Life of a Statistician @ Lilly

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Senior Director—Statistics, Data and Analytics
Eli Lilly and Company

NISS Virtual Career Fair
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Wei Shen, Ph.D.

Statistical Leader in Drug Development:
- Osteoporosis
- Men’s Health
- Autoimmune Disorders
- COVID-19

Roles
Technical roles:
- Principal Research Scientist (2001-2003)
- Research Advisor (2010-2011)

Leadership roles:
- Head/Director (2003-2009)
- Senior Director (2011 to Current)

External Activities
- American Statistical Association
  - Fellow
  - Chair, committee of nominations
- International Chinese Statistical Association
  - President
- Journal of Biopharmaceutical Statistics
  - Associate Editor
Our Purpose + Values

Lilly unites caring with discovery to create medicines that make life better for people around the world.

OUR VALUES

Integrity  Excellence  Respect for People
Global Fast Facts

A heritage of 145 years, founded on May 10, 1876

- Headquarters located in Indianapolis, Indiana, U.S.A.
- Approximately 34,000 employees worldwide
- More than 7,900 employees engaged in research and development
- Clinical research conducted in more than 55 countries
- Research and development facilities located in 8 countries
- Manufacturing plants located in 8 countries
- Products marketed in 120 countries
LILLY IS PROUD TO CALL INDIANAPOLIS HOME!

*Time* magazine ranked Indianapolis a **TOP 10 CITY** to start a new career.

Indianapolis is home to the two largest single-day sporting events in the world, the **Indianapolis 500** and the **Brickyard 400**.

Indianapolis has a booming craft beer and food scene.

Indianapolis is the **13TH LARGEST CITY** in the United States.

Indianapolis is the home of the:
- Pacers & Fever
- Colts
- Indy Eleven
- Indians
- Indy Fuel

INDIANAPOLIS’ CULTURAL TRAIL is ranked one of America’s Best Urban Bike Trails.

FOR MORE INFO

visitindy.com
downtownindy.org
indianapolis.com
indyculturaltrail.org
indyhub.org
STATISTICS, DATA AND ANALYTICS

Making Life Better ACROSS the Globe THROUGH Efficient and Innovative Statistical Support to Overall Drug Development
Drug Development Process

**Research Discovery**
- Explore and identify biological targets along disease pathways as starting points for treatments.

**Preclinical Development**
- Use medicinal and protein chemistry in conjunction with in-vitro and in-vivo experimentation to evaluate molecules for efficacy and safety.

**Clinical and Product Development**
- Product Development: develop, characterize and produce drug formulations in support of clinical trials and in preparation for commercialization.
- Investigates a molecule's efficacy and short-term side effect profile in a small number of patients.

**Commercialization**
- Manufacturing: large scale production, testing and packaging of medicines for approved treatment of patients.
- RWE: differentiate Lilly’s medicines from other treatments so that payers, patients and doctors understand when and how to use the medicines and the expected patient benefits.

**Clinical Pipeline**
- Phase 1: Investigates the safety of a molecule in human.
- Phase 2: Investigates a molecule's efficacy and short-term side effect profile in a small number of patients.
- Phase 3: Seeks definitive proof of a molecule's efficacy and safety profile in a large number of patients.
- Phase 4: Regulatory Approval.
Areas in Statistics, Data and Analytics
Open Positions & Qualifications

Internship & Co-Op

Intern Qualifications:
- Ph.D. in Statistics or Biostatistics, who will have completed third year of Ph.D. program by May 2022

Co-Op Qualifications:
- Currently working on Ph.D. in Statistics or Biostatistics, with at least three years of completed graduate work.

Research Scientist

Qualifications:
- Ph.D. Statistics or Biostatistics

Sr. Research Scientist

Qualifications:
- Ph.D. in Statistics OR Biostatistics, with at least 3 years of proven experience in clinical research and development
- M.S. in Statistics OR Biostatistics, with at least 11 years of proven experience in clinical research and development

Principal Research Scientist

Qualifications:
- Ph.D. Statistics or Biostatistics
- At least 7 years of proven experience in clinical research and development
Statistical Positions

Research Scientist - Project Statistician

♦ PhD
♦ Study design, data analysis methods, results interpretation, learning/applying new methods, improving existing methods
♦ Partnering with others (scientists, physicians, marketing, etc.) to improve discovery, development and commercialization

Career Paths

♦ Technical
♦ Administrative/Leadership
♦ Combination of two
Advice for Candidates

Interview Preparation

• Ensure your resume highlights your accomplishments
• Research the company
• Get familiar with the job description
• Practice your technical presentation
• Explore common interview questions
• Prepare questions for the interviewers

During Interview

• Be clear on what drives and motivates you to work in the pharmaceutical industry
• Respond to questions with real examples
• Provide technical details
• Inquire about next steps
• Stay positive
• Be your authentic self
Considerations for a Successful Career

Technical Ability
Demonstrate technical depth and breadth
Invest in yourself, keep learning

Interpersonal Skills
Develop communication and leadership skills
Seek advice from mentors

External Networks
Join professional societies
Network
Volunteer
We’re doing extraordinary things. Join us and you could be, too!