

Dr. Gunpreet Coudert Oberoi, PhD, MS, BDS

Experienced dentist, researcher, and entrepreneur specializing in medical additive manufacturing, patient-specific medical device innovation, and medical device regulation. A significant aspect of my work is the creation of life-like simulation models to prepare medical personnel for emergency situations. My experience with dental drills and a PhD in 3D printing have enabled me to found the future spin-off SVAN, based on a neonatal emergency drill called SVAN. I am also a core member of the European special interest group, EU3DSIG, that promotes the implementation of point-of-care in-house 3D printing in compliance with MDR, and leading the fundraising working group.

Personal Information

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Address: Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, AKH, 4L, Währinger Gürtel 18-20, 1090, Vienna, Austria

Date of birth: 07.11.1990

Professional Experience

Mar 2024 - Present

FFG Spinoff Fellow, Medical University of Vienna

Project leader for SVAN (Safe Vascular Access Needle), advancing neonatal emergency healthcare solutions toward commercialization

Sep 2022 – Present

Senior scientist at ACMIT GmbH (Austrian Center for Medical Innovation and Technology)

Feb 2021 - Feb 2024

Postdoc, Medical Additive Manufacturing, Medical University of Vienna

Focused on medical device innovation using 3D printing technologies for clinical applications in neonatology, radiology, veterinary surgery, craniomaxillofacial surgery

Oct 2017 - Feb 2021

Doctoral candidate, Medical University of Vienna and University Clinic of Dentistry, Vienna

Developing applications of additive manufacturing in medicine and dentistry

Sep 2015 - Aug 2017

Chief Dental Surgeon and Co-Founder, The Dental Home, New Delhi, India
Led a dental clinic, developed patient care protocols, and expanded clinical services in laser-assisted oral surgery and implantology

Academic milestones

Oct 2024- current

Entrepreneur Leadership program, Austrian Start-ups

Mar 2024- Aug 2024

Masterclass in Biotech Enterprise, Business Management and Marketing, Institute of Science and Technology, Klosterneuberg, Austria

Oct 2017 - Feb 2021

PhD, Center of Medical Physics and Biomedical Engineering and University Clinic of Dentistry, Medical University of Vienna, Austria

Jan 2016- May 2017

Fellowship, Affiliate Associate Fellow, American Academy of Implant Dentistry, Chicago, United States

May 2016- Dec 2016

Diplomat Congress of Oral Implantologists, Asia, International Congress of Oral Implantologists

Feb 2016- Dec 2016

Mastership in Dental Lasers, University Clinic of Dentistry, Medical University of Vienna, Austria

Aug 2009- Sep 2014

Bachelor of Dental Surgery, Delhi University, Maulana Azad Institute of Dental Sciences, Delhi University, New Delhi, India

Certifications and skills

Medical Device Regulation Licenses and Certification courses at SIQ Ljubljana–ENISO13485:2016, Classification of Medical devices, Clinical investigation, Clinical evaluation, Medical device risk assessment ISO 14971, Biocompatibility

Awards and Achievements

Nov 2024: Selected in Top 5 Best Female MedTech Founders at MEDICA 2025, Düsseldorf for SVAN- Category: Female MedTech founders

Nov 2024: Winner at Expo Austria 2025, Osaka, Japan for SVAN (Safe Vascular Access Needle)- Category: Call for Innovations

Oct 2024: Winner at Falling Walls Science Summit Austria and awarded a cash prize € 1.500,00- and Entry ticket for Pitching at Grand Finale Falling Walls Science Summit Berlin 2024 for SVAN- Category: Emerging Talent

Sep 2024: 1st Prize of '3D Printing in Life Sciences' Award for SVAN, and a Filament 3D Printer, at European Healthcare Forum for Additive Manufacturing, Basel, Switzerland- Category: Research in Life Sciences

Aug 2024: 1st Prize at IECT Hermann Hauser Summer School 2024 and awarded a cheque of €100.000,00 for SVAN- Category: Start-up idea

Jun 2024: Winner at xbio-Demo Day, XISTA, Austria for SVAN- Category: Business Idea

Sep 2021: 1st Prize at European Society of Artificial Organs (ESAO)- Category: Poster Presentation

Sep 2021: 2nd Prize At ÖGBMT, (Österreichische Gesellschaft Für Biomedizinische Technik) And Tu-Graz- Category: Dissertation in Biomedical Engineering

Apr 2019: 3rd Prize at RDPM Conference Brunel University London for "Additive Manufacturing: A Growing Platform to Replace, Reduce, And Refine Animal Experiments"- Category: Scientific Paper Presentation

Patents

International Application No.PCT/IB2019/061457;

Title of invention: "Obturator for covering a defect of the hard palate and soft palate"

Inventors: Gunpreet Oberoi (50%), Ewald Unger (50%)

Patent was included in HORIZON 2020 EU Grant 'INKPlant' as a Clinical Use Case. The technology has now been advanced through the spin-off Agensmed GmbH, focusing on patient-specific medical implants. Patent has expired.

Teaching

2022-current: Lecturer, Charite Neonatologie Fortbildung, Berlin, Topic: 3Dprinting in Neonatology

2021-current: CCP Ringvorlesung: Lectures and Teaching Sessions, MUW, Topic: 3Dprinting in Neonatology

2022- current: MUW Basic Lectures, Topic: Anatomical Modelling

Funding

Granting year	Duration	Granting agency	Project	Funding (€)	Role
2023	03.2024-10.2025	FFG	SVAN- Safe Vascular Access Needle for Emergency in Neonates	456,000	Project Leader
2024	08.2024-12.2026	Hermann Hauser Investment Group	SVAN- Safe Vascular Access Needle for Emergency in Neonates	100.000	Project Leader
HORIZON 2020	01.2021-06.2024	EU	INKPlant - Clinical Use case Cleft Palate	5.9 mio	Co-applicant, Leader of Clinical Use case Cleft palate
2020-21	01.2020-12.2020	CCP Innovation Lab, MUW	3D INPRESSION	10,000	Co-applicant and PhD candidate
2020-21	01.2019-12.2019	INSPIRE	INSPIRE	18,000	Co-applicant and PhD candidate
2019-20	01.2019-12.2019	CCP Innovation Lab, MUW	3D RETENTION	10,000	Co-applicant and PhD candidate
2018	01.2018-06.2018	FFG	3D microtissue for regenerative dentistry	10.000	Awardee

Publications

40 peer reviewed publications/proceedings, 4 reviews, 2 book chapters, cited 417 times (without self-citations), h-index 8 (as of 02.08.2024, Google Scholar). 10 most relevant are as follows:

1. **Oberoi G**, Kornfellner E, Aigner DA, et al. Design and optimization of a novel patient-specific subperiosteal implant additively manufactured in yttria-stabilized zirconia. *Dent Mater*. Published online July 30, 2024. doi: 10.1016/j.dental.2024.07.008
2. Schneider KH, **Oberoi G**, Unger E, Janjic K, Rohringer S, Heber S, Agis H, Schedle A, Kiss H, Podesser BK, Windhager R, Toegel S, Moscato F. Medical 3D printing with polyjet technology: effect of material type and printing orientation on printability, surface structure and cytotoxicity. *3D Print Med*. 2023 Sep 28;9(1):27. doi: 10.1186/s41205-023-00190-y. PMID: 37768399; PMCID: PMC10540425.
3. Biglino G, Hopfner C, Lindhardt J, Moscato F, Munuera J, **Oberoi G**, Tel A, Esteve AV. Perspectives on medical 3D printing at the point-of-care from the new European 3D Printing Special Interest Group. *3D Print Med*. 2023 May 5;9(1):14. doi: 10.1186/s41205-022-00167-3. PMID: 37142797; PMCID: PMC10159822.
4. Baumgartner D, Schramel JP, Kau S, Unger E, **Oberoi G**, Peham C, Eberspächer-Schweda M. 3D printed plates based on generative design biomechanically outperform manual digital fitting and conventional systems printed in photopolymers in bridging mandibular bone defects of critical size in dogs. *Front Vet Sci*. 2023 Mar 30; 10:1165689. doi: 10.3389/fvets.2023.1165689. PMID: 37065217; PMCID: PMC10098091.
5. **Oberoi G**, Hatamikia S., Zacher A., Kronreif G., Birkfellner W., Kettenbach J., Ponti S., Buschmann M., Irnstorfer N., Unger E. (2022). Additively manufactured test phantoms for mimicking soft tissue radiation attenuation in CBCT using polyjet technology, *Z. Med. Phys.* doi: <https://doi.org/10.1016/j.zemedi.2022.05.002>
6. **Oberoi G**, Eberspächer-Schweda, M. C., Hatamikia, S., Königshofer, M., Baumgartner, D., Kramer, A.-M., Schaffarich, P., Agis, H., Moscato, F., and Unger, E. (2020a). 3D printed biomimetic rabbit airway simulation model for nasotracheal intubation training. *Front. Vet. Sci.* 7, 587524. doi:10.3389/fvets.2020.587524.
7. Wagner, M., Werther, T., Unger, E., Kasprian, G., Dovjak, G., Dorfer, C., Schned, H., Steinbauer, P., Goeral, K., Olischar, M., **Oberoi G**. (2021). Development of a 3D printed patient-specific neonatal brain simulation model using multimodality imaging for perioperative management. *Pediatr. Res.* doi:10.1038/s41390-021-01421-w.
8. Hatamikia, S., **Oberoi G**, Unger, E., Kronreif, G., Kettenbach, J., Buschmann, M., Figl, M., Knäusl, B., Moscato, F., and Birkfellner, W. (2020). Additively Manufactured Patient-Specific Anthropomorphic Thorax Phantom with Realistic Radiation Attenuation Properties. *Front. Bioeng. Biotechnol.* 8, 385. doi:10.3389/fbioe.2020.00385
9. **Oberoi G**, Nitsch, S., Janjić, K., Shokoohi-Tabrizi, H., Moritz, A., Moscato, F., Unger, E., and Agis, H. (2021). The impact of 3D-printed LAY-FOMM 40 and LAY-FOMM 60 on L929 cells and human oral fibroblasts. *Clin. Oral Investig.* 25, 1869–1877. doi:10.1007/s00784-020-03491-2.
10. **Oberoi G**, Janjić, K., Müller, A. S., Schädl, B., Moritz, A., and Agis, H. (2020b). Contraction dynamics of dental pulp cell rod microtissues. *Clin. Oral Investig.* 24, 631–638. doi:10.1007/s00784-019-02917-w.