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Thoru Pederson

Thoru Pederson believes he would not have realized his full potential in a traditional academic setting, and points to the nontraditional atmosphere of the Worcester Foundation for Biomedical Research as an integral part of his development as a scientist and a leader. As the President and Director of the Worcester Foundation, Pederson has thrived largely, he feels, because of the collegial nature of the organization. He has been at the Worcester Foundation in various capacities since 1971 following his postdoctoral training at Albert Einstein College of Medicine in New York.

Pederson says he did not grow up as "your typical bird watcher" who goes on to study biology in college. Instead, his first interests as he grew up in Syracuse, New York, were literature and the classics. He did not develop an affinity for biology until his junior year at Syracuse University. A graduate student in the biology department was his first mentor. In March of his senior year, he decided to apply to graduate school in biology only to find out, much to his dismay, that he had missed all of the deadlines. A dean at Syracuse allowed him to enter their program with the proviso that he transfer after his first year. In his first year of graduate school, Pederson studied under Seymour Gelfant, "a passionate cell biologist." Pederson was able to complete enough of his course work in his first year that he never left Syracuse, immersing himself immediately in his Ph.D. thesis research. Another turning point was in graduate school when for the first time he saw a living cell dividing in the Embryology course at the Marine Biology Laboratory at Woods Hole. He knew then he would become a cell biologist.

Towards the end of a three-year postdoctoral fellowship at Albert Einstein College of Medicine, Pederson began a job search that led him to the Worcester Foundation. One of his mentors, Harry Eagle, had been approached by Mahlon Hoagland, President at that time of the Worcester Foundation, who was trying to change the direction of the Foundation toward cell biology and was looking for new faculty. Eagle suggested Pederson, who remembers thinking as he walked into the institute, "if they offer me a job here I will take it, and I will stay here my whole career." Several people advised him not to take the position he was offered, urging instead that he follow a traditional academic career and accept one of the several university offers he had received. However, Pederson had been impressed by Hoagland and his ideas about transforming the Foundation from one that focused exclusively on reproductive biology and endocrinology into one more broadly centered on basic molecular and cell biology. He also liked the non-departmental, informal atmosphere.

The Worcester Foundation, which recently celebrated its 50th anniversary, is truly unique, Pederson feels. Deborah Bieri, a Vice-President at the Foundation, says that the Foundation "is a very open place that allows scientists to pursue their interest freely." The institution, which sits on 100 rural acres in central Massachusetts, has become committed to excellence in basic research without any departments or chairpersons. In the early years of the Foundation, it was best known for the development of the oral contraceptive by M.C. Chang and Gregory Pincus. Following the death of Pincus in 1967, the

Foundation changed its focus to cell biology, a change that was not without pain, reflects Pederson with some regret. The Foundation survived this transition despite the absence of an endowment. All of the research at the Worcester Foundation is funded on "soft money." Pederson is very proud of his fellow scientists who he feels have done outstanding science on relatively limited resources. In October, one of the Foundation's scientists, Paul Zamecnik, won the first Albert Lasker Award for Special Achievement in Medical Science.

Asked to comment on the National Institutes of Health, Pederson speaks passionately about the role of the NIH in his career and the success of the Worcester Foundation. Pederson's first grant application to NIH was funded and he has received NIH support ever since. He first learned about the NIH from his postdoctoral mentor, Elliott Robbins, who was on the NIH Cell Biology Study Section. Later, Pederson also served four years in the NIH Cell Biology Study Section and then four years on the NIH Molecular Biology Study Section. He strongly recommends Study Section service to young scientists. The Foundation received a Cancer Center award from the NIH when the program first began in 1971, which was a tremendous lift to the institution. While Pederson was somewhat troubled by the leadership of the NIH immediately prior to Harold Varmus' appointment as Director, he has been extremely pleased with the leadership over the last three years.

Pederson has used his NIH funding to conduct research in nucleic acid-protein interactions and gene expression. He has been called a "molecular biologist operating conceptually in the living cell." His laboratory is known for undertaking experiments that probe RNA-protein or RNA-RNA interactions in vivo, while pursuing parallel biochemical aspects in the test tube. His group was the first to employ UV crosslinking to capture protein-RNA interactions in living cells. At about the same time (1981-82), Pederson's laboratory employed psoralen to photochemically detect base-pairing between the U1 and U2 small nuclear RNAs and pre-mRNA, again in living cells, several years before biochemical identification of the spliceosome began to do it got underway. Günter Blobel of the Howard Hughes Medical Institute at Rockefeller University says Pederson's research "has made a major contribution" to understanding nuclear RNA and proteins. Pederson is particularly looking forward to this year's Annual Meeting of the ASCB, "because a number of particularly exciting things are breaking just at the time of the meeting, notably in protein traffic, the cell cycle, and signal transduction. Beyond my chief preoccupation with RNA, I am deeply interested in and excited about many other areas of contemporary cell biology as well."

Pederson throughly enjoys his role as President and Director of the Worcester Foundation because he is able to work in a collegial manner with his fellow researchers. He takes a sincere interest in the people and the research they perform. "I try to lead by being thoughtful and friendly as well as being honest, candid and easygoing," he says. He has a sense that he could have only been a leader in the kind of environment he found at the Foundation, and he is honored to have such an opportunity. He says he loves fundraising, and it is clear that this is partly due to his great love for the institution he leads. Deborah

Bieri says that Pederson is "an outstanding spokesperson for the institution, who is able to explain the intricate details of science to a layperson and make it exciting."

Pederson became a member of the ASCB as a student in 1966 when he was encouraged to go to the ASCB Annual Meeting. He gave a paper at that meeting and was astonished to learn how many other people were working in the same area (cell division). Upon completing his Ph.D., he became a full member of the ASCB and began encouraging students to join. In 1982 he was invited by Marilyn Farquhar, then President of the Society, to chair the Program Committee for the Annual Meeting in Baltimore. "It was amazing to see all the various aspects of the meeting get pulled together given the great number of people involved." Pederson later served on the ASCB Council, and now serves on the Finance Committee, which he finds "a logical way for me to help the Society given my other experience."

Asked about his pastimes, Pederson answers honestly that he is not a "hobby person." When he is not working on his research or raising funds for the Foundation, he likes to read. When asked to cite a couple of his favorite works, Pederson replies instantly, "Horace Judson's Eighth Day of Creation and René Dubos' biography of Pasteur." Pederson clearly maintains his early love of literature, history and things intellectual. He and his wife, Judith, who is a marine biologist at MIT, have spent most of their summers at the Marine Biological Laboratory. They have two grown sons.

In answer to a question about the derivation of his unusual name, Pederson explains that "'Thoru' was my mother's idea; it's a combination of my parents' names — my father's was 'Thorwald', my mother's was 'Ruth'."

Pederson is an enthusiastic leader of a special institution for basic biomedical research. He feels he is very lucky to have found such a perfect professional fit for himself. He says he has stayed at the Worcester Foundation (which recently changed its name to "The Worcester Foundation for Biomedical Research" from "The Worcester Foundation for Experimental Biology") as long as he has because it has worked. Pederson's excitement about his work is evident as well as contagious. His colleagues note that this enthusiasm has helped sustain his personal passion for science notwithstanding ever-increasing institutional responsibilities.