Funny, kind and smart, this chemist knew the lowdown on fatty acid binding proteins

Written by Jean Bartlett, February, 2017 (Written for the family of Joan Alice Manning)







Joan at work at University of California School of Medicine, San Francisco. Circa 1961.

MANNING, JOAN ALICE (1935-2015)

In a 1991 published paper on fatty acid binding proteins, a 1972 paper on "the binding of long-chain fatty acids to a low molecular weight protein in cytosol of intestinal mucosa, liver, myocardium, adipose tissue, and kidney," written and researched by Robert K. Ockner, Joan Alice Manning, RB Poppenhausen and WK Ho (colleagues at the Department of Medicine, University of California School of Medicine, San Francisco, CA), was cited. At that point in time it was recognized that the 1972 paper had been referenced in more than 310 publications and was a standout in its field.

A chemist, Joan Manning co-authored numerous articles which can still be sourced through such premier peer-reviewed publications as: *The Journal of Clinical Investigation, The Journal of Biological Chemistry* and *The American Journal of Gastroenterology*.

Her sister Kathleen Manning does not recall if Joan loved chemistry when she was growing up in Detroit, Michigan. She does remember that one year, Joan and her twin sister Jane received a chemistry set for Christmas!

Jane and Joan Manning were born to Frank and Helen Manning on March 14, 1935. Jane was the elder of the twins by 18 minutes. They had an older sister, Mary, who was born in October of 1933, and they would eventually have three more siblings: Kathleen, Frank and the youngest Manning sibling, Jay, who was born in 1948.

Detroit wasn't far from where the family's patriarch was born. Frank Manning was born in Saginaw, Michigan, about 90 miles north of Detroit, on December 20, 1904. Mom, Helen Gooder, was born a little farther away in Eau Claire, Wisconsin, about 600 miles northwest of Detroit, on June 23, 1907. The couple married at Sacred Heart Church in Eau Claire on November 28, 1931. Frank worked as a civil engineer and Helen was a nurse.

Author: Jean Bartlett. © 2017 (www.bartlettbiographies.com) The story of Joan Manning (page 2)

Joan attended St. Mary's of Redford elementary and high school in Detroit. Like the rest of her siblings, she played street games with the kids in the neighborhood, which included: kick the can, baseball and red rover. Kathleen noted with a laugh that they all "wasted a lot of time being mesmerized by early television."

"We watched Gorgeous George the wrestler, Broadway Open House with Jerry Lester, Soupy Sales, early television dramas and old zombie movies from the 1930s. We laughed a lot. We also sat around a lot, drinking coffee with the neighborhood kids."



Manning Family Christmas Photo 1965. Taken in Huntington, West Virginia.

Back row: Frank Manning, Joan Manning, Catherine Manning-Burris, Jay Manning, Jane Manning-Cavallaro, George Merring, Frank Manning and Lou Cavallaro.

Front row: Fred Burris holding Steve Merring, Mary Manning-Merring, Kathleen (Kitty) Manning and Helen Gooder-Manning.

Joan was a Girl Scout. She was in Junior Achievement. Like her sisters, she learned how to bake. She was a voracious reader. She started that at an early age and kept with it all her life. Like all her siblings, she had chores at home and got a job in high school. She worked at Big Bear Supermarket and Kathleen remembers that if the cash register was short, Big Bear took it out of Joan's meager pay. Joan took classes at Wayne State University, a public

research university located in Detroit's Midtown Historic District. She graduated from the University of Detroit in 1956 with a Bachelor of Science in chemistry. She was a member of Delta Sigma Epsilon Sorority which would become part of Delta Zeta Sorority not long after she graduated. That same year, her twin sister Jane graduated from Mercy College in Detroit with a Bachelor of Science in nursing.

From 1956 through 1959, Joan worked as a research technician for the Detroit Institute of Cancer Research. At some point during that time, Kathleen roomed with her big sister and the two were loaded with the adventures that come when one first moves out into the world. This is a favorite tale they told many times over the years.

"I broke a connecting wire on the freezer compartment of an old refrigerator," Kathleen chuckled. "We thought poison gas was escaping and called the Fire Department. We called the regular number, not the emergency number. We told them what had happened and we told them it wasn't an emergency. Soon we could hear fire sirens coming closer and closer. Joan and I just looked at each other in horror. It must have



Joan Manning, University of Detroit, 1956.

Author: Jean Bartlett. © 2017 (www.bartlettbiographies.com) The story of Joan Manning (page 3)

been a slow day because they sent a chief and a full hook and ladder, and rushed upstairs to our flat in raincoats with axes. We had covered the hole with clay and a bandage to keep it in place. Two great scientific minds at work! There was a huge crowd out in front, waiting in anticipation. The firemen were impressed. They wanted to know if we had put Mercurochrome on it before we put the bandage on. Then they wanted to carry us out so the crowd wouldn't be disappointed! The downstairs landlady was jumping up and down. 'How much does this cost?' 'How much does this cost?''

Inspired by adventure, Joan headed out to San Francisco in 1960. She and her friends – Nancy, Judy and Katy – rented a house at 2734 Union Street, in San Francisco's Cow Hollow Neighborhood. Joan worked as a laboratory technician at the University of California, San Francisco. She also introduced her family to San Francisco which would eventually become the home of both Kathleen and the youngest family member Jay.

"Visiting Joan and her girlfriends on Union Street," Kathleen noted, "what a thrill! Just a little different than Asbury Park in cold, snowy, uncosmopolitan Detroit!"



Joan, bottom left, and her friends Nancy, Judy and Katy, on the steps of their San Francisco rental. 1960

From 1963 through 1964, Joan worked as a clinical laboratory technician in Sentralsykehuset, Kristiansand S., Norway. In 1965, she returned to Detroit and worked as a principal technician at Wayne State University Medical School and in 1967, she returned to San Francisco where she again worked as a laboratory technician for UC San Francisco. Offered a position as a research scientist, in 1970 Joan headed off to the University of Texas Southwestern Medical School in Dallas. She missed San Francisco and in 1971, she headed back to UC San Francisco where the staff researcher and specialist worked in the Department of Medicine and Liver Center. She remained at UCSF until she retired in the 1990s.

Author: Jean Bartlett. © 2017 (www.bartlettbiographies.com) The story of Joan Manning (page 4)





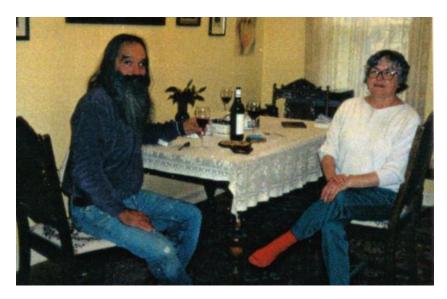


Joan at Baker Beach in San Francisco. 1968.

"She bought an old Victorian era working class home on 22nd Street between Diamond and Eureka in the 1970s," Kathleen said. "At that time it was very uncommon for single women to be home buyers on their own. Over the years, she filled her home with wonderful old books and prints of San Francisco, and wonderful antique furniture that complimented her house and her lifestyle. My brother Jay, who was a professional artist, did a huge mural that had been in her backyard and later filled a whole wall of her dining room. Jay, who was one of the funniest people and we just all loved him so much, was gay. During the AIDS crisis in the early 1980s in San Francisco, Joan gave Jay and his friends so much support. We lost Jay to AIDS in September of 1994."

After Joan retired, she worked as a volunteer for the <u>San Francisco History Association</u>, running their store during meetings. She volunteered with <u>Friends of the San Francisco Library</u>, enjoyed attending the symphony and was a very involved member of the <u>Pacifica Historical Society</u>. She remained interested in current events and politics and social justice, a lifelong passion. She supported causes she believed in.

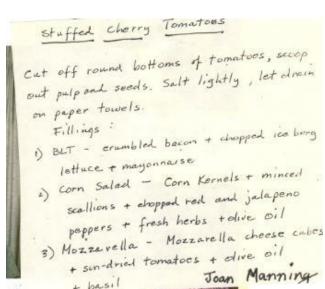
Kathleen described her sister's personality. "Quiet, unassuming, kind, wry sense of humor, could not be convinced to do something she did not want to do and did not suffer fools. She was very thrifty. Jay claimed that his sisters were all raised to be Depression era housewives!"



Jay and Joan, at Joan's home in San Francisco. 1992.

"She was very healthy," Kathleen went on to say. "She never ate junk food and she made fantastic imaginative salads. She was also famous for her stuffed cherry tomatoes."





How does Kathleen think Joan would describe her childhood? "Wholesome but boring food!"

"My family was very lucky in that we always really liked each other and kept in touch and did things together. We were very interested in what was going on in each other's life. If I had to choose what Joan might say in how she would describe her life, that's an easy one. 'I did it my way.'"

Joan died at her home in San Francisco on December 19, 2015.

PARTIAL LISTING OF ABSTRACTS

Ockner, R.K. and Manning, J.A. Intestinal fatty acid binding protein (FABP): Immunochemical quantitation and effect of diet. J. Clin. Invest. 52:61a, 1973 (Accepted for presentation).

Ockner, R.K. and Manning, J.A. Intestinal fatty acid binding protein (FABP): Studies of physiological function. J. Clin. Invest. 53:57a, 1974 (Accepted for presentation).



Lunzer, M.R., Manning, J.A. and Ockner, R.K. Long chain acyl-CoA inhibition of hepatic acetyl-CoA carboxylase (ACC): Modulation by cytoplasmic proteins. Clin. Res. 2:287A, 1976 (Accepted for presentation, Annual Meeting, Amer. Fed. Clin. Res., 1976).

Ockner, R.K., Burnett, D.A. Lysenko, N. and Manning, J.A. Sex differences in free fatty acid utilization and triglyceride biosynthesis in rat hepatocyte suspensions. Third Annual Gstaad Symposium: The Liver: Quantitative Aspects of Structure and Function, Sept. 1978.

Ockner, R.K., Lysenko, N., Manning, J.A. and Burnett, D.A. Sex steroid modulation of fatty acid utilization and fatty acid binding protein (FABP) concentration in rat liver. Gastroenterology 77:A30, 1979 (Accepted for presentation, Annual Meeting of the Amer. Assoc. for the Study of Liver Diseases, November 1979).

Bass N.M., J.A. Manning and R.K. Ockner. Intestinal and hepatic fatty acid binding proteins (FABPs): Differential influences of sex and clofibrate. Accepted for presentation, Annual Meeting of the American Gastroenterological Association, May, 1983. Gastroenterology 84:1099, 1983.

Bass N.M., Manning J.A., Ockner R.K. Hepatic zonal uptake of a fluorescent fatty acid derivative is determined by velocity and direction of flow. Accepted for presentation, 1985 Annual Meeting, American Gastroenterological Association. Gastroenterology 90:1710, 1986.



Joan, in black sweater, at UCSF lab.



Junior Achievement, 1953. Joan, bottom right, glasses.

©2017 Jean Bartlett. (Written for the family of Joan Alice Manning. Permission granted to the <u>Pacifica Historical Society</u> to present this story at their Pacifica Coastside Museum and online at PHS-labeled online resources.)