Ducks fire Helfrich after 4-8 season

Andrew Greif  The Oregonian/OregonLive

For the first time in 40 years, the Oregon Ducks have fired their head football coach.

Mark Helfrich is out after four seasons and a search for his replacement begins, the school announced Tuesday night, shortly after Helfrich and athletic director Rob Mullens met.

“No one wanted Mark to be more successful at Oregon than me,” Mullens told reporters Tuesday night. “For the past several months I’ve grown concerned over the direction of the program. We were not competitive in a number of games and we were on a poor trajectory.”

Players were given less than a half-hour notice to attend an emergency team meeting Tuesday night at the Hatfield-Dowlin Complex, where they were informed of the decision. After the meeting, players walked to Helfrich’s office and formed a line outside as they waited to say their thanks.

“Players were upset, like they had lost a family member,” Mullens said.

During the meeting, Mullens told players he was leaving Wednesday but not returning to Eugene until he had the school’s next coach, but couldn’t offer a timetable with the college football season still ongoing.

The search will be assisted by the firm Parker Executive Search and will go “far and wide,” Mullens said.

The unprecedented highs achieved early in Helfrich’s four-year tenure were not enough to protect the Oregon native from too many recent losses, by too many points. The setbacks this season undid the Ducks’ era of success with shocking speed, not unlike the tempo UO once used to run roughshod over the Pac-12.

Helfrich’s final game was a 34-24 defeat at Oregon State on Saturday, a game UO led 24-14 midway through the second quarter.

But today at 54, Steyger is a prominent auditory neuroscientist. At Oregon Health & Science University, he’s part of a team of researchers who are studying the auditory system in hopes of helping others who can’t hear.

“Tough to know when you’re starting a new team, but we have quite a bit of experience inform their research,” Mullens said.

The Oregonian/OregonLive watchdog report has found.

HEAR LEADERS

Five hearing-impaired scientists make OHSU auditory team one of the best in the world

Lynne Terry  The Oregonian/OregonLive

When Peter Steyger learned to speak, he had to wear hearing aids.

At 14 months, he was struck with meningitis. The powerful antibiotic that saved his life largely stripped him of hearing.

His mother, determined to keep him in the hearing community, worked with him an hour a day for four years as part of an intensive regime of speech therapy.

Sometimes it took him 10 minutes to learn a single word. He didn’t start to catch up to his peers until eight years later.

But today at 54, Steyger is a prominent auditory neuroscientist. At Oregon Health & Science University, he’s part of a team of researchers who are studying the auditory system in hopes of helping others who can’t hear.

The 10 faculty members in OHSU’s Oregon Hearing Research Center are considered trailblazers among their peers.

“I look at their program as a very unique one in the world because of the breadth and the depth of their auditory science and the high quality of the science that’s done there,” said Jennifer Stone, an auditory neuroscientist at the University of Washington.
Lina Reiss’ parents didn’t realize she had a severe hearing impairment when she was an infant and toddler. She was their first child. They had no gauge to judge her development. When she was 2 1/2, a friend of her par- ents came over for dinner. He wondered why she didn’t speak so he stood behind her and clapped. When she failed to respond, he told her parents to go to an audiologist.

The specialist confirmed Reiss had severe hearing loss. No one knows why. She had a severe infection when she was 1 and was treated with antibiotics. It could have been from the drugs, she said. No one else in her family is deaf.

When her hearing loss was discovered, her family was in New Jersey, having moved from Berkeley, California, where Reiss was born. Her father, a scientist, worked at Bell Laboratories. Reiss’ mom, a statistician, stayed home, focusing on her daughter.

Reiss was fitted with large hearing aids and at age 3 went to a speech therapy school where she learned to talk and listen.

“That involved putting my hand on the speech therapist’s throat to feel the vocaliza- tion,” Reiss said.

Reiss said she was lucky. Children in rural areas often don’t have access to a good speech academy. Instead of learning to speak, they often learn to sign.

“My mother didn’t want me to learn to sign; she wanted me to be oral,” Reiss said.

She worried her daughter would miss out on opportunities if she couldn’t speak.

Reiss has learned how to communicate, using hearing aids and lip reading.

In middle school, she was the only deaf child. She had difficulty mixing in because she couldn’t jump into conversations. She had to know what the topic of conversation was and be facing the other children. Some of them were mean.

A speech therapist who worked with her through high school taught Reiss to initiate conversations and make friends. She considered a career in journalism but decided at Princeton University to focus on science. She was introduced to auditory research during a summer internship at Johns Hopkins Uni- versity.

“I was so excited to be learning about hear- ing and doing something I enjoyed at the same time,” Reiss said.

In 2005, Reiss graduated from Johns Hop- kins with a Ph.D. in biomedical engineering.

“I wanted to have more of an impact than just finding out how things work,” Reiss said.

Lynne Terry The Oregonian/OregonLive

Researcher: Reiss ‘wanted to help people’

Reiss was fitted with a bi-cross hearing aid with devices on both ears connected by a wire in back of his head. The left side picked up sound and sent it to his good right ear.

“There was a little bit of a delay in the sounds from the left side, so I could kind of get some directional information that way,” Brigande said.

Over time, he lost all hearing in his left ear and his right started to fail as well. No one knew why, he said. It could be germs or have come from a viral infection or exposure to loud sound. About five years ago, he got a cochlear implant, a surgically inserted elec- tronic device that is supposed to replace the function of the damaged inner ear.

“It didn’t help. “It actually confused the input I was get- ting from my right ear,” he said. “I ended up having to give up the cochlear implant.”

He still wears a hearing aid.

Like two other auditory neuroscientists at Oregon Health & Science University with hearing loss, he turned to hearing research because of his disability.

“My hearing loss absolutely predicated my career choice,” Brigande said.

Now SI, he’s focusing on correcting deaf- ness before birth by correcting genes in the fetus. His breakthrough method has suc- ceeded in mice but it’s not ready for humans. It first must be tested in a higher vertebrate like a dog, pig or monkey.

Even if he succeeds with that, Brigande would face resistance. “Fetal medical inter- vention is generally considered to be ethi- cally and morally taboo,” Brigande said.

He’s optimistic those barriers can be bro- ken down. What he’s doing, he said, isn’t genetic engineering — he’s not adding a new trait, but fixing a hearing impairment.

Brigande is used to surmounting obsta- cle. He’s overcome his hearing loss at work and has learned to navigate his personal life, though it can be exhausting.

“Fetal therapy research, I try to communicate with my lab members and guide the science and then I get home and play with my kids,” he said.

“But when I get home, the first thing I want to do is to take out my hearing aids and put my head in a sound booth where I don’t hear anything because the sound is just con- stant assault.”

An assisted-listening device helps. He uses one with one of his daughters and can book one up at work to an unlimited number of people in meetings. The device sends their voice to his hearing aid and lets only one per- son talk at a time.

Scientists at Oregon Health & Science University’s hearing research center, from left, Peter Steyer, Lina Reiss, John Brigande and Alfred Nuttall.

Lynne Terry The Oregonian/OregonLive

Researcher: Gallun focuses on testing

Hearing researcher Frederick Gallun would be a subject in his own experiments The Problem

A Portland-based expert in auditory per- ception, Gallun is working on making a series of hearing tests available to audiol- ogists in clinics so they can better diagnose their patients. The tests exist now only in laboratories. One of the experiments tests how well people can single out speech in a noisy environment.

Gallun fails every time. He’s deaf in his right ear. He has no prob- lem with his hearing in a one-on-one situa- tion. But add a few more voices and he’s lost.

“As soon as people come in and start talking, I have serious problems because I can’t tell who’s saying what,” Gallun said.

He works at the VA Portland Health Care System to research tests on auditory percep- tion. He also has a secondary position as an associate professor at Oregon Health & Sci- ence University, where he works with four other specialists with hearing loss at the Ore- gon Hearing Research Center.

Gallun earned a bachelor’s degree at Reed College, where he studied music perception, and then went to Boston University for a Ph.D. in auditory perception. He found out he had a hearing problem while conducting experiments for his dissertation. He had dif- ferent results for his two ears while his sub- jects did not.

He suspected a tumor.

Specialists confirmed he had a tumor on his right vestibular and auditory nerve that had been growing over the years.

The 10-hour operation was a success: The tumor has never come back. But his right-ear hearing hasn’t either.

That’s driven his research ever since.

It’s long known that having two ears helps people sort out sounds in the environ- ment, and then the one they want to listen to by focusing on its spatial location. That’s something he can’t do, so he wanted to research it.

“I wanted to understand better how much of an advantage that is and whether every- one is equally good at it,” he said. “Is there a natural variability?”

Turns out there is.

He’s confirmed that aging usually ham- pers people, while one person’s speech in a chatty environment. His exper- iments also have shown that people with traumatic brain injuries have the same prob- lem.

Researchers are using new technology to test auditory perception. They’ve started testing people under specially controlled situations — for example, putting them in a sound booth with loud background noise and then playing a series of hearing tests.

One test galeria to test for “pitch.” People listen to a series of beeps that are slightly different, and they try to tell which is the odd one. Gallun fails every time.

He still wears a hearing aid.

Scientists at Oregon Health & Science University’s hearing research center, from left, Peter Steyer, Lina Reiss, John Brigande and Alfred Nuttall.

Lynne Terry The Oregonian/OregonLive

Researcher: Gallun to develop tests for speech perception

Brigande focused on testing in the lab.

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Researcher: Gallun to develop tests for speech perception

Brigande focused on testing in the lab.
Researcher: Nuttall rebuilt OHSU department

Lynne Terry  The Oregonian/OregonLive

In his early 20s, Alfred Nuttall developed a ringing in his ears. He saw a doctor but nothing could be done. Except for the tinnitus, his hearing was quite normal. That didn't last.

By the time he hit his late 40s, he needed hearing aids. Today, at 73, he can manage a conversation without them but still wears them every day.

"Hearing aids are something you should get used to," he said. "When you're wearing them, you gradually remap your auditory system to work better and prevent it from degrading."

Unlike some colleagues at Oregon Health & Science University, Nuttall didn’t choose auditory neuroscience as a specialty because of his disability. He was fascinated by the subject.

After obtaining a bachelor's degree in electrical engineering at what is now the University of Michigan, he went to the University of Michigan where he visited various labs. He was drawn to the Kresge Hearing Research Institute, a top-notch institution for auditory neuroscience.

The inner ear is an electro-mechanical system that takes in acoustic energy, converts it to electrical energy and transmits it to the brain.

"It meshes with being an engineer because you can think of it as a system that’s stymulated by acoustics, has physical processes and results in an analysis of sound," Nuttall said. "It's a complicated and interesting system."

He was hired in 1996 from the University of Michigan. All but two faculty members had retired. That gave him a chance to reshape the department, which now has only one faculty member who was hired before he took the helm.

Nuttall has brought on scientists who cover all aspects of the auditory system. His faculty members study everything from the genetics of hearing loss to cochlear implants to the physiology and neuroscience of the auditory system.

Nuttall, who's interested in studying blood flow and cochlear mechanics, has made major contributions of his own, said Jonathan Ashmore, auditory neuroscientist at University College London.

He's developed laser techniques for measuring very small movements in the inner ear and developed an instrument to measure blood flow in the inner ear and working on pharmaceuticals to reduce hearing loss caused by loud sound.

The former could help experts find the source of hearing loss and the latter could help a wide range of people, including those in the military.

"If you had a really successful and relatively benign drug, you would have people taking it before they go to concerts or get out lawnmowers," Nuttall said.

**HEARING FROM A1**

For the scientists, it’s not been easy. Their hearing loss has complicated their lives. They struggled to follow their teachers and professors, keep up in graduate school and complete their post-doctoral training. They had difficulty taking notes. They suffered from a sense of isolation and found it tough to make friends.

But they found a home at the Oregon Hearing Research Center. They’re not alone in their hearing difficulty, and they have a personal through treatments in the womb.

Each and every one of them had to work very hard to overcome the disabilities that they have but they’re all extremely effective communicators and very effective teachers," Stone said. "Each and every one of them is a leader in their field."

Steyger's specialty is the toxicity of certain pharmaceutical drugs to the inner ear. He’s studying a powerful class of antibiotics that prevent bacteria from dividing, aminoglycosides kill bacteria. They include Gentamycin and Streptomycin, which Steyger was given for meningitis. He figures the antibiotic was responsible for his hearing loss or contributed to it.

His Ph.D. thesis at Keele University in England, where he was born, focused on aminoglycoside-induced damage to the inner ear, which governs hearing and balance. After post-doc training in the military, he spent a year studying at the University of California, San Diego.

His doctoral work at Keele, he studied the anatomy and function of the cochlea — part of the inner ear. When he got an offer from OHSU to set up shop on the hill, his lab is training and is looking at how aminoglycosides cross the blood-labyrinthine barrier, which has a similar function to the blood-brain barrier but instead of protecting the brain, it protects the cochlea — the organ of hearing.

In the process of doing this, they're exploiting an existing pathway for other compounds, allowing them to barge through the physical barrier.

Both infections and aminoglycosides can harm hearing by preventing bacteria from dividing, aminoglycosides kill bacteria. They reduce blood flow and cochlear mechanics, have made major contributions of his own, said Jonathan Ashmore, auditory neuroscientist at University College London.

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"If you had a really successful and relatively benign drug, you would have people taking it before they go to concerts or get out lawnmowers," Nuttall said.

"I'm passionately committed to trying to make that happen," said Brigande, 51. "The annual meeting of the deaf is an international meeting of the deaf."

Our first six years at the center, Steyger was the only one with profound hearing loss. Now that he's not the only one with profound hearing loss, it's very stimulating to be around a group with many deaf people," Reiss said. Beth Nakamura / staff

Another researcher at the center, John Brigande, is focused on going upstream to the blood-brain barrier.

Like Steyger, Brigande has profound hearing loss. He gradually lost hearing in his left ear from some unknown cause. By the time he was in college, he had to wear hearing aids. He ended up doing post-doctoral training with a hearing scientist at Purdue University in Indiana in an environment that accommodated his disability.

His choice to focus on hearing was strategic, he said.

"I expected that they would be more welcoming of a hearing-impaired person," said Brigande, 51. "The annual meeting of the deaf is an international meeting of the deaf."

As director of the Oregon Hearing Research Center, Nuttall doesn't plan to retire. He has a legacy to continue.

OHSU scientists Peter Steyger, left, and Linda Reiss facilitate a conversation during a class. "It's very stimulating to be around a group with many deaf people," Reiss said.

Her lab is trying to understand why some people with hybrid cochlear implants — which combine an implant with hearing aid in the same ear — do well while others don’t. Steyger, who has a traditional cochlear implant, takes a keen interest in her work, feeding her hypotheses to test.

During his first six years at the center, Steyger was the only one with profound hearing loss. Now that he's not alone, he enjoys a sense of community.

"It's very stimulating to be around a group with many deaf people," Reiss said.

When first arrived, he said he often wondered whether he was there as the token faculty member with hearing loss.

Then OHSU hired Brigande, followed by Reiss. Today they all need hearing aids to do their ground-breaking work.

"Our field's been redirected by these individuals," Stone said. "They've highlighted new questions. They've taken the research in new directions and that's influenced people to follow."