

## **Juan Pablo Ortega Fermín, Ph.D.: El Quimico Krypton**

**By Crystal Mikell Reynolds, Ph.D.**

### **Introduction**

Krypton is a chemical element that is colorless, odorless, and difficult to discover. Krypton takes its name from the Greek word for “hidden,” kryptos. Like the chemical, which is often hidden, Juan Ortega (the name he is commonly known as) is a name that is not well-known in the annals of the history of Indiana State University. Actually, very few people at the University have probably even heard of this hidden figure. Names like Bird and Baumgartner are much more recognizable. However, Ortega was a leader in his field and taught and mentored countless students in his native Venezuela, building upon the solid foundation that was laid for him at Indiana State Teachers College (ISTC) during the late 1950s and early 1960s.

Ortega was one of the earliest known international students at State and one of the earliest students of Hispanic descent to attend the Teachers College. Ortega, who attended the college from 1959-1962, saw the Teachers College as a bright light, a School that was supportive of international students, and got the most out of his experiences and education there. This El Quimico (Spanish for chemist) went on to do great things in the field of biochemistry with the solid foundation that the Teachers College laid for him.

Ortega’s legacy continues at State today in the form of one of his daughters, Theresa Ortega, who is pursuing a degree in psychology and continuing his legacy of educational excellence. Theresa is also a support staff member in the Student Recreation Center.

### **Early Years**

Juan Ortega was born in Porlamar, Isla de Margarita, approximately 36 miles off the northeast coast of Venezuela in 1935. Ortega’s parents were Angel María Ortega, an auto mechanic who later owned a service station and an auto parts store. His mother, Teresa Fermín de Ortega, was a homemaker and as Ortega states, “not only taking care of her own children but of the ones of the close family she deemed it necessary because of various circumstances, two or three on and off.” (All quotes in essay taken from July 7, 2017 email interview with author). He is one of three siblings, two other brothers: one, a home decorator and art dealer (deceased) and the youngest, a pediatrician and psychologist, still in practice.

Ortega attended elementary school in Porlamar and secondary school at Escuela Técnica Industrial in Caracas. Young Juan was a good student.

In the late 1950s, this budding scientist was fortunate enough to earn a scholarship from the Creole Petroleum Corporation, a subsidiary of Standard Oil Company, to attend Purdue University, in electrical engineering to study in Indiana. The scholarship was earned because, as he states, “of the background acquired from the technical school I graduated from in Caracas.”

However, despite a two month preparation course in English at Indiana University in Bloomington, by the end of his first year at Purdue University, he soon realized that he was not handling the English language well enough to continue the stringent academic work there.

As luck would have it, however, he visited Indiana State Teachers College on a holiday and realized that this School would better fit his needs and skills. He also surmised from his visit that foreign students would receive more quality attention.

By luck, I visited Indiana State on a festivity and decided this was an alternative: smaller school, more relaxed, and one that could dispense more attention to me as a person and as a foreign student.

### **Sycamore Years**

Once at ISTC, Ortega avidly pursued his double majors of mathematics and chemistry. However, the prestigious scholarship that he had won from the Creole Petroleum Company would be no more. The company suspended the scholarship upon his transfer to ISTC. To make ends meet, Ortega received some financial assistance from his parents and got a part-time job:

I took mathematics and chemistry at State. Since my scholarship was suspended, I asked my parents for help, and worked in the cleaning of the kitchen of Union Hospital during the evenings.

Not only did he work in the kitchen of Union Hospital, during his last year of school, he worked at the local branch of International Business Machines. Ortega's acquiring part-time positions at both Union Hospital and International Business Machines speaks to the progressive nature of these organizations in hiring an international student.

Ortega has fond memories of several of his ISTC professors. He recounts his memories of Dr. Ringer, Dr. Shriner, Dr. Moore, Mr. Herbst, Dr. Kessel, Dr. Trinler, Dr. Wilkinson, and Dr. Earl Smith:

I remember the Registrar, Dr. Ringer, interested in helping the foreigners: adapt, get work, academic difficulties. My professors of Mathematics Dr. Shriner and Dr. Moore. My professors of Chemistry: Ms. Eugene Herbst for his ebullient enthusiasm during the Chemistry lab sessions, Dr. Kessel, Dr. Trinler, Dr. Wilkinson and specially Dr. Earl Smith teaching Analytical and Physical Chemistry for his sobriety and subtle humor, an example to follow. Ms. Ola Jerry of English, was interested in people from "faraway lands": often commented and asked a Chinese girl (Miss Wong?) and I, the foreigners in her class, about diverse aspects of our countries. Also remember the man, whose name I have forgotten, in charge of the Chemistry Storeroom, giving us the materials assigned for the laboratory experiments, warning us of mishandling and the cost of the equipment.

This grateful student's fond memories of these professors 55 years later reflects the character of these professors and the vision of the Teachers College in hiring such remarkable individuals.

In addition to his professors, he has fond memories of the students at ISTC as well. He believed that the American students treated him well, were friendly, and took the time to help him learn the material, material that he sometimes struggled with due to English being his second language.

The other students, mostly Americans, were friendly and treated me kindly, took the time to explain things when asked. Met American students in the Social Sciences interested in Politics and Economics; by then (1958-1962) most countries in Latin America were inclined toward Socialism as the system that would alleviate our problems of poverty and underdevelopment. Discussed the coming in scene of Fidel Castro whose ideas spread even to Asia and Africa as valid to liberate us from the burdens imposed by Imperialism.

At State, Ortega was a good student in the majority of his subjects, achieving better scores in both physics and chemistry: "I was a slightly over average student in most subjects, had higher points in physics and chemistry."

Ortega lived in on-campus housing until his senior year. In his senior year, he asked the School administration for and received permission to rent an apartment off campus, about six blocks away. He also ate most of his meals at the residence hall on campus.

Although Ortega did not belong to any organizations, clubs, or fraternities, he did partake of athletic endeavors. He swam and played tennis as often as he could.

In addition to swimming and playing tennis, other activities that he enjoyed were reading English literature, listening to classical music, and as he says, "occasionally visiting bars around the College to talk and drink beer with fellow students."

Ortega states that he has good memories of the Terre Haute community and felt supported by its people: "I have pleasing memories of my years in Terre Haute and at the College. Met nice people in all instances."

He remembers a particular instance when the local owner of an IBM company invited him to dinner after hearing that he too had worked for IBM in Caracas.

Since I worked for IBM in Caracas as a mechanic in the electric typewriter department before coming to the U.S., this reached the ear of Mr. Walter Bockover in charge of the branch of the company in Terre Haute; he asked me to visit the shop, offered me some work, and sometime afterward invited me to dinner in his home with his family. Asked me about Venezuela in the presence of his wife and children; took books and maps from his library for me to identify the

pictures and the places in the maps. I was amazed and later grateful for the interest in my country.

He also liked the character of the American people stating that: "People in America were more decisive and direct than us in general in their talk and doings. There was more order and responsibility, respect for the law." Interestingly, another aspect of the country that he enjoyed was the amount and diversity of food available. He states that the amount of food surprised him: "there was much milk. There were small differences in the food and in the dressing; our clothing was lighter because of the milder climate year around, women used more vivid colors than in the U.S."

"I liked living in Terre Haute while at ISTC. In walking distance I had the Fairbanks library, the post office, and the gorgeous downtown with most things one needed: restaurants, bars, clothing stores, jewelry, bookstore, and banks, record store and the landmarks the Terre Haute House and the Deming Hotel."

In the spirit of a true Hautean, Ortega in the July 7, 2017 email interview with the author, discussed the once infamous Terre Haute smell: "One disagreeable aspect of the city was the odor of the gas that pervaded the city on occasions coming from a chemical solvents plant."

It was during his years at State that he met his wife Jane, her family, and her friends. "The people in Terre Haute were amicable and warm to me, I made several friends and acquired a family with my wife Jane."

He married his wife Jane Eck, fellow ISTC student majoring in English, during his senior year at State. They had three children, two girls and one boy. As stated, his eldest daughter Theresa has followed in her parents' footsteps and is both a current student and an employee at Indiana State pursuing a degree in psychology. During a 2008 return visit to the campus, Ortega marveled at the growth and beauty of the college. "This is a beautiful campus." In an August 12, 2017 interview with the author, his daughter Theresa remembered that her father wanted to walk the entire campus. "He wanted to see every facet of it, both the new and the old." She commented that he spent a usual amount of time at the science building, his old "stomping grounds."

On weekends, the ever curious Ortega would visit state parks, the golf driving range, or go to the cities of Bloomington or Lafayette to visit friends.

Ortega also spent time with his fellow Venezuelans classmates who were on campus during the latter part of his tenure at ISTC. They remained lifelong friends: "I kept in contact with three of the Venezuelans here in Caracas. I lost track of them sometime after I retired from my job as a chemistry professor at the Universidad Central in Caracas; read in the paper one died."

In addition to his American friends and his fellow Venezuelans, Ortega did not, however, meet other fellow international students until he was a senior:

Did not meet any foreign students but in my last year at school when arrived four Venezuelans, one Peruvian, one Iranian and one Kenyan, with whom I chatted. Before, because of the accent in their speech and their dress, I judged them to be some Chinese and Indians, probably postgraduates. Once, the President of the College Dr. Raleigh Holmstedt, invited the few of us to an interchange of views and then dinner at his home in Allendale, fabulous.

This “international dinner” was one of only a few dinners that the President sponsored for the international students. Holmstedt’s predecessor Dr. Ralph Tirey would host the international students more often, as much as every two weeks for Sunday dinner. In telephone interviews with the author (2014-2016), the students of Japanese descent at ISTC from Hawaii during the late 1940s and early 1950s fondly remember the Tirey International Dinners. The Asian students were disappointed when they learned that Holmstedt would not be continuing this tradition.

### **Post-Sycamore Years**

After graduation, this biochemist went to Saint Louis, Missouri, home to several significant chemical enterprises, where he had landed a job as an analytical chemist with Sigma Chemical, a producer of biochemical substances for research. “Since this was a new field, we had to test and establish the standards for purity and activity of what was offered: enzymes, nucleic acids, substrates.”

After a three year stint with Sigma Chemical, he decided to return to graduate school. He pursued a master’s degree in chemistry at Indiana University. After earning a master’s degree, he then went on to earn a doctorate in chemistry at the University of Montana, a university in which two of ISU’s current and former presidents held administrative positions: Dr. Richard Landini and Dr. Daniel Bradley.

Armed with his doctorate, Ortega took a temporary job in Caracas to teach chemistry at the Universidad Central; he stayed for 34 years. At the University, he contributed to renewing the freshman chemistry courses for science majors; revised and installed new experiments in the laboratories of physical chemistry; researched in area of biological chemistry: worked on the activation of alpha-amylase, synthesis in vitro of cytochrome c, molecular weight determination of nucleic acids, chemical components of the membrane of breast cancer cells; and taught principles of chemistry and physical chemistry. One often referenced article he published was his work on the Molecular Weight Determination of the 16S Ribosomal RNA from Escherichia coli, (J.O. Ortega and W.E. Hill (1973), "A Molecular Weight Determination of the 16S Ribosomal RNA from Escherichia coli," Biochemistry, 12, 3241). Clearly a very driven individual.

### **Life in Venezuela**

Today life in Venezuela is challenging. Ortega acknowledges this fact when he states that: “right now in our country we have gone primitive: intermittent electricity and water.”

He values his experiences at State during the late 1950s and feels that he profited greatly from both ISTC and Terre Haute. As his life comes full circle, he appreciates more than ever the opportunities that he was given at Indiana State.

This was a most determining experience in my life where I acquired the tools to advance in my development, but also looked at the wide variety of opportunities present; I profited largely as I look back.

### **Conclusion**

In his July 7, 2017, interview with the author, Ortega thanked the author for the opportunity to as he says, “revive those cherished moments.” The author thanks Dr. Ortega for sharing his life at State and for being part of the progressive history of the University. Ortega’s story is only one of the many stories of Hispanic students, faculty, and staff who were a part of the history of ISU. The history of the Hispanic experience is a hidden history that this essay only begins to touch the surface. But, it is hoped that Juan Ortega’s story sheds some light on the welcoming environment of the College, the solid foundations that the school laid for its graduates, and the great work that the School’s graduates went on to do in the world.

## References

Written Interview of Juan Ortega by Crystal Reynolds, July 7, 2017.

Telephone Interview with Theresa Ortega with Crystal Reynolds, August 12, 2017.

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