 30:16

Yeah, so, everyone in the group is, do you see younger faculty? Interested?

Judith Klinman 30:23

Well, we see, well, I yes, certainly at other institutions. I know, Stanford just had an article that somehow made its way to my desktop about a group of women who had banded together in different departments, not all in science, in that case, to create a group similar to what we we had done, but I mean around the world. I was just at a retreat in Asilomar where a woman from India came up and told me about her experience with the book and that she had formed.

Paul Bartlett 30:51

But your Berkeley group is not a renewing group. What? Excuse me, said the group at Berkeley is not renewing with new faculty joining.

Judith Klinman 31:00

No, no, no, no, we have closed the door, so to speak. We've got enough to deal with among the seven of us at the moment. Let me just say that of the initial eight, half of the women for the women, were elected to the National Academy of Science. So I think we did our job and helping each other and move along.

Paul Bartlett 31:23

And also conveying your experiences about what is successful and what is effective, yes, very important, right?

Judith Klinman 31:29

And that it's actually collected in a published book by Yale. Yale press, actually, Joan Steitz at Yale was very supportive of Ellen's work, and she's written perhaps at least a recommendation may be part of the preface, but she promoted Yale University Press as a venue for publishing the book, yeah, yeah.

Paul Bartlett 31:56

So, beyond your informal contributions to the University and its faculty. You also had a formal role in administration, yes, as the department chair, again, as the first woman to do so in the College of chemistry. Yeah. Now I used to joke with my colleagues. I guess it was a joke. It was tongue in cheek. I used to say that I really wasn't qualified to be department chair because I never raised children or managed a daycare center. So Judith, what was your experience? First female Chair of physical sciences department.

Judith Klinman 32:42

Network, glutton for punishment. No, I had just been president of the American Society for Biochemistry and Molecular Biology, and I felt piece of cake. You know, of course, there were all these administrators there to help me. And so Paul, you had been, you preceded me as chair, and I, you seem to handle it with such ease and charisma. And I thought, oh, I can do that so. But I did agree to be chair for three years, not for four or five. And the department accepted that, and I did restrict my chair activities to the afternoon, so I kept my lab going in the morning. I was really firm about that. I don't think people it was similar to when I first arrived, in a way I don't think people knew what to do with me again, you know, as the first woman and then the first woman chair. And once again, people were cordial, and they let me work my way. I have to say I had a fabulous office staff, which you had organized when you were chair. So I was the beneficiary of that. And Clayton Heathcock was Dean, and he was one tough guy, but in a loving way. And he was, he was terrific to work with. And the university was still quite, quite rich at that point. There was money for all kinds of initiatives. So it was an exciting time. And I had an agenda. Really. The main agenda was to try to give people what they wanted. No, I wanted. I wanted a happy faculty. So that's a very female approach, perhaps, to being chair. And certainly gave everyone in the department a lot of leeway to organize their own subgroups and needs, but my main goal really was to increase the faculty and to hire in a whole bunch of young assistant professors. We did hire, hire Michael Marletta. As a senior appointment. And you had started that, actually, and I completed it when I was chair. And of course, that was a very successful appointment. But in expanding the faculty, I had two goals. One was to enlarge the ranks of the junior faculty. I think we I hired eight people when I was chair in three years, so that that was that, in and of itself, getting the money in the space and everything, and really sort of people, one of them Matt Francis, has just stepped down after being a superb chair during covid. And Dean Toste is another person who was hired during that time who is now taking up the position of chair. I mean, they these, this is a group of really superb scientists and service minded people. So it that was a very productive time. Now, what was going on in the back of my office or front was very different. You know, I knew that there was dissatisfaction when we were trying to hire a theoretician, and they would meet and grumble

to each other, but there was also a lot of gentlemanly behavior where they, you know, kind of succumb to whatever the directives were and went along with the program. I didn't feel ill at ease as chair, in a way. I really liked being in charge, so that was it was okay. I didn't I didn't find it all that stressful. In fact, my husband, partner, Mordechai, says he thinks I was happiest in the years that I was chair. It was just three years. Very interesting comment. He's a psychologist, psychotherapist, so, you know,

Paul Bartlett 36:48

Well, that just goes verify my comment earlier you'd raise children, so you were, well,

Judith Klinman 36:53

Yes, that's right, multitasking to, you know, and keeping people in line, where I failed miserably was in bringing in more women during that time. And, you know, I felt very depressed about that and frustrated, and I urged women to apply. There was a very small group of women who were actually going to apply for a position in chemistry. We interviewed a few who went elsewhere. So we weren't successful in recruiting the few people we were going after, and so I stepped down with a feeling of failure in in one of my major agendas, agendas, another agenda was to bring in a chemical biology program. And we did that, and I asked Ken Sauer to help me. He, as you know, died recently, but he, he was so good spirited about it, jumped in and, you know, negotiated all the new course names and course content. And this was an undergraduate major which eventually extended into the graduate program. So he was, he was such a wonderful colleague in that way. And I want to acknowledge him.

Paul Bartlett 38:01

Well, I would point out that your introduction of the chemical biology program was part of this evolution of biological sciences that we spoke about earlier in the campus, and at

Judith Klinman 38:13

that point, so that would have been between 2000 2003 and so I've been in MCB for about 10 years. At that point, I want to just give a shout out from Michael Marletta, who is also an enzymologist, as you are, Paul and were and still are, once an enzymologist, always an enzymologist, as was Jack Kirsch and because he was chair, I think, from 2005 to 2010, and he really, you know, his family is from Sicily, loves telling people that he took a tougher stance on this. And actually what he did was he packed, like packing the court. He packed the committees with people who would be amenable to giving women a serious view. And it was at when he was chair that the number of women started to increase more noticeably. But of course, Carolyn Bertozzi had been hired into the department before I became chair, and there was Birgitta Whaley. And you know, there were a number of people, and go through all their names, but yes, so that was my chair time, and at that point I was asked, Did I want to go into higher administration? I think I did a good job. I made some real faux pas. I remember going directly to the Vice Chancellor for just the Vice Chancellor, the provost, and I stepped over Clayton Heathcock's head, and he was furious at me, but I had something I wanted. I just went directly to the Vice Chancellor. You know, I didn't really understand the rules very well, but in the end, it didn't matter. But when I was asked, Did I want to go into higher administration, I thought about it, and I said, No, you know my first love, really? Was the research, the the academic part of it, and I'm still running a lab, as crazy as that may be with a handful of postdocs, but I am, I am retiring. This is formal record in two and a half years.

But the fact is that perhaps that was a good decision, decision. Perhaps it was not, I don't know, but that's a decision I made at the time, so I never pursued anything higher up in the administration. Yeah.

Paul Bartlett 40:31

Well, you've received a lot of recognition in the broader scientific world outside of Berkeley, as well as in Berkeley, of course, they've your contributions have earned you many awards and honors, and I'm sure you're proud of them as I am and as your colleagues are. My sense is you probably don't want to brag a lot, but we want to hear about them. Awards are an important element in the stimulus and reward system of our scientific community, I'd like to hear about the ones that you feel were the most impactful, either because of the stages in your career that they came or what they represented from the organizations that awarded them to

Judith Klinman 41:14

Yeah, I'm gonna say something about awards. We all won awards, right? You know? Gimme, gimme, but the focus on rewards, which can get out of hand and often does at a high level university like Berkeley, is quite corrosive. So I'm really proud and glad for the awards that I've received, but I've really had to stay focused on self validation, and that's a big one. I mean, really not, you know, we all fall into this whole, you know, oh, I want that too, like when we were kids. So, yeah, so, yeah, I'm proud of the awards, trying to keep it balanced. The Guggenheim was important to me at an early time in my career. It gave me some time off because I was raising a family as a single mom in the early years, and that Guggenheim made a big difference. And the association with physics and Gobi, Alec and the biophysicists in the department, um, I would say I have an honorary degree from UPenn. And so, you know, I have my undergraduate degree, my graduate degree, and then an honorary degree. That was Amy Gutman, who was the protege of Shirley Tillman at Princeton, before she became president at UPenn. And I appreciated that. And when she stood up, and you know, announced the honorary word, she called me a daughter of Penn, and I was I came from a middle class family that didn't that wanted me to be educated, but that wasn't their primary goal. And I was a commuter in the early years, and that meant a lot to me to be announced, you know, pronounced as a daughter of him. And the other one was the National Medal of Science, of course, which I received from Barack Obama. And that was fun. One cool dude. My God, did I ever love meeting him? I was scared. I mean, I, you know, how do you go and meet the president and but it meant a lot, and I brought the whole family, my own kids and extended family, so they relented and gave us space for my two kids and two step kids.

Paul Bartlett 43:36

Yeah, well, I think it meant a lot, not just for your own family, but for your academic family too.

Judith Klinman 43:44

Oh yeah, absolutely,

Paul Bartlett 43:46

Yeah, yeah. Absolutely, receive that award. Yeah. Let's actually talk about your academic family, your scientific offspring. I think that personally, I feel that that's almost the most important element of one's legacy. You as a professor, you play a very important role in the development of your co workers, your

students, your postdocs, right? They also influence your path as a teacher and as a mentor. Talk about some of the reminisce about some of the influential offspring that from your from your long career, yeah, many of them,

Judith Klinman 44:23

Yeah, I did want to talk about my own family too for just a minute. First, because it's all about family formation. Here we go again. But you know, I was able to have my two sons, and then second marriage, two stepchildren, and so with four children and ultimately eight grandchildren, family has been a big part of my life, and you can have it all. I just want to say, I don't care what anyone says. It's a fallacy that you can have it all. You may. Choices every step along the way. You know, some in favor of family, some in favor of career, and I so I, at least in my experience, I wanted to say that, because I think it's for me, it was the right direction to go. But no, it's not always easy, and you're always making choices. Now the scientific family is quite different in a way, because they come and they go, but they don't really ever go. That's the thing. And, and I've learned that over the years. So I've trained maybe 100 graduate students and postdocs, which is a very large number. And, you know, and then many, many undergraduates and and I never realized just how much of a family it was. My first graduate student at Berkeley was Sue Miller, who has just retired, so I'm still working. And she retired at UCSF, and she's now come to my lab, come back to the lab. She's come full circle to the lab, and she's joining in the group meetings, and she's picked up a little project of her own. And you know, it feels like yesterday? I mean, she offers all this wisdom and experience, and she keeps me in my place, like my graduate students have always done. And and so I'm grateful for that kind of continuity and real connection. And we just had this 80 plus birthday bash I've had. There's been one at 60, 70, 80. 80 is the end. But you know, I really got the love and appreciation that goes both ways. You know, it's it's really a very heartfelt thing. It's not just the intellectual part and what we've accomplished, but it's all the connections. And basically, we've built a community together. And at the end of this, this bash for the women, announced that they had established an endowed lectureship in my name to honor not just the science but the community that was created. I mean that so I feel deeply touched by that. And now, you know, we're gathering remotely to try to decide how to structure it and the themes and how to go forward. But I feel really, really blessed between my personal family and my academic family. Oh, my God. And the thing is that there have been sad moments, you know? There have been people who've died and people become very ill, and that's just part of a long life and family, right?

Paul Bartlett 47:45

So, yeah, another important award,

Judith Klinman 47:48

Yeah, maybe the biggest in a way. And I really got that at the 80th, 80 plus because of covid. Yeah, really, you know, we talk science, but it went way beyond that community is essential. And I think because Cal is such a hard driving place that can get lost in the shuffle the importance of community in these very high powered departments, but even if it does get lost in the bigger scheme of things, for those of us who run large research groups, it's right there. It's at the core of what we're creating and practicing.

Paul Bartlett 48:30

Yeah, what's an important function of a professor is to serve as a mentor, and that is ongoing, ongoing responsibility in many respects.

Judith Klinman 48:39

Yeah, it's a responsibility. But I've learned so much from the people I've trained. You see, it's a two way street. It reflects, yeah, yeah, it's really, I'm very proud of them. Very, very proud of them. Okay?

Paul Bartlett 48:54

I actually want to explore what is perhaps a strange topic here, and I gotta explore hindsight by any measure, I think you've succeeded in what you strive for to accomplish in your career, but I think all of us will identify decisions we made or paths that we followed that looking back, were maybe not the best decisions, but these can be valuable lessons For those of us who serve as role models, those of us, those who look to us as role models and mentors. Are there any hindsight? Yeah, issues you'd like to

Judith Klinman 49:32

Well, first, let me say that, you know the if onlys yes, if I had, if I hadn't. I mean, I had to let go of that a long time ago. But when I think back, you know, the biggest and most traumatic moment in my life, interpersonally, was my the divorce from my first husband in the breakup of our family. And so, you know, if I look back, that's a moment, a turning point. That's what drove me west, that's what's, you know, created everything that I've been talking about today. So had that not happened, none of this would have happened. So, you know, I've had to accept that endings are beginnings. And you know, I do have a meditation practice which has helped me a lot, a yoga meditation practice which has, I haven't have had a very excitable personality, and just to get common and see that, you know, life really is in the passage of moment to moment, and accept that I also, having just come from another 80 plus birthday party for one of the women in the women's group was aware of how much time she spent personally with the families of all the people in her group, and all of the inquiry she made into their well being. And I tended to work with people more on a professional level, and then, you know, not with everyone, but with some of the people go more deeply into personal issues, but I think back on all these people who I didn't take the time to ask questions about their personal lives, and so that that would be a regret, and then the regret of not having had more time with my kids when they were younger, when They were that first year, when they were just born. But maybe that was just who I was ready to get up and go again. But really, I think regrets just understanding more that, yeah, you know, we've got the heights we've got, the valleys and living from that perspective,

Paul Bartlett 51:51

What have I left out?

Judith Klinman 51:53

What have I left out? I want to say a few things that interested me that question. So I'm going to say a few things. I'm going to look at my notes everyone. I made some notes because it's something that, it's something that a little offbeat, but I want to say it anyway. I want to talk about feeling like an outsider. And it started with my father leaving when I was two, and then all the adjustments and changes that happen, and I think that's been a very important factor in my life. And as a woman, for example, the first woman outsider, first woman chair outsider, being able to be an outsider and not having to belong, be

part of the inner sanctum all the time, and it's also changed how I've done science, because I've been able to look at things differently. We've made observations that forced us to look at things differently. And, you know, I had to recognize that this was really annoying, pissing off, excuse me, a number of people in different disciplines, and just needing to go with the flow, but as an outsider and having to push back, you know, I don't, I don't know about the word fight, certainly, just being able to push back in support of what I believe to be true. And what happened was, in the process, I became estranged from my own scientific community, the enzymologists were thinking in traditional ways which were at variance with the data that we were collecting, and I had to become an outsider to my own family of scientific colleagues, and that was very, very difficult. And I would have preferred to stay within the safety of that, that, in a way, a click, but I couldn't. I had to move outside of that, and my teachers also, and to differ in opinion terms of what I thought was going on. So it all goes back to the being able to tolerate being an outsider. And I wanted to mention that. And then I want to talk about being a stubborn I am a stubborn human being, and I think that that may you know you hope you're discerning when you're just when you're stubborn. I'm not sure I've always been optimally discerning, but I have been stubborn, and that has made a big difference. And then I wanted to mention my mentors, because mentors matter, and it was my PhD mentor at Thornton, even Britton Chance, head of the Johnson Foundation, and his colleagues who, at the time, terrified me. They, they were mentors, you know, and I could talk at length about that Mildred Cohn woman at UPenn, very famous biochemist. I've just completed her memoir for the National Academy of Sciences. Was a very important mentor. And then Ernie Rose, he was one tough guy. He went on to win the Nobel Prize in 2005 for understanding the role of ubiquitin in intracellular protein breakdown. And you know, all these people who have been a part of my life, and you know, I often say, oh, you know, I didn't have that many mentors. That's not true. I had some very significant and strong, strong and people with integrity, also lot of scientific integrity.

Paul Bartlett 55:34

Judith, it has been a pleasure talking to you. I've been honored to be the person who was interviewing here. But I have one last question. What are you going to do now?

Judith Klinman 55:44

Well, first I have to live up to my promise to close my lap, write up all those final papers, let go. So we have a country house in western Sonoma, which I've been spending a lot of time at since covid full time, pretty much. And I think about that question all the time. I want to read all those books I never had time to read. Right? Good luck with that. I had my yoga and meditation practice. I've kind of dived into gardening without knowing anything, and it's just beautiful. I really enjoy it. I have someone to help me. I don't do all the hard, manual labor travel. I did so much of that as a faculty member, and always took time when traveling around the world for business, to see something that was outside of the work sphere. So I feel travel has been really kind of beaten out of my accomplished beaten out of my blood. Yeah, although we, you know, we'll still travel, but it's a lot of people say they retire and want to do a lot of traveling. You know, I feel I'm kind of kind of done with that. You know, getting older is challenging and learning to live with loss. You know, in these last few years, people who are very dear to me have been moving on. And so I don't know just slowing down enough. I think slowing down, I think letting everything in, everything I've talked about today, has been on the move right, right? And so just practicing the art of day to day living. It's good. I don't know how it's going to feel when my lab is closed. That will be the big one, but I'm ready for the change of pace.

Paul Bartlett 57:54

Welcome to your next career.

Judith Klinman 57:58

You want to say what

Paul Bartlett 58:02

I do think enjoying retirement could be a career.

Judith Klinman 58:04

I have always admired the way you have enjoyed your life. No, I mean that. I think you're a connoisseur of life, and there's a lot to be said for that, and I've appreciated our ongoing friendship after so many years really well. Thank you. Yeah, journey. Yeah.