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dsm-firmenich

Kaiseraugst, Switzerland

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Dear Members of the Hiring Committee,

I am writing to express my strong interest in the Pharma & Biological Model Lead position at dsm-firmenich in Kaiseraugst, Switzerland. My doctorate from the Laboratory of Food Biotechnology at ETH Zurich, focusing on complex interactions between vitamins, gut microbial communities, and probiotic microbes, has equipped me with the expertise to lead innovative research projects and manage a team of skilled scientists and technicians.

My doctoral research project has positioned me at the forefront of vitamin B9 and B12 research in relation to gut microbial communities. Throughout my doctoral work, I developed expertise in:

1. Designing and executing complex experimental protocols to study the effect of vitamins on human gut microbial communities and single gut microbes.
2. Developing and applying various biological models, including in vitro fermentation systems for microbial communities and single-microbial cultures. My experience of using single batch fermentations to high throughput models for studying gut microbial communities and single gut microbes has given me a strong foundation in biological models. I am eager to apply this knowledge to develop new cell culture models, including organoids, and to deploy these systems for ingredient screening.
3. Developing and utilizing advanced analytical techniques such as HPLC-RI and UHPLC-DAD for metabolite profiling and vitamin quantification.
4. Analyzing complex datasets, including metagenomic data and metabolite profiles.
5. Translating scientific findings into potential applications for nutritional and pharmaceutical products. I have a proven track record in preparing research protocols and presenting data to diverse audiences, skills crucial for this role.

This work has resulted in several impactful publications that demonstrate my expertise in pharmaceutical sciences and biological models:

1. In a study published in Frontiers in Nutrition (2024), we investigated how different vitamin B12 analogues from gut microbes and diet distinctly impact commensal propionate-producing bacteria in the human gut. We found that these analogues enhanced propionate production, potentially improving overall health. This work showcases my ability to design and execute complex biological studies with direct relevance to human health.
2. Another study in Frontiers in Nutrition (2022) revealed that healthy adult gut microbiota can sustain its own vitamin B12 requirement in an in vitro batch fermentation model. This research demonstrates my proficiency in developing and utilizing innovative biological models to answer critical questions in nutritional science.
3. My recent work (submitted to BMC Microbiology, 2024) investigates the effect of microbially-produced vitamin B9 on the growth and metabolism of butyrate-producing beneficial gut bacteria. This study opens new avenues to produce live biotherapeutics, showcasing my ability to translate basic research into potential pharmaceutical applications.

This experience has equipped me with the skills necessary to lead a team in pharmaceutical and biological model research, evaluate new opportunities and trends, and drive innovation in the development of health-promoting solutions.

My research experience aligns closely with the key responsibilities outlined in the job description:

1. Throughout my Ph.D., I mentored junior scientists including technicians, Bachelor's and Master's students, demonstrating my ability to guide and manage a team. I am prepared to lead and inspire a team of technicians and scientists in application technology and biological & cell culture models. While my background is in food science and microbiology, I have a comprehensive understanding of biological mechanisms that can be applied to pharmaceutical sciences. My work with vitamins B9 and B12 has direct relevance to pharmaceutical applications, and I am committed to expanding my expertise in this area to drive advancements in galenic form development and characterization.
2. My doctoral research resulted in several impactful publications, demonstrating my ability to innovate and collaborate effectively. I am excited about the prospect of evaluating new opportunities and trends, interfacing with Innovation Managers and Scientists, and actively participating in cross-segment innovation project teams.
3. My experience in designing and executing complex research projects has honed my project management skills. I am adept at setting priorities, defining timelines, and managing resources to achieve target results.
4. My educational background - a Bachelor's in Food Science and Technology, a Master's in Food Science, and a doctorate specializing in gut microbial biotechnology - provides a strong foundation in life sciences. While my specific expertise is in nutrition and gut microbiology, I am confident that my analytical skills, research experience, and passion for scientific innovation will allow me to quickly adapt to and excel in the pharmaceutical sciences field.

I am particularly drawn to dsm-firmenich's commitment to developing cutting-edge solutions that positively impact human health. I am eager to bring my expertise, leadership skills, and innovative mindset to your team, working collaboratively to advance the company's research initiatives and drive scientific breakthroughs.

Thank you for considering my application. I look forward to the possibility of discussing how I can contribute to dsm-firmenich's continued success and leadership in pharmaceutical and biological research.

Sincerely,

Palni Kundra

P.S. I would like to mention that I am also applying for the "Application Scientist (Biotics)" role within dsm-firmenich. My strong interest in both roles stems from my expertise and passion for innovative research in nutrition and health. I believe my skills and experience could be valuable in either position, and I am excited about the prospect of contributing to dsm-firmenich's mission in whichever role best aligns with the company's needs.  
  
Dear Members of the Hiring Committee,

I am applying for the Pharma & Biological Model Lead position at dsm-firmenich in Kaiseraugst, Switzerland. My doctorate from ETH Zurich's Laboratory of Food Biotechnology, focusing on vitamin-microbiome interactions, has prepared me to lead innovative research projects and manage skilled scientific teams.

Key qualifications aligned with your requirements:

1. Leadership: Mentored junior scientists, including technicians, Bachelor's and Master's students, demonstrating ability to guide teams in application technology and biological models. Facilitated a semester laboratory course, enhancing hands-on learning experiences.
2. Biological Model Expertise: Developed in vitro fermentation systems and single-microbial cultures, ranging from single batch fermentations to high-throughput models. Proficient in advanced analytical techniques (HPLC-RI, UHPLC-DAD) for metabolite profiling and vitamin quantification. Experienced in metagenomic data analysis and bioinformatics.
3. Research Innovation and Publications: My research has resulted in several impactful publications:
   * Frontiers in Nutrition (2024): Investigated how different vitamin B12 analogues from gut microbes and diet impact commensal propionate-producing bacteria, enhancing propionate production and potentially improving overall health.
   * Frontiers in Nutrition (2022): Revealed that healthy adult gut microbiota can sustain its own vitamin B12 requirement in an in vitro batch fermentation model.
   * Submitted to BMC Microbiology (2024): Explored the effect of microbially-produced vitamin B9 on the growth and metabolism of butyrate-producing beneficial gut bacteria, opening new avenues for live biotherapeutics.
   * Molecular Nutrition & Food Research (2021): Reviewed the role of dietary micronutrients on gut microbial dysbiosis and modulation in inflammatory bowel disease. These publications demonstrate my ability to design complex biological studies, develop innovative models, and translate research into potential pharmaceutical applications.
4. Project Management: Designed and executed complex research projects, honing skills in prioritization, timeline management, and resource allocation. Proficient in setting up and coordinating stability studies, crucial for pharmaceutical development.
5. Interdisciplinary Background: B.Sc. in Food Science and Technology, M.Sc. in Food Science, and Ph.D. in Gut Microbial Biotechnology. This diverse foundation enables quick adaptation to pharmaceutical sciences and provides a unique perspective on nutritional and health solutions.
6. Innovation and Collaboration: Published impactful research, demonstrating ability to innovate and collaborate across teams. Experienced in translating scientific findings into potential applications for nutritional and pharmaceutical products.
7. Technical Skills: Proficient in R programming, Bash scripting, and version control using Git. Experienced in project management using GitHub, skills valuable for coordinating research efforts and data management.

I am excited about dsm-firmenich's commitment to health-improving solutions and eager to contribute my expertise to advance the company's research initiatives. My experience in evaluating new biological models and opportunities aligns well with the company's innovative approach.

Thank you for your consideration. I look forward to discussing how I can contribute to dsm-firmenich's leadership in pharmaceutical and biological research, particularly in developing new cell culture models and screening systems for innovative ingredients.

Sincerely,

Palni Kundra

P.S. I am also applying for the "Application Scientist (Biotics)" role at dsm-firmenich, as my skills align with both positions. I am enthusiastic about contributing to the company's mission in either capacity, leveraging my expertise in biotics and nutrition science to drive innovation in product development.