

Columbia Daily Spectator, Volume CXXV, Number 60, 23 April 2001 — Hendrickson Named Univ. Professor
[ARTICLE+ILLUSTRATION]

Hendrickson Named Univ. Professor

BY RACHEL GERSHMAN

Spectator Staff Writer

Columbia professor of biochemistry and molecular biophysics Wayne Hendrickson sits in his uptown office at a small table covered with papers and a laptop sipping a cup of coffee.

He breaks into a warm smile as he explains his fascination with structural biology and crystallography, which surfaced while he was a doctoral candidate at Johns Hopkins University.

“There is an aspect of the work that’s really sort of puzzle solving, and that’s fun,” said Hendrickson. “But also it’s appealing because the results are really quite definitive.”

Hendrickson was recently named a University Professor, the highest ranking Columbia professorship, in recognition of his scientific achievements and years of dedication to Columbia University. Economics Professors Jagdish Bhagwati and Robert Mundell were named University Professors simultaneously.

The honor is awarded by the University Trustees after review by the Senate’s Executive Committee. University Professors can teach in any department they want, although

most continue to work at least near their fields of expertise.

Provost Jonathan Cole had high praise for Hendrickson, calling his work on AIDS “pathbreaking.”

“He is a man of exceptional talent, a wonderful collaborator, and great citizen of the University,” Cole said.

Cole was not alone in his praise of Hendrickson.

“He is an extraordinary scientist, one of the best structural biologists in the world and a person of broad interests,” said Eric Kandel, University Professor of biochemistry and molecular biophysics.

“I am simply delighted that he has been honored in this fashion,” Kandel added.

Hendrickson has come far from his days as a doctoral candidate. His work centers primarily on the use of x-ray crystallography in the study of the structure of biological molecules, a process he has greatly advanced and refined through his research.

X-ray crystallography involves making crystals of molecules, directing x-rays at the crystals, and observing the patterns that the x-ray diffraction creates.

“The idea is basically that the

scattering from this experiment will allow us to reconstruct the details of the object that did the scattering," he said.

"The diffraction pattern from a crystal is a lot like a fingerprint. It's quite a unique thing," Hendrickson added.

One of the areas Hendrickson studies is immunology, which has recently led to research on the AIDS virus. Hendrickson's work focuses specifically on determining the structure of CD4, a molecule that acts as the receptor for the molecule to which HIV attaches.

"It's been a challenging problem and we've had some gratifying results," he said of his recent research.

He added that his research in structural biology constantly leads to different problems to solve. "There's always something new to do," he said.

Hendrickson completed his undergraduate studies at the University of Wisconsin at River Falls, not far from the farm in Wisconsin where he grew up. While he was an undergraduate, he studied physics and biology, and then went on to receive his Ph.D. in biophysics from Johns Hopkins.

After earning his doctorate degree, Hendrickson spent two years as a post doctoral fellow at the Naval Research Laboratory in Washington D.C., before taking a position as a regular staff member there.

In 1984, Hendrickson became a faculty member at Columbia's College of Physicians and Surgeons. He said he was attracted to Columbia because it gave him an opportunity to interact with students and to address larger issues. More importantly, Columbia gave him the chance to be in a "more

legitimate biological environment where I could approach problems that were of interest to me.”

Hendrickson said he enjoys the challenge of attempting to decipher the biological system. “There are so many things that are happening in a living system, and evolutionary pressure has directed solutions to problems in very ingenious ways, and trying to figure out what those ingenious ways might have been is a challenge,” he said.

During his time at Columbia, Hendrickson has worked on research projects with graduate students and teaches several courses a year.

“I really do enjoy teaching,” he said. “I thoroughly enjoy students.”

Since he began his work, significant advancements have been made in the field of molecular biophysics, many by Hendrickson himself, that allow deeper understanding of the biological system.

“When I started, there was very little known, [and] now there are literally thousands upon thousands of such structures known” Hendrickson said. He added the structural information available makes it possible to really understand biological systems.

“What’s now possible, which I find totally wonderful,” he said, “is that you can take a biological molecule for which you really don’t quite understand the biological connections, and from its structure get an ‘aha!’ experience that tells you ‘now I have a clue about how this thing works,’ and generate the hypothesis that would lead to other tests.”

Hendrickson said he was hon-

ored to be included among the select group of faculty who are University Professors, which includes Professors Edward Said, Simon Schama, and Caroline Bynum.

“It’s quite awesome to think that I should aspire to that level of responsibility and achievement,” he said.

He ascribes the honor as a recognition for his past accomplishments, but also to the belief that he and his colleagues will be contributing more in the future.

“It rededicates my sense of resolve to make contributions to science,” he said.

Dr. David Hirsh, chair of the biochemistry and molecular biophysics department, spoke to Hendrickson’s dedication to contributing to science as well as his dedication to teaching.

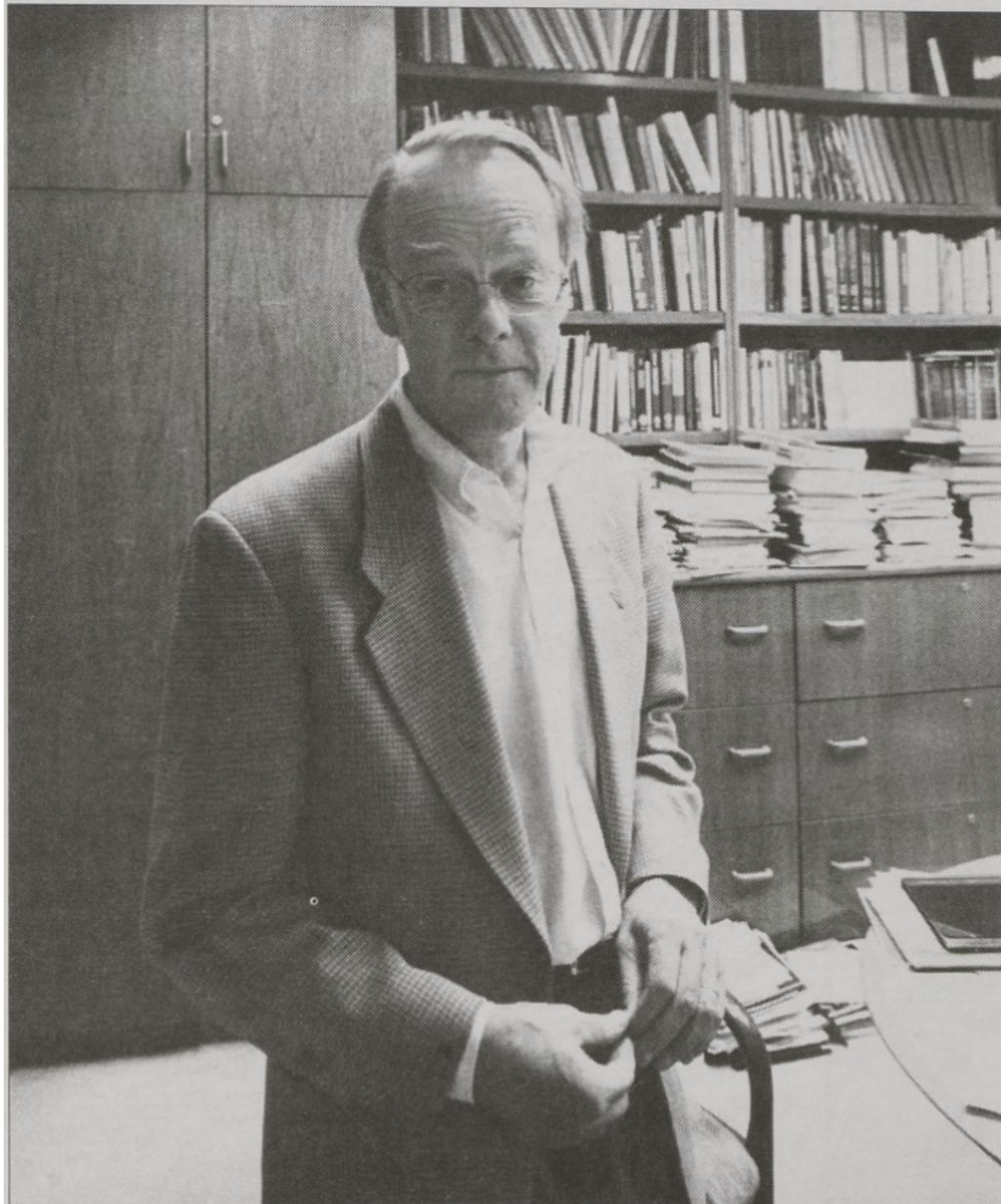
“Not only is he a researcher, but he cares deeply about educating graduate students,” said

Hirsh added that Hendrickson teaches his own course, which is uncommon in the department.

“He is somebody who is a true scholar; a true expert in his field,” said Hirsh. “He helps set the standard for what we should all be doing at this University.”

‘He is an extraordinary scientist, one of the best structural biologists in the world and a person of broad interests.’

—University Professor
Eric Kandel



SAFORA BADAQSHAN FOR THE SPECTATOR

As a University Professor, Hendrickson can teach any subject, even outside of his usual biochemistry and molecular biophysics.