

Research profile for applicants

Name of DKFZ research division/group:	<i>Translational Radiotheranostics (E270)</i>
Contact person:	<i>Martina Benešová-Schäfer (5355, m.benesova@dkfz.de)</i>
Group homepage: <i>Visit this website for further information on current research and recent publications.</i>	Translational Radiotheranostics (dkfz.de)
Eligibility:	<ul style="list-style-type: none"> <i>DKFZ Postdoctoral Fellowships</i>

RESEARCH PROFILE AND PROJECT TOPICS

The Junior research group Translational Radiotheranostics pursues highly innovative projects at the frontiers of interdisciplinary cancer research. The use of so-called “theranostics” [from Greek words *therapeia* (therapy) and *gnosis* (knowledge)] differs from the vast majority of other cancer therapies in its capacity for simultaneous imaging and treatment. In particular, “radiotheranostics” – as the most rapidly developing medical field – has already fundamentally changed the landscape for thyroid (radioiodine), neuroendocrine (Lutathera®), and prostate cancer (Pluvicto®). The palpable excitement in this field is catalyzing the search for more radiotheranostic approaches and applications with a tremendous market valuation. The greatest improvements in outcomes are likely to be achieved in cancers with high incidence and mortality rates. Thus, our main focus currently lies on the design, development and evaluation of novel breast cancer (BCa)-targeting radioligands for both molecular imaging by positron emission tomography (PET) and single photon emission computed tomography (SPECT), targeted radionuclide therapy (TRNT) with either beta/(β)- or alpha/(α)-emitters, online therapy-monitoring and post-therapeutic imaging. The main objective is to offer an alternative for women with different subtypes of advanced BCa who do not respond to any available treatment options. Ultimately, the most promising novel radiolabeled compounds are aimed to be translated into the clinics for both diagnostic and therapeutic applications within the frame of personalized and precision nuclear medicine.



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