

ESP Advanced Training Centre for Ophthalmic Pathology, Rotterdam, NL

Name of the Training Centre: Erasmus MC University Medical Center, Dept. of Pathology, Section Ophthalmic Pathology, Wytemaweg 80, 3015 CN Rotterdam, the Netherlands

Chair of the Centre: Prof. Dr. Folkert J. van Kemenade

Head of the training programme in Ophthalmic Pathology: Dr. Robert M. Verdijk

Erasmus MC University Medical Centre is the largest tertiary hospital of the Netherlands. Erasmus MC stands for a healthy population and excellence in healthcare. By conducting ground-breaking work, we aim to push boundaries through leading the way in research, education and healthcare. We have access to the latest equipment and techniques in a state-of-the-art environment.

The department of pathology provides services for all subspecialties and receives over 35.000 specimen per year. The department employs 150 of which are 18 pathologists and 16 residents in pathology. The Section Ophthalmic Pathology receives about 700 ophthalmic specimen per year and has a collaboration with the Leiden University Medical Centre adding another 250 ophthalmic specimen per year. The specimen is as diverse as eyelid, conjunctiva, cornea, intra-ocular and orbit. In addition, post-mortem eye examinations for sporadic and syndromic congenital malformations are performed for the prenatal care centre and clinical genetics department. These paediatric post-mortem examinations are supervised by Dr. Verdijk as well. The laboratory is the national referral centre for forensic ophthalmic specimen in the evaluation of suspected shaken baby syndrome.

There is a special research interest in ocular melanoma, IgG4-related disease and corneal transplantation related disease (in collaboration with the Netherlands Institute for Innovative Ophthalmic Surgery).

Dr Verdijk supervises the pathology resident training programme of the south western region of the Netherlands. All trainees in pathology in the Netherlands regularly do two rotations in Ophthalmic Pathology of 3 months each. Residents in pathology or ophthalmology with a special interest in Ophthalmic Pathology are welcome and may come from any country (some came from as far as Cambodia), provided they have a good command of English. For non-native English speakers a certificate indicating CEFR level B2 or IELTS competence Band 6 or higher is required.

Dr Verdijk is a member of the European Society for Pathology (chair Ophthalmic Pathology), the European Ophthalmic Pathology Society, Euro-CNS, the Ocular Oncology Group (treasurer) and contributor to the World Health Organization (WHO) Classification of Tumours of the Eye, 4th edition.

Number of positions offered each year, expected duration of the training: A training program is offered for 3 or 6 months. One candidate can be accommodated at a time. This comes down to 2 positions per year.

Specific periods of the year when the visit may be realized: no special preference.

Contact address for requesting details by the applicant: Dr Robert M. Verdijk, Dept. of Pathology, Section Ophthalmic Pathology, PO-Box2040, 3000CA, Rotterdam, the Netherlands. Email: r.verdijk@erasmusmc.nl

Accommodation and Documents: the applicant will receive help for acquiring visa and find low cost accommodation. No charge for the training will be raised. No costs will be covered by the department related to travel, accommodation, visa etc.

List of publications on Ophthalmic Pathology Erasmus MC University Medical Center Rotterdam:

Epub ahead of print

The treatment outcomes in IgG4-related orbital disease: a systematic review of the literature. Detiger SE, Karim AF, Verdijk RM, van Hagen PM, van Laar JAM, Paridaens D. *Acta Ophthalmol.* 2019 Feb 7. doi: 10.1111/aos.14048. [Epub ahead of print]

The tarsal plate manifestation of IgG4-related disease. Verhoekx JSN, Karim AF, van Laar JAM, Verdijk RM, Paridaens D. *Int Ophthalmol.* 2018 Jun 20. doi: 10.1007/s10792-018-0974-3. [Epub ahead of print]

Ocular melanoma

Overexpression of EZH2 in conjunctival melanoma offers a new therapeutic target. Cao J, Pontes KC, Heijkants RC, Brouwer NJ, Groenewoud A, Jordanova ES, Marinkovic M, van Duinen S, Teunisse AF, Verdijk RM, Snaar-Jagalska E, Jochemsen AG, Jager MJ. *J Pathol.* 2018 Aug;245(4):433-444.

Genetic Background of Iris Melanomas and Iris Melanocytic Tumors of Uncertain Malignant Potential. van Poppelen NM, Vaarwater J, Mudhar HS, Sisley K, Rennie IG, Rundle P, Brands T, van den Bosch QCC, Mensink HW, de Klein A, Kiliç E, Verdijk RM. *Ophthalmology.* 2018 Jun;125(6):904-912

Combined mutation and copy-number variation detection by targeted next-generation sequencing in uveal melanoma. Smit KN, van Poppelen NM, Vaarwater J, Verdijk R, van Marion R, Kalirai H, Coupland SE, Thornton S, Farquhar N, Dubbink HJ, Paridaens D, de Klein A, Kiliç E. *Mod Pathol.* 2018 May;31(5):763-771

GNAQ and GNA11 mutations and downstream YAP activation in choroidal nevi. Vader MJC, Madigan MC, Versluis M, Suleiman HM, Gezgin G, Gruis NA, Out-Luiting JJ, Bergman W, Verdijk RM, Jager MJ, van der Velden PA. *Br J Cancer.* 2017 Sep 5;117(6):884-887.

Genetic evolution of uveal melanoma guides the development of an inflammatory microenvironment. Gezgin G, Dogrusöz M, van Essen TH, Kroes WGM, Luyten GPM, van der Velden PA, Walter V, Verdijk RM, van Hall T, van der Burg SH, Jager MJ. *Cancer Immunol Immunother*. 2017 Jul;66(7):903-912.

Correlation of Gene Mutation Status with Copy Number Profile in Uveal Melanoma. Yavuziyigitoglu S, Drabarek W, Smit KN, van Poppelen N, Koopmans AE, Vaarwater J, Brands T, Eussen B, Dubbink HJ, van Riet J, van de Werken HJ, Beverloo B, Verdijk RM, Naus N, Paridaens D, Kiliç E, de Klein A; Rotterdam Ocular Melanoma Study Group. *Ophthalmology*. 2017 Apr;124(4):573-575.

Targeting of the MAPK and AKT pathways in conjunctival melanoma shows potential synergy. Cao J, Heijkants RC, Jochemsen AG, Dogrusöz M, de Lange MJ, van der Velden PA, van der Burg SH, Jager MJ, Verdijk RM. *Oncotarget*. 2016 Jul 22;8(35):58021-58036

Uveal Melanomas with SF3B1 Mutations: A Distinct Subclass Associated with Late-Onset Metastases. Yavuziyigitoglu S, Koopmans AE, Verdijk RM, Vaarwater J, Eussen B, van Bodegom A, Paridaens D, Kiliç E, de Klein A; Rotterdam Ocular Melanoma Study Group. *Ophthalmology*. 2016 May;123(5):1118-28.

Metastatic disease in uveal melanoma: importance of a genetic profile? Van Beek JG, Koopmans AE, Vaarwater J, Verdijk RM, de Klein A, Naus NC, Kiliç E. *Melanoma Res*. 2015 Oct;25(5):447-9.

IgG4 related disease

The histological absence of IgG4 positive plasma cells in juvenile xanthogranuloma; comments on 'Systemic juvenile xanthogranuloma: a case report and brief review'. Detiger SE, Karim AF, van Laar JAM, Paridaens D, Verdijk RM. *Clin Exp Dermatol*. 2019 Jan;44(1):91-92.

The treatment outcomes in IgG4-related disease. Karim AF, Bansie RD, Rombach SM, Paridaens D, Verdijk RM, van Hagen PM, Van Laar JAM. *Neth J Med*. 2018 Aug;76(6):275-285.

To distinguish IgG4-related disease from seronegative granulomatosis with polyangiitis. Karim AF, Verdijk RM, Nagtegaal AP, Bansie R, Paridaens D, van Hagen PM, van Laar JAM. *Rheumatology (Oxford)*. 2017 Dec 1;56(12):2245-2247.

Expansion of blood IgG4+ B, TH2, and regulatory T cells in patients with IgG4-related disease. Heeringa JJ, Karim AF, van Laar JAM, Verdijk RM, Paridaens D, van Hagen PM, van Zelm MC. *J Allergy Clin Immunol*. 2018 May;141(5):1831-1843.e10.

IgG4-related disease as an emerging cause of scleritis. Karim F, de Hoog J, Paridaens D, Verdijk R, Schreurs M, Rothova A, van Hagen M, van Laar J. *Acta Ophthalmol*. 2017 Dec;95(8):e795-e796.

Infliximab for IgG4-Related Orbital Disease. Karim F, Paridaens D, Westenberg LEH, Guenoun J, Verdijk RM, van Hagen PM, van Laar JAM. *Ophthalmic Plast Reconstr Surg*. 2017 May/Jun;33(3S Suppl 1):S162-S165.

Cornea

Atypical Presentation of Iridocorneal Endothelial Syndrome With Band Keratopathy but No Corneal Edema Managed With Descemet Membrane Endothelial Keratoplasty. Zygoura V, Lavy I, Verdijk RM, Santander-García D, Baydoun L, Dapena I, Melles GRJ. *Cornea*. 2018 Aug;37(8):1064-1066

Histopathology of Failed Descemet Membrane Endothelial Transfer. Parker J, Verdijk RM, Müller TM, Lavy I, Bruinsma M, Colby K, Binder PS, Melles GRJ. Eye Contact Lens. 2018 Sep;44 Suppl 1:S361-S364.

Outcome and Histopathology of Secondary Penetrating Keratoplasty Graft Failure Managed by Descemet Membrane Endothelial Keratoplasty. Lavy I, Liarakos VS, Verdijk RM, Parker J, Müller TM, Bruinsma M, Binder PS, Melles GRJ. Cornea. 2017 Jul;36(7):777-784.

Histopathologic Features of Descemet Membrane Endothelial Keratoplasty Graft Remnants, Folds, and Detachments. Müller TM, Verdijk RM, Lavy I, Bruinsma M, Parker J, Binder PS, Melles GR. Ophthalmology. 2016 Dec;123(12):2489-2497.

Sex Chromosome Analysis of Postmortem Corneal Endothelium After Sex-Mismatch Descemet Membrane Endothelial Keratoplasty. Lavy I, Verdijk RM, Bruinsma M, Sleddens HF, Oellerich S, Binder PS, Melles GR. Cornea. 2017 Jan;36(1):11-16.