## "Who's in the House Tonight?"

Robert J. Lefkowitz, MD (AΩA, Columbia University Vagelos College of Physicians and Surgeons, 1965) is a Nobel-Prize-winning scientist (Chemistry, 2012).

Randy Hall, PhD, is a Professor in the Emory University School of Medicine.

Editor's Note: The following is excerpted from A Funny Thing Happened on the Way to Stockholm by Robert Lefkowitz and Randy Hall. Published by Pegasus Books. Reprinted with permission. All rights reserved.

Twas driving my car in the dead of night and could not

keep my eyes open. Having worked a twenty-four-hour shift at the hospital for the third time that week, and with two young children at home, I was operating on less than twenty hours of sleep for the entire week combined. I was an intern now, a member of the house staff at the Columbia-Presbyterian Medical Center, and the schedule was killing me. Just the week before, during a dinner at home with my wife Arna and our two young sons, I had fallen asleep at the table and faceplanted into a plate full of mashed potatoes and peas. Now, as I sped home through the darkness on the West Side Highway, it felt good to just let my eyes drift closed to rest them for a few seconds.

Suddenly, I was jarred to consciousness by a loud bump. My car had drifted across the right lane and hit the curb. I rapidly spun the steering wheel

to correct course and get back on the road. As I tried to get my bearings, and also pick up the stethoscope that had fallen from the pocket of my white jacket, a siren began to wail and blue lights flooded my rearview. I pulled the car over.

"Doc, what's going on?" the cop asked as he approached my car. "You were weaving all over the road back there. Have you been drinking?"

"Absolutely not, officer. I just worked a long shift at the hospital and I'm trying to get home to my family. Can't you cut me a break?"

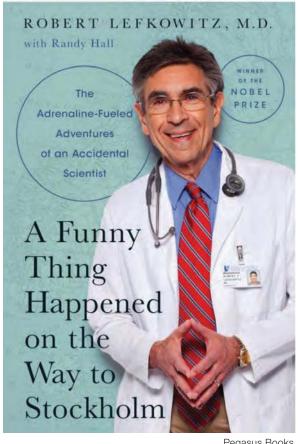
"Sorry, doc, the law's the law. Your license, please." I handed the cop my driver's license and his eyes widened. "Lefkowitz, huh? You any relation to Louis Lefkowitz?"

> The attorney general of the state of New York at that time (1966) was Louis Lefkowitz. He was no relation to me, as far as I knew. However, my grandfather, a hat maker from Poland, was, amazingly, also named Louis Lefkowitz. I answered the policeman honestly.

> "Louis Lefkowitz? Yeah, he's my grandfather."

> "Oh geez," said the cop. "Well, I guess there's no point in me giving you this ticket. Your grandfather will just have it tossed. Okay, doc, I'm letting you go with a warning. Please drive home carefully." And I did...thanking the gods of coincidence all the way.

> The bone-crushing fatigue I was feeling that night was a constant in my life, but I was loving my internship nonetheless. I was a real doctor now, and it was a thrill to walk into the hospital every day knowing I was in charge of a whole roster



Pegasus Books

48 The Pharos/Winter 2021 of patients. It was also scary, because I was now the one who was supposed to know what to do in all situations. Fortunately, I worked with a number of senior nurses who were accustomed to breaking in new interns. If I was treating an injured patient in the ER but forgot to order pain relief, for instance, one of the nurses would gently prod me to make up for my oversight.

"Doctor, you'd like to give this patient some morphine, correct? Would five milligrams be about the right dose?"

"Yes, yes, very good," I'd say, feeling both sheepish and thankful in equal measure. I made numerous little mistakes in my first few weeks as an intern, but fortunately the talented professionals around me were able to compensate for my lack of experience. Some of my fellow interns made clear to the nurses that they did not appreciate being corrected, but I was always grateful for the help. I viewed these senior nurses like mentors, and appreciated the way they tried to instruct me without showing me up. Later in my career, when I became a mentor, I tried to take a similarly positive approach with my trainees, as I never forgot how much such encouragement meant to me when I was a struggling intern.

The stress of my internship was compounded by the deep concern I felt about my future. I waited each day for news about whether I would receive a coveted position in the U.S. Public Health Service to conduct research at the NIH in lieu of serving as a military doctor in Vietnam. Concern over my impending service weighed on me, although the hundred-hour workweeks and constant stress of my hospital work kept my mind occupied. My chief resident, Bill Lovejoy, pushed the house staff mercilessly. Bill was a former Yale football player who cut an imposing figure as he strode the hospital wards. Despite his gruff exterior, he was one of the finest physicians I ever encountered, and I learned a lot about doctoring from him. Bill was tough as nails and prided himself on never sleeping. If I was working a late-night shift and tried to sneak away when things were quiet to catch a half-hour nap in the on-call room, Bill would tease me in front of the nurses. Looking back on that era, it seems ridiculous that the entire Columbia house staff was so deprived of sleep and half-functional most of the time. These days, hospitals have changed their rules and placed restrictions on the number of hours that interns and residents can work in a given week. In the 1960s, though, shunning sleep was a key rite of passage by which young doctors demonstrated their toughness.

I required prodigious amounts of coffee to stay awake most days, and the flood of coffee plus the nonstop stress wreaked havoc on my gut. I developed persistent diarrhea, which is never good, but is especially bad when patients are counting on you to deliver timely medical care. During long shifts tending to one patient after another, I couldn't possibly take time to run to the bathroom every fifteen minutes. To combat my GI troubles, I began self-prescribing a syrup called paregoric, which was a tincture of opiates. I would walk around the wards swigging it straight from the bottle, like it was a whiskey flask. The paregoric worked wonders in terms of stopping the diarrhea, but also had the unfortunate side effect of completely paralyzing my gut. Nothing at all was moving through my GI tract anymore, and I developed excruciating cramps with a high fever.

I had to be admitted to the hospital as a patient, and Bill Lovejoy insisted on overseeing my care. He wasn't exactly a sympathetic caregiver, and kept reminding me that because of my stupidity another member of the house staff had to be in the house (i.e., on call) rather than enjoying a scheduled night off. Bill also enjoyed pointing out that the standard protocol for these types of gut problems was to perform a sigmoidoscopy to make sure there wasn't a blockage. In those days, sigmoidoscopies were not performed with thin, flexible filaments like they are today, but rather with solid steel rods that were profoundly uncomfortable as they probed the sigmoid colon.

"Hey Lefkowitz," Bill kept saying with a smile. "If you're not better in forty-eight hours, you're gonna be riding the silver pony!" Needless to say, I recovered rapidly.

Shortly after this incident, I got a brief respite from Bill. By tradition, there was one week every year when the chief residents of Columbia and Harvard traded places, with the goal of having an exchange of ideas and best practices between these two great medical communities. This year in particular was exciting, with Bill Lovejoy bringing his unique brand of tough love to Harvard, and Columbia welcoming Sam Thier (A $\Omega$ A, SUNY Upstate Medical University College of Medicine, 1959), who was legendary for both his brilliance and his pugnaciousness. Thier was known to take sadistic pleasure in putting interns in their places by showing them how little they knew. When Thier arrived, I found out I was assigned to be the first intern to go on rounds with him the next morning, and I was absolutely terrified.

One of the first patients we saw was a patient of mine with a rare kidney problem. Thier's specialty was nephrology, so he took a keen interest in the case. He examined the patient's chart and sneered.

"You're probably not aware, Lefkowitz, but last week

The Pharos/Winter 2021 49

there was a big review in the *New England Journal of Medicine* about cases like this," he said when we stepped out of the room. "This review showed clearly that treatment Y is better than treatment X, so I want to know why the hell you're pursuing treatment X with this patient."

As fate would have it, I had in fact read the review article to which he was referring, and I knew he had his information wrong. Less than a day earlier, I just happened to be perusing this issue of the journal, which was laying around in our house staff library, and I'd noted this article about the rare kidney disease that one of my patients had. I was certainly no great connoisseur of the literature at that point in my career, so it was just a stroke of random luck that I'd stumbled across this review article. Nonetheless, having read the article mere hours earlier, I knew for a fact that Thier had misremembered the conclusions of the article, and I told him so.

"Well, I'm sure you're wrong, Lefkowitz," he said with unshakable Harvard confidence. "Do you happen to have this issue of the journal around so we can settle this matter?"

Naturally, I knew right where the journal issue was, because I had just read it the day before. I brought the journal to him and watched the smug smirk dissolve from his face as he read over the abstract and realized that the study had in fact recommended treatment X, the treatment I was giving my patient. After this incident, I became concerned that Thier might now make my life a living hell for the rest of the week because I had shown him up, but in fact just the opposite happened. We went on rounds together several more times that week, and each time he delighted in telling the tale to the other house staff members who accompanied us.

"I was on rounds my first day here with this kid Lefkowitz, and he absolutely nailed me!" he'd say, roaring with laughter. "I had some information backward about a kidney treatment, and he really put me in my place." This incident gave me a great confidence boost and also heightened my reputation amongst my peers, who all took pleasure in seeing the swaggering chief resident from Harvard forced to back down.

After a week, Thier departed back to Boston, Lovejoy returned, and I kept waiting to learn whether my next move would be to the NIH or Vietnam. Finally, a phone call came for me at the hospital and someone yelled down the hall that it was from the NIH. I raced to the phone and picked up the receiver. The call was from Jesse Roth (A $\Omega$ A, Albert Einstein College of Medicine / Montefiore Medical Center, 1975), one of the investigators who had interviewed me during my visit to Bethesda, and he wanted to know if

I would be interested in joining his research group. I accepted on the spot and raised my arms in triumph when I hung up the phone.

That evening, I celebrated the news with Arna. Several months earlier, we had welcomed our third child, a daughter named Cheryl, and moved to a two-bedroom apartment in Yonkers. Family life was sweet, other than the fact that I was falling over from exhaustion when I came home from work most nights. I wanted to spend more time playing with my kids, but my insane work schedule and constant sleep deprivation were having adverse effects on my parenting. There was one incident, though, when my medical training did have a positive impact on my family.

My oldest child, David, who was then four years old, was sick in bed one morning with a fever. I checked in on him, then gave Arna a kiss and headed out the door to go to my next shift at the hospital. I stepped into my car, but then paused. David just didn't look right. There was something about him, especially his breathing. I pulled the key out of the ignition and walked back into the house. Arna nearly dropped her coffee mug when she saw me.

"Aren't you on duty in half an hour?" she asked.

"I'll get someone to cover," I said, picking up the phone and dialing the hospital. "I just want to sit with David for a while. He doesn't look right to me."

I sat on the edge of David's bed and took his temperature several times over the next hour. His fever was rising. Worse, his breathing was becoming more labored. I wasn't exactly sure what the problem was, but my medical intuition told me that something was wrong. I scooped David up in my arms and headed to my car. Arna's mother had just come over, so I asked her to stay home with our other two children. Arna placed a quick call to David's pediatrician to let them know we were coming and we jumped in the car.

It was a twenty-minute drive, and during the journey David's condition began to rapidly deteriorate. With Arna swaddling him in a blanket in the passenger seat, David's breathing was becoming increasingly difficult and he was getting blue in the face with cyanosis. I suspected he might have epiglottitis, an inflammation of the lid that covers the windpipe. Such infections are rare but potentially deadly because the inflamed epiglottis can totally block the trachea and prevent breathing if not treated immediately. David's condition was worsening by the minute and I could hear him gasping for air. Panicked, I stepped on the accelerator and began hurtling at top speed through the streets of New York City, weaving in and out of traffic and running red lights.

The Pharos/Winter 2021

We arrived at Albert Einstein Medical Center, jumped out of the car in front of the main entrance, and raced inside. A nurse tried to stop us, yelling that the doctor was with a patient, but I ran past her and busted into the examining room with David in my arms. The pediatrician immediately saw that David's face was blue, and looked down David's throat for a few seconds to confirm that it was indeed epiglottitis. He paged an emergency procedure, and at once there was a flurry of activity with nurses and staff members sprinting at full speed as David was wheeled to an operating room down the hall. I ran to the operating room and was met there by the pediatric anesthesiologist, who had just arrived by rushing up the stairs and was out of breath as he spoke.

"I'm gonna take one shot at sliding a tube through his nose and down his throat, but it'll have to be a perfect shot because the opening left in his throat is so small," the anesthesiologist said. "If that doesn't work, we'll have to trake him." By "trake," he meant perform a tracheotomy, a dramatic surgery that would involve slicing open David's throat to insert a tube that would allow him to breath on a ventilator.

I was asked to step out of the room, which is a helpless feeling for a doctor whose son is in a life-or-death situation. Fortunately, the anesthesiologist was a wizard with the tube and managed to get it down the throat on the first try without the need to cut open David's neck. David then spent the next several days in intensive care while taking antibiotics to treat the infection.

While I sat vigil with David in the intensive care unit the next day, I reflected on what had made me stay home the previous morning. David had basically just been a kid with a fever, and kids are always running fevers. However, if I had left and gone to work that morning like normal, David probably would have died. Every good physician has to develop a sixth sense about when things aren't right, and somehow that morning my sixth sense had told me to stay with David.

After taking a few days off to spend with David while he recovered, I returned to the wards for my final clinical rotation. In a few weeks, I would be driving my family to Maryland so that I could begin my fellowship at the NIH. The last rotation of my junior residency would be in Harkness Pavilion, a section of the Columbia Medical Center with private rooms where many of the wealthier patients were treated.

One of the most famous actresses in the world at that time was admitted to Harkness in the early days of my rotation. This actress had suffered several fainting spells, including one onstage during a performance on Broadway. The tabloids all ran front-page stories about her, saying that she was in the hospital being treated for "exhaustion." While the gossip columnists chattered about the impact of this episode on her career, I sat at her bedside and tried to figure out what was wrong with her.

We ran blood tests and diagnosed her with an extreme case of hypokalemic alkalosis. This meant that her blood was too low in potassium (hypokalemic) and too high in pH (alkalosis). Basically, her blood electrolytes were off-kilter. But the question was: why? There are a number of potential causes of hypokalemic alkalosis, and I took a detailed history from her in order to start crossing potential causes off the list. Hypokalemic alkalosis can be caused by certain drugs, but she insisted that she was not taking any of the drugs I mentioned. Another potential cause is too much licorice. I asked her several times if she had an affinity for licorice, or perhaps licorice-flavored cocktails, but she told me that in fact she hated licorice and hadn't eaten it in years.

For several days, I was mystified, as was the attending physician on the case, Stuart Cosgriff (A $\Omega$ A, Columbia University Vagelos College of Physicians and Surgeons, 1963). He was one of the most distinguished physicians on the Columbia faculty at that time, a real doctor's doctor. Cosgriff advised me that we needed more information from the patient to help crack the case, and I told him that I would do my best.

I spent more time talking to the actress, trying to get her to open up. She had a young son, so we talked about our kids. We also talked about our mutual admiration for Robert Kennedy, the presidential candidate who had been tragically assassinated several days earlier. We talked about her hopes and dreams and her various upcoming projects. She told me about the intense pressure she felt every day as a public figure, and how the tabloids were always commenting on her weight. Then, she confessed that sometimes after meals she felt guilty about eating and made herself throw up. She also sometimes abused enemas as a weight-loss tactic. As it turns out, excessive vomiting and frequent enemas are known causes of hypokalemic alkalosis, so this revelation seemed to explain her condition. However, it wasn't until she began to trust me that she was willing to admit to these behaviors.

I was moved by her story, especially because she seemed like one of the nicest people on the planet. At the same time, I was completely shocked. I had never heard of someone intentionally throwing up after meals. This eating disorder would later be named bulimia, but nobody

The Pharos/Winter 2021 51

## Reflections

in that era had heard of it, and we certainly weren't taught about it in medical school. Flying by the seat of my pants, I counseled the actress that she absolutely needed to stop throwing up after she ate and also to stop abusing enemas. If left unchecked, hypokalemic alkalosis can lead to heart problems, kidney problems, and eventually death. I told the actress that if she wanted to see her son grow up, she needed to take care of her own health, and that this behavior was a serious threat to her life. She received the message well, vowing to stop at once and thanking me profusely for listening to her and lending a sympathetic ear.

When I presented the wrap-up of the case to Cosgriff, he was impressed. He noted that the rapport I had developed with the patient, especially my careful listening to her life story, was the key to solving the mystery. We then discussed other patients he was overseeing in Harkness, and he expressed concern about two patients in particular who were not doing well and would require constant monitoring. As he packed up his briefcase and prepared to leave for the evening, he turned to me.

"Who's in the house tonight?"

"Me," I replied. "I'm on duty all night and all day tomorrow."

"That's wonderful news," Cosgriff said. "I'll sleep well knowing that you're in the house."

These words from Cosgriff represented one of the peaks of my professional life to that point. The fact that this legendary physician trusted me with his patients was the highest accolade I could imagine. I felt like I had really made it. Not only was I a doctor, but I was a *good* doctor. I had found my calling. Or so I thought.

Little did I know it at that time, but I was on the verge of developing an obsession that would divert me from the full-time practice of medicine and completely change the course of my life.

The author's E-mail address is lefko001@receptor-biol.duke.edu.

The Pharos/Winter 2021