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dsm-firmenich

Kaiseraugst, Switzerland

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Dear Members of the Hiring Committee,

I am writing with genuine enthusiasm to express my strong interest in the Application Scientist (Biotics) position at dsm-firmenich in Kaiseraugst, Switzerland. My doctorate from the Laboratory of Food Biotechnology at ETH Zurich, focusing on the intricate interactions between vitamins B9 and B12, human gut microbial communities, and probiotic gut microbes, has positioned me at the forefront of biotics research. I am confident that my expertise uniquely qualifies me to drive innovation in your team's groundbreaking work in dietary supplements, medical, and early life nutrition.

My research experience not only fits with the key responsibilities outlined in the job description but also demonstrates my passion for pushing the boundaries of nutritional science:

1. Solution Development: My doctoral research delved deep into the modulatory effects of dietary and gut-microbially produced vitamins B9 and B12 on complex gut microbiota and individual gut microbes. This work has trained me with invaluable insights for developing cutting-edge solutions in prebiotics, probiotics, and postbiotics. I am eager to translate this knowledge into tangible products that can revolutionize dietary supplements, nutrition and health.
2. Prototype Development: Throughout my Ph.D., I developed skills in designing and executing complex experimental protocols. My work with batch fermentations to study human gut microbial communities and single gut microbes as well as with their inactivated preparations (postbiotics) showcases my versatility in handling various biotics formats, a skill crucial for innovative product development.
3. Stability Studies and Data Analysis: My research demanded meticulous attention to detail in setting up and coordinating stability studies for various vitamin forms and doses. I have mastered the art of analyzing complex data sets, from metagenomic data to metabolite profiles, using advanced techniques such as HPLC-RI and UHPLC-DAD. This experience will be instrumental in driving data-driven decisions in product development.
4. GMP Laboratory Maintenance: My background in food science, coupled with rigorous laboratory experience and industrial internships, has instilled in me a deep respect for maintaining high standards and ensuring unwavering compliance with safety protocols. I understand the critical importance of GMP in developing products that consumers can trust.
5. Documentation and Reporting: My proven track record in writing detailed scientific reports and preparing research findings for publication demonstrates my ability to communicate complex scientific concepts clearly and effectively. This skill is crucial for fostering collaboration and driving innovation within the team.

My doctoral research has resulted in several impactful publications in collaboration with other researchers that demonstrate my expertise in biotics and nutrition science:

1. In the study published in Frontiers in Nutrition (2024), we showed how different vitamin B12 analogues from gut microbes and diet distinctly impact commensal propionate-producing bacteria in the human gut, enhancing propionate production and potentially improving overall 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, providing insights into the self-sufficiency of gut microbial communities.
3. In a review study published in Molecular Nutrition & Food Research (2021), I explored the role of dietary micronutrients on gut microbial dysbiosis and modulation in inflammatory bowel disease, showcasing my ability to conduct deep literature study.
4. My recent work (submitted to BMC Microbiology, 2024) investigates the effect of microbially-produced vitamin B9 on the growth and metabolism of a butyrate producing beneficial gut bacteria, opening new avenues to produce live biotherapeutics.

Although the position requires a master's degree, my Ph.D. in Gut Microbial Biotechnology offers enhanced expertise valuable to this role. My educational background — a Bachelor's in Food Science and Technology, a Master's in Food Science, and a doctorate — provides a comprehensive foundation in food science, nutrition, and gut microbiology and biotics, along with analytical and critical thinking skills. I am confident that this expertise will allow me to contribute immediately and significantly to your team's innovative work, while my passion for continuous learning ensures I will remain adaptable and growth-oriented in this dynamic field.

My research on the interplay between vitamins, probiotics, and postbiotics has given me a unique perspective on developing next-generation nutritional solutions, which makes me genuinely excited about dsm-firmenich's commitment to pushing the boundaries of biotic and nutrition science. I am eager to bring my expertise, dedication, and good spirit to your team, working collaboratively to develop groundbreaking solutions that positively impact human health across all life stages.

Thank you for considering my application. I am submitting my CV, degree certificates, and work reference letter along with this cover letter. I am available for the interviews on the mentioned dates and can start immediately. I look forward to the possibility of discussing how I can contribute to dsm-firmenich's continued success and leadership in the field of nutrition.

Sincerely,

Palni Kundra

P.S. I would like to mention that I am also applying for the "Pharma & Biological Model Lead" role within dsm-firmenich. My strong interest in both roles stems from my expertise and passion for innovative research in biotics to improve 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.