

Global Head - Modeling and Simulation, Pharmacokinetic Sciences (PKS)

Job ID
REQ-10060031

8月 22, 2025

Switzerland

摘要

Location: Basel, Switzerland or Cambridge, MA, USA

The Global Head of Modeling and Simulation (M&S) is a strategic scientific leader responsible for shaping and executing the global modeling and simulation strategy across all therapeutic areas—from early research to development. This role leads a high-performing team of expert modelers in the Pharmacokinetics (PK) Science department, driving productivity and decision-making in drug discovery and development.

The Global Head will work closely with key departments within Research (including Preclinical Safety, Data and Digital, Pharmacology, Chemistry, and Biologics) and beyond (including Advanced Quantitative Sciences, Technical Research Development) to ensure quantitative integration of disease, target, and compound knowledge—enhancing internal decision-making, contributing to submissions to health authorities, and increasing the probability of success for development candidates.

About the Role

Major accountabilities:

- Lead the M&S organization with responsibility for the management, allocation, and development of all M&S associates and resources and attracting and retaining top talent. Develop and champion a strategic vision to best implement and integrate the four M&S sub teams across data science, translational modeling and quantitative systems pharmacology (QSP), PBPK, and non-clinical statistics.
- Direct, supervise, and manage portfolio of M&S contributions to integrate relevant drug discovery and development, technical, and target / compound / disease area knowledge in the planning and execution of robust development programs and disease area strategies.
- In the Discovery & Preclinical Phases, M&S: M&S function to provide comprehensive support from early discovery to first-in-human clinical entry. Develops systems pharmacology platforms to guide early drug design for optimal therapeutic outcomes. Models biological targets and pathways to assess biomarkers, efficacy, and toxicity. Expands Artificial Intelligence approaches to optimize drug design across multiple therapeutic modalities and across therapy areas. Deploys statistical approaches to maximize impact of preclinical studies.
- In Clinical Ensure strong PBPK contributions to generate mechanistic insights on drug disposition and evaluate the impact of intrinsic and extrinsic factors on drug exposure. Expand PBPK applications beyond small molecules to support broader translational insights. Integrates preclinical and clinical biomarker and competitor data to develop mechanistic models to support FIH dose decisions. Expands the use of mechanistic models in clinical development to inform trial design and regulatory submissions through collaboration with the data and AI and pharmacometrics groups. Supports regulatory documentation and strategy.
- Drive the data strategy covering access, use, and storage of data used by and produced by M&S
- Anticipate organizational needs for M&S and strategic support based on in-depth understanding of the relevant issues and the drug development process. Identify opportunities and advocate and drive integration and implementation of innovation across the drug discovery and development continuum, such as next-generation M&S capabilities for new therapeutic modalities and emerging technologies such as digital twins & artificial intelligence. Lead infrastructure / process / scientific consulting improvement initiatives.
- Develop next generation M&S capabilities to serve new therapeutic modalities and emerging technologies such as digital twins and Artificial Intelligence.
- Provide on-boarding, training, mentoring and career development of staff, and oversee constructive and continuous performance evaluation.
- Member of the PK Sciences Leadership Team, contribute to overarching disciplinary and departmental strategy for PKS research and development across all Therapeutic Areas.

Key performance indicators:

- Significant strategic and scientific impact on Biomedical Research projects and portfolio.
- Recognized as leading a team with best-in-class drug discovery and development M&S capabilities
- Develop next-generation M&S capabilities

- Development of staff, retention of high-performance associates, and driving a high-performance culture.
- Contributions to high functioning PK sciences Leadership Team
- Demonstrated and visible thought leadership through external visibility, reputation and shaping of industry practice.

Minimum Requirements:

Work Experience:

- Ph.D in pharmacology, biology, engineering, mathematics, statistics, computational science, or a field with significant modeling-related content (or equivalent Ph.D/MD)

Skills:

- 15 years of relevant postdoctoral, academic, industry, or government experience with a track record as a leader and individual contributor in one or more of the following fields: Quantitative Pharmacology, Systems Pharmacology, Mechanistic Modeling, Physiologically based Pharmacokinetic Modeling, Disease Modeling, Pathway Modeling, Pharmacometrics. • Broad, integrative experience and a driven approach to the use of modeling and simulation in drug research and development. • Expert knowledge of drug discovery, drug development, and HA guidelines relevant to pre-clinical and clinical drug development. Substantial track record of identifying and leading contributions to policies that shape best practice in M&S. • Internal and external strong and established track record of establishing M&S excellence. • Excellent critical thinking and problem-solving skills. Strong record in leading global scientific improvement/change initiatives. • Significant experience in coaching, development, and influencing scientists and physicians

Languages :

- English.

Accessibility and accommodation

Novartis is committed to working with and providing reasonable accommodation to all individuals. If, because of a medical condition or disability, you need a reasonable accommodation for any part of the recruitment process, or in order to receive more detailed information about the essential functions of a position, please send an e-mail to inclusion.switzerland@novartis.com and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

Why Novartis: Helping people with disease and their families takes more than innovative science. It takes a community of smart, passionate people like you. Collaborating, supporting and inspiring each

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部门

Biomedical Research

Business Unit

Pharma Research

地点

Switzerland

站点

Basel (City)

Company / Legal Entity

C028 (FCRS = CH028) Novartis Pharma AG

Functional Area

Research & Development

Job Type

Full time

Employment Type

Regular

Shift Work

No

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