75 Years of IFT: Journal Reviews and Hypotheses

The Institute of Food Technologists (IFT) was founded in 1939, making 2014 the 75th Anniversary. The precursor to the Journal of Food Science, Food Research, started a bit earlier in 1936. In the build-up to the Annual Meeting and Food Expo in June of 2014, the Scientific Editors of all IFT scientific journals will be taking a look to the past and future to share their thoughts on how the science has progressed and where it is going.

This first editorial is a joint effort with Professor Manfred Kroger, as Scientific Editor of the journal Comprehensive Reviews in Food Science and Food Safety, and me representing the Concise Reviews and Hypotheses in Food Science section of the Journal of Food Science. The first Concise Review appeared in 1994 and was the only one published that year. We are now averaging about 16 a year and hope to increase that number. Comprehensive Reviews in Food Science and Food Safety started in 2002, and by 2012, had risen to be the journal with the highest impact factor (5.053) of the 124 journals in the Food Science & Technology category.

First, let’s hear from Professor Kroger.

Dear Readers, Food Scientist all, I presume! Occasions of commemoration demand reflection; and 75 years of IFT, and a few more for the Journal of Food Science (JFS), triggers more than a mental view of stacks or shelves of magazines holding the printed accounts of research studies. Much more, since JFS represents the veritable mountain of achievements—a growing mountain—that stands for the dreams and thoughts, and the skill and hardwork, of scores and scores of deeply committed individuals. You may be one of them, you know many personally, and you also recognize the names of some outstanding authors. The growing hill of data, insights, and conclusions represents, in my opinion, the most important achievements of mankind. Do we not agree that what we ingest is more important to life and living than shelter, transportation, education, entertainment, or ideologies? The sum of all food endeavors has surely contributed immensely throughout the ages to human progress on Earth, as measured by lifespan, contentedness, as well as pleasure. And the recent “invention” of science and organized research during the past few centuries has truly accelerated our success in these matters.

I was born several years before JFS saw the light of day, and I now treasure my 50-year IFT membership pin. Looking back at the 1960s makes me smile at the relative simplicity of research reported then. Gas chromatography had just come into its own during the late 1950s as a new separation method. Through my mentor Stuart Patton I was introduced to it and to flavor research. We could now identify and measure micro- and nanogram-amounts of specific chemical substances. Pesticide residue investigations thereafter led us into the picogram realm. In subsequent decades, entirely new areas of food research were opened. Now, as an editor for others, I am confronted on a daily basis by dissertations of newcomers and the ever-better distilled wisdom and skill of the great leaders among us. Seeing their work expand the horizon of food science is, I assure you, a great satisfaction.

The food science knowledge base has, indeed, grown over the years (I am tempted to say “mushroomed”) and its active creators/participants have grown in numbers, worldwide. Food research used to be conducted solely in Europe. In the last half century it was mainly the U.S.A. originating and funding food research activities. Looking at authorships of JFS papers today, it seems inevitable that for years to come China will be leading the world in food science research activities. And it is certain that we all share in it. So, I ask my second question. Does that not make food science the best world unifier there is? We all have common needs and common objectives in our quest to keep generating the necessary calories and nutrients for a growing world population. In my humble opinion, producing food, protecting food, and making it edible and also, of course, the research behind it all, MUST be considered the noblest of occupations.

Something else that has happened, and will continue, is the fusion of pharmaceutical and food science experts. Maybe it started when many universities brought together their nutritionists and food scientists. Their research output is now closely watched by pharmaceutical interests, because the packages of calories and nutrients offered to the public is now no longer known to contain some 3 dozen essential chemical substances along with hundreds of others that are useful and appealing, but also to harbor 1000s of other entities that have gained a reputation to be of medical value and are therefore called nutraceuticals.

Whether free radical scavengers or probiotics, these and many other entities, unknown for so long, can now be measured and studied and put to good use, thanks to the analytical chemists and microbiologists among us. Keep your eyes peeled on developments in nanotechnology and on how “bacteria communicate with each other” and you will be forever fascinated and spellbound by where food science may be heading next.

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Dear Readers, after reading Manfred’s comprehensive perspective my concise overview can add little, nonetheless, here are some thoughts. I joined IFT as a student in 1974, so 2014 will be my 40th year in the profession. Seventy-five years ago there was no obesity problem, we still did not have a model for DNA (1953 event), and we were just coming around to large chemical entities being polymers rather than non-covalently associated aggregates. The volume of information has increased exponentially over the past 75 years. I recall a speaker talking about how, when in graduate school in the 1940’s, his protein chemistry journal club covered ALL the main journals publishing work on protein chemistry—something inconceivable with today’s litany of publications. My prediction, or shall I say hope, for the future of Food Science research and publications is that the complex nature of food becomes more of a scholarly focus. Sustainable agricultural practices—assuring food safety—having foods with the most ideal mix of nutrients and bioactive compounds (nutraceuticals)—making delicious foods—and doing it all at a reasonable cost to the
consumer are all interlinked. The age-old approach of observing a phenomenon and then drilling down until you have a physical/molecular/organism model that explains the phenomenon will and must continue. However, since food is part of a linked system with some challenging goals, such as being healthy and delicious, a broad approach will also be needed. The future of food is exciting and IFT scientific journals will be there to convey the next level of discoveries and understandings.

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