



Long Bio:

Petra Kok received her MSc degree in computational science in 2002 at Utrecht University. Thereafter, she became employed at the Academic Medical Center Amsterdam and did her PhD in hyperthermia, focusing on hyperthermia treatment planning (PhD degree in 2007). She received several young investigator and editorial research awards.

Currently, she is responsible for the clinical hyperthermia treatment planning at the Amsterdam University Medical Centers. Her continued research on hyperthermia has resulted in a research line focusing on clinical hyperthermia treatment planning using on-line adaptive strategies. Furthermore, she explores biological modelling to predict the hyperthermic radiosensitization in terms of effective enhanced radiation dose. Her multidisciplinary research also aims to improve the quality of hyperthermia treatment planning by including patient-specific dielectric tissue properties reconstructed using MR techniques and using advanced thermal modelling techniques including discrete vasculature.

The impact of her research is enhanced by ongoing translation of the developed planning modules into a commercially available clinical hyperthermia treatment planning package for use by clinical hyperthermia professionals worldwide.

She has authored and co-authored over 75 peer-reviewed journal papers and has been awarded several research project grants:

- UVA 2017-10873: Clinical evaluation of the benefit of planning based steering to improve effectiveness of hyperthermia in cervical cancer patients. Project leaders H.P. Kok, J. Crezee, L.J.A. Stalpers. Funding €326.486,-; 1 Postdoc
- UVA 2017-10595: Development of treatment planning to optimize clinical effectiveness of hyperthermic intraperitoneal chemotherapy in colorectal cancer patients. Project leaders J. Crezee, N.A.P. Franken, H.P. Kok, P.J. Tanis. Funding € 563.765,-; 2 PhD students
- UVA 2012-5540: Towards biological treatment planning in radiotherapy combined with hyperthermia to improve clinical outcome. Project leaders H.P. Kok, N.A.P. Franken, L.J.A. Stalpers. Funding € 553.300,-; 2 PhD students
- UVA 2012-5393: Active hot spot suppression to improve thermal dose and clinical outcome of locoregional hyperthermia treatment. Project leaders J. Crezee, H.P. Kok, L.J.A. Stalpers. Funding € 339.300,-; 1 Postdoc.

She is PI in the Marie Skłodowska-Curie Action HYPERBOOST project (H2020-MSCA-ITN-2020-955625).

She has been co-promotor of three PhD students:

- G. Schooneveldt (2019),
- C.M. van Leeuwen (2018),
- A.L. Oei (2017).

Other activities:

- Invited lectures at several conferences and other meetings: MyWave 2020, Lisbon; EuCAP 2020, Copenhagen; PIERS 2019, Rome; STM 2019, St. Pete Beach; Kantonsspital Aarau 2019; San Giovanni Hospital- Oncologic Institute Bellinzona 2017; ESHO 2014, Turin.
- 2020: Invited guest editor for special issue "Hyperthermia in Cancer" in 'Cancers' (impact factor 6.162).
- Host prof Peter Wust (Berlin), Spinoza chair at University of Amsterdam 3-4 July 2018
- Regular visits as guest researcher at Chalmers University, Göteborg, Sep 2013 – May 2017.
- Discussion leader/ opponent during PhD licentiate thesis defense of P. Takook (Gothenburg; 2016 May 18, Towards a microwave hyperthermia system for head and neck tumors)

PubMed

Link to PubMed publication list:

<https://pubmed.ncbi.nlm.nih.gov/?term=kok+hp+or+%22petra+kok+h%22&sort=date>

Keywords

Hyperthermia treatment planning, biological modelling, treatment optimization.