

## PhD Project Description

School/ Department	Dept Internal Medicine, Endocrinology, Erasmus MC
<b>Supervisor information:</b>	<ul style="list-style-type: none"> <li>• Prof. Dr. W.W. de Herder &amp; Dr. J. Hofland</li> <li>• Email: <a href="mailto:w.w.deherder@erasmusmc.nl">w.w.deherder@erasmusmc.nl</a> &amp; <a href="mailto:j.hofland@erasmusmc.nl">j.hofland@erasmusmc.nl</a></li> <li>• Website: <a href="https://www.erasmusmc.nl/en/research/departments/internal-medicine-laboratories">https://www.erasmusmc.nl/en/research/departments/internal-medicine-laboratories</a></li> <li>• <b>Personal Grants:</b> <ul style="list-style-type: none"> <li>- ERC H2020 Marie-Curie Intra-European Fellowship (2013), Royal College of Physicians UK (2013), Daniel den Hoed Foundation (2015), Erasmus MC MRACE-Grant (2017), Swiss National Science Foundation (2018), co-investigator Dutch Cancer Fund (2019), NET Research Foundation (2020)</li> </ul> </li> <li>• <b>Most important publications:</b> <ul style="list-style-type: none"> <li>- Additional holmium-166 radioembolisation after lutetium-177-dotatate in patients with neuroendocrine tumour liver metastases (HEPAR PLuS): a single-centre, single-arm, open-label, phase 2 study. <b>Lancet Oncol</b> 2020; 21: 561-570</li> <li>- Advances in the diagnosis and management of well-differentiated neuroendocrine neoplasms. <b>Endocr Rev</b> 2020; 41: 371-403</li> <li>- Management of carcinoid syndrome: a systematic review and meta-analysis. <b>Endocr Relat Cancer</b>. 2019; 26: R145-156</li> <li>- Symptomatic and radiological response to 177Lu-DOTATATE for the treatment of functioning pancreatic neuroendocrine tumors. <b>J Clin Endocrinol Metab</b> 2019, 104(4): 1336-1344</li> <li>- Salvage peptide receptor radionuclide therapy with [177Lu-DOTA,Tyr3]octreotate in patients with bronchial and gastroenteropancreatic neuroendocrine tumours. <b>Eur J Nucl Med Mol Imaging</b> 2019, 46(3):704-717.</li> <li>- Role of biomarker tests for diagnosis of neuroendocrine tumours. <b>Nature Rev Endo</b> 2018, 14(11):656-669</li> <li>- MAFA missense mutation causes familial insulinomatosis and diabetes mellitus. <b>PNAS</b> 2018 Jan 30;115(5):1027-1032</li> <li>- Persistent Hematologic Dysfunction after Peptide Receptor Radionuclide Therapy with 177Lu-DOTATATE: Incidence, Course, and Predicting Factors in Patients with Gastroenteropancreatic Neuroendocrine Tumors. <b>J Nucl Med</b>. 2018 Mar;59(3):452-458</li> <li>- Consensus on biomarkers for neuroendocrine tumour disease. <b>Lancet Oncol</b>. 2015 Sep;16(9):e435-e446.</li> </ul> </li> </ul>
<b>Project Title:</b>	<b>Discovery of novel biomarkers for gastroenteropancreatic neuroendocrine tumors</b>
<b>Abstract:</b>	<p>Neuroendocrine neoplasms of the pulmonary and gastrointestinal systems are heterogeneous tumors. Although rare, their incidence has risen 6-fold over the last 3 decades. Well-differentiated neuroendocrine tumors (NETs) have limited treatment options and are often accompanied by severe hormonal syndromes. Our NET Center of Excellence has been world-leading in this field with translational biomarker research<sup>(Nature Rev Endo 2018)</sup>, participation in international guidelines<sup>(Neuroendocrinology 2016)</sup> and the development of radionuclide imaging<sup>(Lancet 1989)</sup> and therapy<sup>(NEJM 2017)</sup>.</p> <p>Our research lines in endocrine oncology have a strong translational aspect with close interaction between clinical and basic scientists. We participate in international clinical trials, have created clinical databases with &gt;2000 NET patients and have a dedicated Neuroendocrine Laboratory with decades of experience in in vitro and ex vivo characterization of NET cells.</p> <p>Current projects focus on the discovery of novel biomarkers for gastroenteropancreatic NETs through epigenomics, proteomics and microbiomics. This includes regulatory control of somatostatin receptor expression as well as the search for biomarkers for carcinoid syndrome-related complications and for the efficacy of peptide receptor radionuclide therapy (PRRT). This project will integrate into our long-standing translational biomarkers studies to improve diagnostics, prognostication and prediction of therapeutic outcome in patients with bronchial and gastroenteropancreatic NETs.</p>
<b>Requirements of candidate:</b>	<ul style="list-style-type: none"> <li>• We are looking for a highly motivated and enthusiastic student to join our international team. The candidate should be a team player with good communication and writing skills and interested in translational cancer science</li> <li>• Master degree or Medical Degree. Prior experience in molecular biology, bioinformatics and statistics is of significant added value.</li> <li>• Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we could help with the scientific part of your scholarship proposal)</li> <li>• English language requirement: fluently speaking and writing.</li> <li>• <i>English speaking countries &amp; Netherlands:</i> no requirement</li> <li>• <i>Other countries:</i> IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs)</li> </ul>

Application requirements & Deadlines:

<https://www.eur.nl/en/about-eur/erasmus-university-china-centre/csc-scholarship>

Erasmus MC, ranked world

\* No.32 for Clinical Medicine US News 2020:

<https://www.usnews.com/education/best-global-universities/clinical-medicine?page=3>

\* No. 30 Nature Index for Biomedical Sciences 2019:

<https://www.natureindex.com/supplements/nature-index-2019-biomedical-sciences/tables/healthcare>