Chao Center for Asian Studies, Rice University

Interviewee: George Chiou

Interviewers: Priscilla Li, Zoe Clark Date of Interview: April 5, 2019

Transcribed by: Zoe Clark, Sophie Lafferty (5/16/2019)

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Background: Dr. George Chiou was born in Taoyuan, Taiwan during the Japanese occupation before World War II, one of eleven children in his family. He worked several jobs growing up to support himself and his family. He studied pharmacology for his undergraduate studies and immigrated to the United States for graduate school where he engaged in research and eventually became the first department head of the Department of Pharmacology and Toxicology at the Texas A&M School of Medicine. An autonomic pharmacologist, Dr. Chiou discovered Timolol, a widely used glaucoma drop medication that propelled the market for eye drop medication. He has two daughters, and four grandchildren. Although Dr. Chiou retired from Texas A&M, Dr. Chiou continues to conduct research on diabetic retinopathy in Taiwan.

<u>Setting</u>: The interview was done in a study room in Fondren Library during the morning of April 5th. Dr. Chiou discussed his childhood in Taiwan during the Japanese occupancy and his research projects and accomplishments. His daughter, Dr. Laura Epner, was present during the interview.

Key:

GC: George Chiou PL: Priscilla Li ZC: Zoe Clark LE: Linda Epner

—: speech cuts off; abrupt stop ...: speech trails off; pause

Italics: emphasis

(?): preceding word may not be accurate [Brackets]: actions (laughs, sighs, etc.)

PL: Okay so today is April 5th, 2019. We're here in Fondren Library interviewing George Chin-Ye Chiou. Uh, my name is Priscilla Li.

ZC: My name is Zoe Clark.

PL: Okay. And we're interviewing him for the Houston Asian American Archive. Okay, so the—we'll start off with where and when you were born.

GC: Uh, I was born in, uh, Taoyuan, Taiwan, uh, on July 11, 1934.

PL: Okay. Uh and, can you describe your childhood?

GC: My childhood is, uh, quite happy, uh, during that time is under the occupation of, uh, Japan, and before the second World War. So when I was in the China for particularly in the elementary school, uh, after school, uh we always get together to play the army fight. And uh, the class was divided into two: the white army and the red army. And each one has the leader and then we fight, uh, for fun. And uh, after the fight, then we all went to a restaurant which is, uh, Total Guru (?), uh, which is a—a favorite, you know,

Chao Center for Asian Studies, Rice University

uh, uh, f—favorite, uh... delight. Uh, and everybody get one—you know, one—one bowl for that. So uh, just a major, uh, childhood activities.

PL: Um so what kind of food did they serve at that restaurant? Was it Taiwanese or Japanese food?

GC: Uh, it—it's a Taiwanese.

PL: Taiwanese? Okay. [GC: Yes.] Okay.

LE: Can you tell us about your father's occupation?

GC: Oh you want to ask a—

PL: Yes, go ahead.

GC: Uh... I was born when my father, uh, was a policeman. And uh, during the, uh, Japanese, uh, occupation, uh police, uh is a very—was respected uh profession. And in order to become a policeman, uh, you have to go through the examination, which is very, uh, tough, because most of the people don't have the education at that time. And my father is one of the very few to go through the elementary school education. But the entrance examination for the police is much higher. Uh, they are at the high school level. So therefore my father has to do the self, uh, education uh in order to uh accomplish that. So during the examination day, uh, they have three subject, and uh, you go through the examination and then right after the test, uh, they will grade it and then announce who passed the examination. So, uh, the first subject is math. But the math would include algebra and uh all higher-level—not just the math. So therefore, after the uh first test, more than half was cut off. So only those who pass the math examination get entered for the next subject examination. And the next one is science. [LE speaks Chinese to GC] [to LE] Yes? Yeah. [to PL] Is a science, so uh, then you go through the science, and then go finally to the literature. So after the three examination, they are told that those who are accepted, uh, would be notified by mail. So my father at that time was a salesman of the clothes (?) material. And uh, he has to travel around, uh, Taiwan. And then, uh, leave for about one week or so. So uh one day, uh, my mother received the letter, uh, of the acceptance letter. And they are very excited about it, the problem is, they didn't know where my father is. So they have only one week, and after one week if you don't report in, which means you give up. So they are very, very nervous about what's going to happen, and then all the sudden in the late afternoon my father came home. So after he saw the letter he was very excited, and the following day he ran into police academy and reported in. That's how he became the police. And uh so he was, uh, very unusual for our whole family.

PL: Okay. What did your mother do?

GC: My mother is a house—uh, um—housekeeper [PL: Mmhm.], basically. And uh, we have, uh—they have 11 children uh to take care, so my mother was very busy just take care of the children, and—and uh, was very busy.

PL: Okay. So what kind of principles did your father and mother raise you up on? [**GC**: Uh...] What kind of principles—like what did they teach you, I guess?

GC: Oh. Uh, the principle is that it's very simple. Uh, they want us to be uh honest, uh, we never lie, uh, and we are responsible uh for what we do. The second one, they want us to become a good man, so you can serve the whole mankind, uh, with your whole life. So that's the only two principle they taught us.

Chao Center for Asian Studies, Rice University

PL: Um, was there a certain thing that your father said how you could serve mankind? Like, were there—I think—my friend helped me translate some of the book.

LE: How did you—how did you choose to serve mankind, dad?

PL: Yeah.

GC: The, uh, serve for the mankind, of course there are many, many things you can do. And this all depend on your interest, uh, also. And my father at that time, uh, discussed with me what should I do for the mankind, and uh the message he said, uh, the life at that time is very poor. So, if we can do anything, uh, in medicine, medical, or uh pharmacy, uh, that will really help people's health, and that would be a major accomplishment and improvement of the human life.

PL: Mm. Um, how was it—or what was your—like the financial status of your family?

GC: The financial situation is poor. [PL: Mmhm.] Uh, my father uh was born in a farm family, and the life change after he entered the, uh, police academy and become the policeman. So the payment of the policeman is good. It's not very poor. So actually, we should be able to have a good life, if our sisters or brothers only one or two. But the problem is that uh we have 11—my parents have 11 kids. So the total uh 13, uh, really make the salary, uh, very insufficient. So therefore, uh, I remember my sisters, they all tried to, uh, weave the hat. And this is a lever that they do to earn a little bit of the income. And that's how, uh, they try to make up the, uh, financial difficulty.

PL: Did you have to work any other jobs when you were growing up?

GC: Uh, when I grow up, even when I was in graduate school, uh, I always keep more than two jobs. And actually, as a graduate student, I also work part-time for six jobs. So my income at that time is not bad, uh, because the professor's income at that time is Taiwan dollar of 1,000. And I was making 6,000, uh, a month. So actually it's pretty good. So, uh, the reason I have to do this is because the family need the money. So I work very hard, extra work, and then try to make up, uh, and help the parents', uh, financial situation.

PL: Um... is—oh, how was your schooling like in elementary, middle, high school?

GC: Entry?

PL: Yeah, or like your... like, what did you like to study in school when you were a child in Taiwan?

GC: Oh. Uh, I went to Shintsu Medical School [PL: Mmhm.], which is one of the best in Taiwan. Not just local in Shintsu. So Shintsu University—uh Shintsu, uh, Middle School is very famous in Taiwan. Uh, everybody, uh, very respectful for this, uh, middle school. And, uh, my uh entrance examination at that time uh was after the second World War, and Japanese occupancy changed to Chinese occupancy and the entrance date changed from spring to the fall, so as a result, I lost one year. Eh, actually I lost half year, but it turned out to be one year, uh, you know, for entering, uh, the middle school. And since the school is very good, so there's no problem of the study, and uh at that time we don't—still too young, so we don't work, uh, for money. So, at that time all I do, all I earn, is a scholarship from school, which is automatically uh go to the first, uh, prize uh to the best, uh, academic, uh, record. So I—every semester I get one so that will help, uh, my family. And my mother used to say, "It's not bad. You go to school to

study and still earn the money." So, which was interesting. [PL: Mmhm.] And of course, middle school's money is not that much. When I enter the Taiwan University, then the scholarship is big. Because at that time, there's only one scholarship for the whole department, and from Pfizer of America. And Pfizer is a very big, uh, drug company at that time, and they gave 5,000 dollars scholarship, which is plenty for one year in living. So uh, actually, my study, most of the money come from the scholarship.

PL: Um, do you remember what it was like when it changed from Japanese occupancy to Chinese? Can you describe, like, some memories you have during that time period?

GC: During that time, it was very difficult. The reason is that Chinese and Japanese just totally different language, and you don't—you don't understand what they're talking about. So usual—after, for the examination, it's half-half, which means we have the written examination, uh, in Chinese, then after that you then we have oral examination which is interview by the teacher of middle school and we are so nervous that uh—because we don't even know what they're talking about—so for the examination, you enter the room and there are two person—two teachers sitting in front of you. The one ask you—this is Chinese, and I don't know - understand what she is asking for. Then the other one translate into Japanese, then I can answer. But the answer has to be in Chinese, not in Japanese. And all I can say is uh [speaks Chinese]. Something of that nature. And probably some of the answer is not what they're asking for. So that was pretty tough. But everybody(?) is like that. So after we enter the, uh, middle school, then the problem is, uh, that we have morning uh meeting which the principle will give a speech. Every morning he would give a ten-minutes speech and we listened carefully but didn't catch anything. So that was a difficult time. Then of course they teach Chinese [coughs] every day, so, uh, we learn it very quickly.

PL: Okay.

LE: So then, basically, Japanese is your first language. [GC: Yes.] And Mandarin is your second language.

GC: Right.

PL: Okay. So your parents also spoke Japanese?

GC: Hm?

PL: Your parents spoke Japanese to you growing up?

GC: Yeah. While—while I was growing up, we still speak Japanese. The reason is that my sisters and brothers, [coughs] they are all older than me, except one younger sister. All the rest are above me, and they—they all talk Japanese. So that's why, uh, I keep Japanese very well, uh, writing and reading and even after I come to the States, I was invited to Japan to give a talk—to give a seminar—and, uh, in Kyoto University. Kyoto is—Tokyo and Kyoto are uh top university, uh, in Japan. And uh they asked me, "How would you present? In Japanese or English?" I said, "I can speak Japanese." They were so pleased. So at that time, uh, because of the Timolol discovery, I was invited all over the world to give a talk. And after my talk in Japanese, the professor the—there said, "You sound like an all-time our Chinese stu—uh Japanese student sent to Japan and now just come back to give a talk." Because my Japanese sound very classic and authentic, not like the modern Japanese. They all changed. And in there, they put a lots of English word in the new Japanese, uh, language. So I was surprised, I—I didn't make that much difference.

Chao Center for Asian Studies, Rice University

PL: Okay, cool. Um, so, let's go back to like when you went to university, um, what did you chose to study?

GC: Uh, Pharmacology.

PL: Pharmacology? [GC: Yes.] Okay. Um, that was like a natural path since when you talked to your father about how you could give back to mankind—or serve mankind—like were you on that path from the beginning? [LE: [coughs]]

GC: Yes, well, uh when I entered the [LE: [coughs]], uh, university, the university, uh, I entered is pharmacy. So therefore, I continue, uh, to [clears throat] pharmacology uh in the States and the reason I went to Vanderbilt was that I told my professor that the CUID [speaks Chinese] uh he was a worldfamous, uh he—he—he become the president of uh International [coughs] Toxicology, uh, Society. [coughs] Excuse me. And at that time, uh, he asked me, "Where do you like to go?" I said, "I don't have any idea which school is good." He said, "One school which is very good is Vanderbilt University. Apply for it." I said, "Okay. Anyone goes there, uh, from Taiwan?" He said, "No. You'll be the first one." I said, "Oh, okay. I will try." So, [coughs] when I apply for it, I was accepted immediately. And why—I was a little wondering why I can get in so easily. I was later find out it's because, uh, my uh application has, uh, university principal—uh president—recommendation letter, and I find out later from Taiwan University why I have the recommendation. After he said the president write only one letter for each department every year for applying to the United States and I was the only one in pharmacy school, and that probably is the reason I was accepted. And also, the recommendation including, uh, Dr. C. Y. Lee, uh, who is—as I said he's very famous, and he has recommended, although he didn't get the Nobel Prize, but he was recommended, uh, to get the Nobel Prize three times, uh, in his lifetime. So, uh, uh I was very well, uh, received, uh, by Vanderbilt University.

PL: So you worked in... Dr. C.Y. - C.Y.D. [sic]? You said...

GC: Yes. Lee Chen-Yuan.

PL: Lee Chen-Yuan. Okay. Did you work in his lab? [GC: Yes.] Okay.

GC: Yes. Uh, before I uh come to the United States, uh I work in Taiwan as a graduate student, and I was his graduate student [**PL**: Okay.] at that time.

PL: Okay. So what were your um, like, plans for your career, uh going to college? Were you thinking you wanted to do research as a career?

GC: Well, uh, I—in the college, I was influenced quite a bit by, uh, Dr. Lee. Originally, I thought when I—I went to the college—I went to pharmacy school, and after graduation I thought I could be a pharmacist. But I found out pharmacist is a very monotonous, uh, boring job. Because you count the pill every day. That's no fun. And uh at that time, I was influenced quite a bit by a few, uh, good, research-oriented professors. So at that time, so before graduation, then I decided I want to be the professor not the pharmacy—uh, uh pharmacist. So in order to be a, uh, research-oriented professor, Dr. Lee told me, "You've got to go to the United States to learn more. Then you can come back to work for Taiwan." So I took his advice and went to, um, United States, but after graduation, then I had the opportunity to go to the best, uh, Pharmacology department, which is University of Iowa. And then after the post-doc, uh, uh, uh graduate work uh and the post-doc, uh, training, uh then I was offered a job to go to University of Florida, so I stuck in—in the United States, and uh in 1972 Dr. Lee told me, "Now you are good enough

Chao Center for Asian Studies, Rice University

so you can come, uh—come back to Taiwan." And I wa—he was the dean of the medical school. So he said he want to offer me the department head of pharmacy school. But my mother turned it down. My mother say, "It's very important to let the kids—" Which is Linda and Faye. I have two daughters. And she said, although she doesn't have a very high degree, but she said, "The education is much better in the states than in Taiwan." So she prefer I stay in the States to let the kids finish their education. But then the story was—after the kids graduate, and they were established in the field. So now I cannot even leave, so I stay in the States.

PL: Um, what was like when you came to the United States, were your parents supportive of you?

GC: No. Uh, my parents, uh, absolutely uh objected, uh, my going abroad. The reason is that my eldest si—uh, brother, he went to Thailand when he was 19, and never come back, So, he said, "I have three sons, and one went out, didn't come back. You are the second one want to go to the States, and if you don't come back, then I have only one left." And so they rejected my, uh, wish. Actually, my eldest brother, when he want to go abroad, my parents objected as well. At that time, he wanted to work to Thailand for education and business. Which is a very, uh, rare opportunity, uh, for him. He want to go, my parents would not let him to. So, he decided he'd stop eating. He had a hunger strike until my parents allow him to. So my parents told me, "If you can get your eldest brother come home from Thailand, then I will let you go." And obviously that's impossible, so that's why, uh, then I, uh, married with my wife, I have two kids at that time, so then I re-negotiate with my parents. I say, "Now. I have wife, I have two kids, and they stay with you. And I myself will go to the states. So that will be very safe. So I can come come back." They say, "Yeah, that's reasonable," so I went to. But then my wife had a good strategy: she built a house [coughs] for my parents and left some money for them to spend. Then, I told my parents, [coughs] "Now you have the house, you have money, so you don't need to worry about whether I'm back or not. And of course I'll come back to visit, but not necessarily to live." So, that's why, uh, they finally agree for me to go.

PL: Okay. So they're under that—is it like a tradition for the son to come back and take care of his parents? Is that—were they under that, like—like—

GC: Well, taking care of my parents is not the problem because I have so many sisters. [coughs] Excuse me. Uh, in the, uh—in Taiwan. So even when we were in the States, uh, my sister, they all living there.

PL: Oh okay. And what was the—

LE: And you were sending money every month.

GC: Oh. No, the, the, after—after I uh come to the States, although I have the full scholarship, uh actually I was tuition free and then 300 dollars a month. Uh, that was my money I get from Vanderbilt University. And, 300 dollars is not big money. And I spend 50 dollars for the rent, and the rest of 250 dollars, I spent 50 dollars for the living. So each month I have only 50 dollars left. So I don't spend a penny for anything else—not clothing or a trip to anywhere or something like that. So every month I can have 50 dollars left, so—about 50 dollars—and you know about three, four months I can save about one full hundred dollars. Then I send it back to my parents. And at that time, 100 US dollar, uh, is very big money. Which is 4,000 dollars. Which is equivalent to the salary of four professors. So, they are very happy. They say, "You go to—go to school and still earn money. Just like you were in middle school."

PL: Um, so did you have any expectations coming to the United States?

Chao Center for Asian Studies, Rice University

GC: My expectations at that time were trying to get a PhD, which was uh most important, uh, and after uh I get my uh PhD., I got my PhD. uh in a very short period of time—uh, the shortest for the, uh, for the university. And uh most of people get PhD. spend, uh, five-plus years to get one, and I get only two and a half years to get the PhD. So when my wife told my friends and said uh, "My husband is getting the PhD. soon," they said, "Ahh, you made a mistake." They said, "Master's degree, not PhD." But actually, I get the PhD. So after the PhD. uh was awarded, then, uh, Dr. JP Long in the University of Iowa immediately, uh, offer me uh the, uh, fellowship for post-doc training, and at that time 9,000 a year is a very big money. Uh, it's probably one of the highest post-doc fellowship. And I work uh with him in Iowa for one year. Then, two, four year.

ZC: How old were you when—[louder] how old were you when you went to the University of Iowa?

GC: Uh, I went to there in 39—when I was 39 years old [Note: Age stated was misspoke. GC was 35 when he went to the University of Florida to be an Assistant Professor]. So which means I was in the—in the States, uh, for nine years, uh move from graduate student to post-doc and to assistant professor, uh, at that time. And it's very interesting, a couple years later I become the department head of Texas A&M University, and uh I have a friend, uh, came to the States with me, he was still in graduate school. And I was already department head.

PL: So, what do you think allowed you to finish—you know like go so quickly through your um—through the positions and get your PhD so quickly? What would you attribute that to?

LE: What time did you go to the lab in the morning?

GC: Go to the lab?

LE: Yeah, what—what time did you start your research day at?

GC: [coughs] Yeah, usually, [clears throat] I'm a early bird. So uh, therefore, I sleep very early and, uh, during the summertime the sun is still high in the air—before sunset I already in the bed. And then I wake up at the middle of the—of the, uh, night, and then I eat breakfast very quickly, and then go to laboratory because no one is giving lecture, so I go there at about two or three o'clock. Very early. So the... whole day is black. So that's why I met, uh, two bad guys who robbed me and, uh, asked me for money. And if I don't pay the money, I don't—I would be hurt. So usually, I keep at least five dollars in my wallet. So if bad guy came over, I ready to show him my wallet and say, "This five dollars all I have." And at that time five dollars is not small. It's not too bad. So usually he would take it. In both time, he took it and said thank you. Then left— [coughs]

PL: Was this Vanderbilt? While you... This was this while you were in Nashville?

GC: Nashville, Nashville, yes.

PL: Okay.

GC: As a graduate student.

PL: Okay. Um, did you—how was your, uh, fluency in English when you came to the United States?

Chao Center for Asian Studies, Rice University

GC: Well at the beginning, my English was very poor. Because in Taiwan, I learned how to read, how to write, so uh when I come to the States, uh, the biggest thing bothers me is the spoken English, because it doesn't follow the grammar. And for instance, you talk to the people, you say, "Me, too." They say, "What is 'me, too'?" It doesn't make any sense you have to say, "I, too." Right? You cannot say, "Me, too." Something like that. So this is a whole bunch of this question. So, in addition to my poor hearing practice and speaking practice, that whole English sounds different to me at that time, when I first came over. So that was improved, of course, very quickly. Then I learned—okay, so spoken English is not the *real* English. So I improve it very quickly.

PL: Okay. Um, how was, like, going to restaurants like in America? Like, how did you know what to order?

GC: Going to restaurant is a challenge. Actually, I—I started, uh, afraid of going in to restaurant. The first time I went to restaurant was when I ride the Greyhound bus all the way from Los Angeles to Nashville at that time. And that was 60 hours ride straight. So you got to stop somewhere. And the bus will stop and allow you to go to, uh, order something to eat. So I enter, everyone is ordering things and uh looks very happy, I was the only one who didn't know how to order it. So I said, "I want to eat stick." They say, "What?" I say, "Stick, there. There." They say, "Oh, it's steak!" So that's the first time I say "steak," not "stick" you want to eat. [PL: Mmhm.] So the language problem is something which most of us take it for granted. You know, steak is steak, you never say stick, right. But when you read the English, it can read "stick." Something like that. But after that, I learned how to order steak, so later on in my life, every time I go to the restroom—uh to the restaurant, I always order the steak. I don't order anything else.

PL: Like, you didn't want to try other types of food? Or...

GC: Because I don't know. [PL: You don't know.] I don't want to take the risk. It's a big venture for me.

PL: Um so when did your family reunite with you? Like your two daughters and your wife because they were in Taiwan with your mom?

GC: Your question is...

PL: Like when did they move over? Immigrate.

GC: Oh uh I came in 1964 and they came in 1966. [PL: Okay.] It's about one and a half years later. So when they come to uh the States my friends in graduate school said "Boy. You are very brave to bring wife and children." Most of them didn't even marry. So they said, "How can you survive with your scholarship and two additional uh – three, three additional uh family members?" I said, "Well I have to take them." My wife say she want to come and my wife has a very strong will. Some say when a man succeed you have to have some great lady. That is the typical one. When she say she want to come, she will. And uh, uh unlike me, she was born and grow in a very rich family in Taiwan. So, financially she has no problem of coming to the States. So, uh they came over and uh – of course that's why even today, all my financial...question is controlled by my wife. I don't have a right to spend a penny. Everything has to ask her first. Without her approval, I cannot spend the money.

PL: So how did you meet your wife?

GC: Huh?

PL: How did you meet your wife?

GC: Oh that was uh you cannot believe during the old time I was introduced by the people and she was introduced to me by my relative and that's how we uh get to know each other and uh somehow uh we like each other so very quickly we engaged and marry.

ZC: When did you get married? When – when did you get married?

GC: Uhh...it was 1961.

PL: Umm—what did you - how long did it take for you to feel comfortable in America?

GC: Actually, I feel comfortable relatively quickly. Uh the reason is my English is poor in the spoken English but I learn it very quickly because my grammar is good, my writing, reading and writing everything is good so I can pick it up very quickly. So the largest problem uh you know disappeared uh so, which is very good. The second thing was of course, during 1960s uh discrimination still is very serious problem in the United States, particularly in the southern area like uh Nashville, uh Texas these southern areas uh you have lots of racial discrimination. But fortunately, I am—I was in academia. So unless I go out countryside, I don't really face that uh, uh local resident who are quite discriminative. For example, one time we joined the car outside and uh somehow uh the tire you know uh had the trouble so I had to fix the tire and I went to the garage and went to do it. The people there don't even want to listen to you so this is the problem that I was—I have to wait because I have no place to go and the tire is broken so I waited a long, long time until they took care all the customers then come to me and say "So what do you want?" I said he didn't need to ask me because the tire is broken. So he didn't say anything, replace it, and charge me, that's it. They don't even bother to talk to me. This kind of place uh you, you can really feel the discrimination. And fortunately, I don't face it everyday because I go to school. I was in academia, and the kids went to school so that's not the problem. So I get used to it very quickly.

PL: How was it like going to the grocery store?

GC: The grocery store now that is like going to countryside. You have to face uh all kind of people in public so... the ladies over there are not very friendly—the check out uh ladies. So when I buy something they would give y—just throw it to you, and don't bother to you know put it nicely in the bag, something like that. So sometime it's really hurting you. You, you work very hard to swallow it. One day I find out the lady made a big mistake. My item is sixty-nine cents and she put ninety-six cents. Turn six and nine reversed. I said, "Excuse me lady, you charge me wrong it's 69 not 96." She said "Oh! No problem. We return the money to you." So she took the paper, pen – try to - now subtraction they cannot do it. They spend a whole bunch of time. And I say "Just take 27 cents out and that's it." She said "No, we can not guess it. We have to be accurate." I said, "Oh okay. You make it accurate." After all calculation, she got five or six different answers. So [inaudible] her superior came over and said, "What's the problem?" "69 and 96. I reversed it." "Oh. Get the computer." Uh, at that time, although it's new, they have the uh calculator. So, take, take 27 cents out. Said, "Oh. You guess it right." And after that I went to the same store, buy anything, she was very respectable for me. She said, "He can do subtraction." [laughs]

PL: Um, I guess we can start talking about your research with Timolol the glaucoma drop.

GC: Mhmm.

PL: Um what was – can you describe how you came up with that research?

GC: How to come to Timolol for glaucoma treatment?

PL: Yeah.

GC: Well actually I was a autonomic pharmacologist which means of course – pharmacology has big area - and my area is autonomic pharmacology. And autonomic pharmacology has two major part. One is uh cholinergic and one is adrenergic. And uh the glaucoma drug is a cholinergic drug which is physostigmine or neostigmine, neostigmine uh something like that. And at that time, the whole world are using cholinergic drug. But since I was autonomic pharmacologist, I want to try adrenergic path as well. And adrenergic path have adrenergic agonist and antagonist and I want to study all of them so I wrote a NIH proposal I send it to NIH, apply for grant. And my proposal was quickly approved so I can um get the money except that the - they said, NIH said you don't need to do the adrenergic path because it doesn't work and you just work on cholinergic. But since your proposal is good we'll give you the full funding. Today NIH will ask you to do more job and half of the funding. I was the reverse. I get the full funding with half of the job, so after I get that money, I told my graduate student just do it anyway because they gave me the money so just try it. And one of them we try is new drug from Merck Sharp & Dohme which is a anti-hypertension drug at that time. So I said well try this one also uh let's see what's going to happen. And the - when we try it, the student came back and said, "Boy, Dr. Chiou, this one works." I said, "Well you must have grabbed the diff- the wrong bottle for the testing," which you know always happens. And pilocarpine drug which is originally used for glaucoma. Of course it would work." But he said, "No, I don't think I grabbed the wrong bottle." "You repeat it anyway. I cannot believe the result. So he went back and two weeks later he said Dr. Chiou, this is for real. The intraocular pressure dropped. So, then I decided that this must be a real good thing happen. And that was the discovery of Timolol for glaucoma. So a lot of great discovery come by accident not necessary you plan, and you get it for wrong reason, so its' very interesting.

PL: What university were you at when you discovered the drug?

GC: University of what?

PL: Where you at the university of Florida or Texas A&M.

GC: Oh, that was in uh Florida.

PL: Florida okay.

GC: Yeah uh, uh 1978 uh about '77. '78 is the, is the year uh the drug was put in the market and at the same time I move to Texas A&M. So ac- actually, this happen between two schools and everyone said, yeah from Florida and someone say no it's from A&M. Actually both are right.

PL: Um I guess what was that like? Seeing- was that one of the fi- was that the first drug you had on the market or had you had previous um like medications on the market? Is that the first time your research became like something that could be sold in the market or had you had previous research where you're able to like invent something and sell it?

LE: [Speaks in Chinese to GC] [GC: Huh?] It's the first medicine that went on market.

GC: Yes this the first one

PL: Oh okay.

GC: Yes it's the first one.

PL: And how-

GC: And that's a big excitement before this drug was put in the market. Uh. the market uh income is very small and with Timolol put in the market the glaucoma drug jump nine and half times higher income. It's not the patient increase it's just because of the new drug so this was very exciting. And in the past, before 1978, the whole world didn't care about eye drug development or eye drug production. So if you are big company you don't want to say you are a eye drug producer, but after 1978 if you don't say, "we also produce eye drugs" then you are not the biggest, first-class pharmaceutical company. So that's how it changed. The world completely changed. So at that time the CBS evening news, before you were born, uh the evening uh reporter is Walter Cronkite and Walter Cronkite at that time, say this drug is a magic drug of the century so all of a sudden it's exploded.

PL: How did you start researching like drugs for glaucoma?

GC: How to start?

PL: Yeah. How did you start on that research topic? Like what led you to research – um yeah...

GC: Oh as I say – originally I was an autonomic pharmacologist-

PL: Oh, yes. Okay.

GC: And uh - I just switched.

PL: You just switched. Okay. Um and then you went to Texas A&M for which position?

GC: Department Head

PL: Oh okay. Yeah and you were the first one?

GC: Yeah uh I went there – usually people are professor then advance to department head. And I jump from associate professor at the University of Florida then went to Texas A&M as professor and department head at the same time. And uh this of course uh has a big help from Dr. Allan Bass and John Long. Allan Bass as I mention was at the department head of Vanderbilt and he was also the Head of the American Association of Pharmacology. Uh John Long was the department head of number one pharmacology department in the States and also then uh very nice to me. And they know that I'm interested to become the department head so they already received a request of nomination of the department head from all over the nation and most funded request from Texas A&M and they told them that George Chiou should be interested. So then I received the phone call from Texas A&M and uh Aaron Smith, Dr. Smith was the uh, uh acting dean at that time and he called me and said, "Would you be interested in the department head position at Texas A&M?" I said, "Sure uh if everything's good then I'll be happy to accept." So he said, "Then why don't you come over right away?" I said, "Okay." I will try to buy a ticket and see what happen. Then the second day I call him back. I say, "I'm sorry all the tickets are sold out and I cannot go to A&M." He said, "Oh don't worry." At that time uh the airplane between

Chao Center for Asian Studies, Rice University

Houston and College Station is a private uh airline owned by the university so he said, "Don't worry. We'll, we'll send the airplane and pick you up." I said "Airplane to pick me up?" That is unusual. And then they really send the airplane and pick me up and uh flew to uh College Station. That's where I had the interview done and then they wanted me.

PL: And were you the first department head?

GC: Yes.

PL: At- Okay. So it was newly opened.

GC: Yes. Newly opened uh, uh 1978 I come to Texas A&M but the school opened two days [sic] before '78.

LE: What school?

GC: Hm?

LE: What school?

GC: Medical school. Yeah medical school start uh 1976 but then when, when you first started kids doesn't need to study pharmacology until their second-year student so they started without the department head. And in 1978 they decided to hire the department head, so I came over.

PL: Um what was that like interacting - being in a new position? Like you said it was like a big jump from associate professor. How did you feel going into that role?

GC: Uh it's very interesting that uh not only I'm the brand new department head of pharmacology uh I also a brand new position. So that I designed the department uh for the building uh without knowing much of the architecture uh with pencil and, and paper you know I draw the picture of how it should be like. Uh something of that nature, so it was highly challenging. I, I did lots of things which I didn't know how to do it before, and I learn it myself.

PL: Okay. Um, do you have any questions Zoe?

[pause]

LE: Did you hold any other positions other than department head eventually at the medical school?

GC: Yes. I was offered to work as a - actually I have multiple function uh at that time. One of them was Associate Dean uh of the school uh so that was in charge of uh medical research and graduate program. So uh that was in addition to the department head job. So I have two offices. You know one was the associate office and department head office. So I have two of them. Uh then I also work at the chief editor of the Journal of Ocular Pharmacology and Therapeutics. Of which also is very heavy duty, busy one and I used one secretary solely you know handling because manuscripts come in, send it out for review and all of that kind of stuff. So, I did all this all together by myself and then I published more than 10 papers which is about half of what the whole department did so the faculty cannot complain so I'm not concentrate enough on the job although I have done so many things, I still publish much more than what they are doing.

ZC: How did you deal with moving so often? Like you and your family moving so often, how was that difficult?

GC: Moving. That's a very interesting question. Umm when I first come to the States I went to uh Vanderbilt University and as you know they're quite discriminatory atmosphere at that time. So uh to rent a room is not easy. You see a sign there "room for rent" and you knock the door and say "I'd like to rent room." They say, "Sorry, it's been rented." Well actually it's a lie you know but you see this all the time and then once you move in a place they would uh complain to you: you didn't follow this, you didn't follow this. Lots of complaint. And basically they don't want you to stay there. So, I have to of course spend my time after school. I was trying to find a place to live most of the time. And during that time one year I move ten times and I have to do that. It's not my desire or my pleasure but you have to face it. So you said, did you face any discrimination? Yes, but what can you do? You, you cannot do anything. You know if you complain, who is going to help you? So that's what- so by the time my family came over we didn't move because at that time uh we live in one place and then move to the university dormitory. which was very, very lucky to be able to get the place. And the place we live when the fa- when they came over, it's a very bad area. There's no safety at all. So at that time after, I was eager to find another place. You know the reason I was robbed is because I walk early in the morning, so I was robbed. And the place where we lived after we moved out the new one came in and they got killed. They just entered from the window and killed the lady and tried to rob, I don't know the details. But - so that was a terrible situation. So to move I have a lots of experience. Not very pleasant.

PL: What – what are your current research projects if you have any?

GC: Now?

PL: Yeah now. Are you doing any research now?

GC: Oh now I still working on research uh mainly in Taiwan. Uh I have couple professors who came to my lab in College Station before. They are now in Taiwan Medical University. And they are helping me to doing the research in the laboratory. And uh what happened was I had the project uh with a pharmaceutical company and then try to work on developing new drug for the treatment of diabetic retinopathy. Now diabetic retinopathy one third of patient will get this disease and this disease can cause blindness so it's a very serious disease. The population today is about 120 million, at least 120 million. Why it's at least? Because a lots of diabetic patients didn't see the eye doctor and didn't know that he or she has the diabetic retinopathy. So currently we don't have a good drug for the treatment of this particular disease and I'm working on it, try to develop it.

PL: Um how would you like identify yourself?

GC: I'd like to identify as inventor of novel eye drugs and uh which can benefit millions and millions of the patient.

PL: And would you say that's your proudest accomplishment so far in your life?

GC: So far uh I have accomplished quite a bit. Uh even glaucoma alone a lot of millions of people has benefitted by it. Last time I went to Taiwan and in a uh meeting there's one patient, uh glaucoma patient, come to when I give a talk uh she came over to the stage and give me flowers to thank me for inventing the glaucoma drug. So uh that's a comfort when you receive...[coughs]

Chao Center for Asian Studies, Rice University

PL: Um and then I guess having raised your children in the United States did you want to also like teach them like Taiwanese/Chinese traditions that you also were raised on? Or, how was it like raising your children in the states?

GC: Of course the customs very different. You know Taiwan and the United States. And uh we go to the uh Taiwanese community here in Houston and they have all kinds of Taiwanese activities, uh so that enjoyable uh but of course when you are in the states, majority of the uh time is spent in the American way so uh basically you have to be Americanized.

PL: [to **ZC**] Did you have any other questions?

ZC: Uh I guess when did you retire um I guess being a professor?

GC: Uh I officially retired two years ago and uh I don't need to retire because the university allow me to continue to work uh because I was very well funded. I have a lots of money for research. And uh the main reason I retire is Taiwan's pharmaceutical industry wanted me to go over there to help them. So I thought it's a different experience and stimulation. And also it's my motherland so I thought at least I should do something which I can, so I agree. But in order to do that I have to retire from A&M. I cannot say I'm a full professor in A&M and also working for the industry and that's why I retire. University didn't really want me to retire but when I finally tell them, I keep postponing it until I cannot postpone any further and then when I retire I contribute all my research funds, which is \$350,000 dollars, left behind to medical school so they really appreciate that.

PL: So do you travel to Taiwan or are you...

GC: Yes. Yes. I go to Taiwan once or twice a year.

PL: A year.

ZC: How long do you stay when you're in Taiwan?

GC: Usually stay three weeks and planning to make it longer uh in the future because there are more and more uh things which I need to take care of.

LE: [speaks Chinese]

GC: My book?

LE: [speaks Chinese]

GC: Oh! Once in uh - I like to mention about the accomplishment. Uh most of the people when they talk about the accomplishment, they just talk about the professional. For me developing an eye drug which is a symbol of my accomplishment but I have equally proud of my accomplishment is I have four- two daughters and four kids - uh four grandkids. Uh the four grandkids uh the biggest one is Margeaux Epner uh who graduated from Rice University and uh now is second-year medical student at McGovern Medical school next door. And the second one is Eden Epner uh she is uh she was graduated from uh Hopkins University and then is going to go to uh medical school at McGovern uh from this year. There are two other twins which are much younger. They will graduate uh high school in the fall and uh will go

to university. And uh Filemon Tan is a boy uh who is accepted to Rice University early decision this year, so I have lots of relationship with Rice. So he is going to come to Rice University in the fall. And uh he youngest uh granddaughter she is going to uh go to Baylor University with a full uh scholarship, \$80,000, which I never heard of it. Which sounds pretty good. So she will go to Baylor. [LE: Michelle.] Uh her name is Michelle Tan.

PL: Okay. Um then what are your hopes for your grandchildren?

GC: Oh my hope for them is what they like to do and looks like they all like to go into medicine so in this !way I like them to work very hard uh for the medical world and I'm sure the field is so large that they canuh do anything they can but the principle is just like what my parents told us before, just try to improve the health of the human being. !

PL: Um so that kind of concludes our interview. Did you have anything else-

GC: Okay. thank you very much. !

PL: Did you have any last comments you wanted to make?!

GC: No. No comment. I think this is very thorough. !

PL: Okay, great. Thank you so much Dr. Chiou. !

GC: Yeah thank you very much.!

[interview ends]!