

CV RESUMIDO

PROF. DOUTOR

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1. CARREIRA ACADÉMICA

2013 – Professor Catedrático Oftalmologia, Faculdade de Medicina da Universidade de Coimbra

2. FUNÇÕES NA FACULDADE DE MEDICINA

2012 – 2015 – Director Faculdade de Medicina Universidade Coimbra

3. CARREIRA PROFISSIONAL

2000 – Chefe Serviço de Oftalmologia dos Hospitais da Universidade de Coimbra

4. RESPONSABILIDADES HOSPITALARES

2008 – presente – Director do Centro de Responsabilidade Integrado de Oftalmologia, Centro Hospitalar Universitário Coimbra

5. ACTIVIDADE EDITORIAL

- International Advisory Board Member de inúmeras Revistas Científicas Internacionais
- Revisor de inúmeras Revistas Científicas Internacionais

6. ORGANIZAÇÕES PROFISSIONAIS

(Outros Cargos de Gestão e Direcção Académica)

- Presidente Sociedade Portuguesa de Oftalmologia (1997 – 1998)
- Presidente do Colégio Oftalmologia (Ordem Médicos) (2000)
- Membro da Comissão Responsável pela elaboração do – Plano Nacional Saúde Visão– (2003 – 2004)
- Membro da Comissão Responsável pela elaboração da “Rede Referenciação de Oftalmologia” (2005 – 2007); Presidente da Comissão (2015 – 2016)
- Consultor da Direcção-Geral da Saúde (2009 – presente)
- Membro do Research Committee of European Society of Cataract and Refractive Surgeons (2003 – presente)
- Membro da Pan-American Association of Ophthalmology (2005 – presente)
- Representante Português da –International Society of Refractive Surgery of American Academy of Ophthalmology– (2005 – presente)
- Membro da “European Academy of Ophthalmology” (2006 – presente) Cadeira XLI ; Secretário (2014 – presente)
- Membro “Academia Portuguesa de Medicina” (2006) sendo Membro Titular (2010) Cadeira XLVIII; Tesoureiro da Direcção no biénio 2010 – 2012; 2012 – 2015
- Consultor da Direcção-Geral de Saúde (2009 – presente)
- Membro Honorário da Academia Amazonense de Medicina (2013)
- Presidente da Assembleia Geral da Secção Regional Centro da Ordem dos Médicos (2013)
- Membro da Academia de Ciências de Lisboa (2014 – presente)
- Membro da Comissão Peritos dos Centros de Referência em Portugal (2015)
- Membro Comissão Peritos ACSS (2010 – presente)
- Membro do European Board Ophthalmology
- Membro da Direcção do Health Cluster Portugal (HCP)

7. PRÉMIOS E DISTINÇÕES HONORÍFICAS

- 1989 – Prémio da Sociedade Portuguesa de Oftalmologia
- 2010 – Imposição das insígnias de Grande Oficial da Ordem do Mérito pelo Presidente da República pelo trabalho realizado na Transplantação.
- 2014 – Achievement Award da American Academy of Ophthalmology (2013)
- 2013 – Membro Honorário da Academia Amazonense de Medicina, tendo



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colaborado em programas de combate à cegueira na Amazônia (2014)

2017 – Prémio Pfizer

2018 – Prémio Obstbaum

8. PUBLICAÇÕES

Publicações Revistas científicas Nacionais e Internacionais – 132

Capítulos de livros – 15

Participação e Organização de Cursos e Mesas – 168

Conferências por Convite – 202

Comunicações em Congressos – 614

Videos e Cirurgia ao Vivo – 6

Publicações mais importantes

1. JN Murta, JG Cunha-Vaz, C Sabo, C Jones and M Laski. Microperfusion studies on the permeability of retinal vessels. 1. A new model demonstrating organic anion transport and reabsorptive fluid flux. Invest Ophthalmol Vis Sci 1990; 31: 471-480
An experimental model to study the permeability of individual retinal vessels in vitro using microperfusion techniques adapted from kidney tubule studies was developed. It was demonstrated, for the first time, an active transport of fluorescein in the rabbit retinal vessels coupled with net fluid flux from outside the vessels into the lumen.
2. Murta, Joaquim N, Rosa, Andreia M, Quadrado Maria João C, et al. Combined use of a femtosecond laser and a microkeratome in obtaining thin grafts for Descemet stripping automated endothelial keratoplasty: An eye bank study. Eur J Ophthalmol 2013; 23(4): 584-589
3. Rosa AM, Silva MF, Quadrado MJ, Costa E, Marques I and Murta JN. Femtosecond laser and microkeratome-assisted Descemet stripping endothelial keratoplasty: first clinical results. British J Ophthalmol 2013; 97(9): 1104-1107.
A new surgical technique was developed using sequentially femtosecond laser and microkeratome to prepare consistently thin Descemet stripping automated endothelial keratoplasty (DSAEK) grafts, with no irregular cuts or cornea perforations. This new technique consistently yielded very thin grafts (<100 µm), excellent visual acuity results and good endothelial cell counts.
4. Laíns I, Duarte D, Barros AS, Martins AS, Gil J, Miller JB, Marques M, Mesquita T, Kim IK, Cachulo MDL, Vavvas D, Carreira IM, Murta JN, Silva R, Miller JW, Husain D, Gil AM. Human plasma metabolomics in age-related macular degeneration (AMD) using nuclear magnetic resonance spectroscopy. PLoS One. 2017 May 18;12(5)
5. Laíns I, Kelly RS, Miller JB, Silva R, Vavvas DG, Kim IK, Murta JN, Lasky-Su J, Miller JW, Husain D. Human Plasma Metabolomics Study across All Stages of Age-Related Macular Degeneration Identifies Potential Lipid Biomarkers. Ophthalmology. 2017 Aug 31.
Studies to improve the clinical assessment and current knowledge of age-related macular degeneration (AMD) progression, underlying its multifactorial nature, namely addressing the interactions between genetic and environmental risk-factors. It was differentiated the plasma metabolomic profile of patients with AMD from that of controls, by Nuclear Magnetic Resonance (NMR) spectroscopy. For the first time, it was shown metabolite changes in the plasma of patients with AMD as compared to controls, using NMR. Geographical origins were seen to affect AMD patients's metabolic profile and some metabolites were found to be valuable in potentially differentiating controls from early stage AMD patients.



It was also characterized the plasma metabolomic profile of patients with AMD using mass spectrometry (MS). Participants with AMD have altered plasma metabolomic profiles compared with controls, suggesting that the most significant metabolites map to the glycerophospholipid pathway.

These findings have the potential to improve our understanding of AMD pathogenesis, to support the development of plasma-based metabolomics biomarkers of AMD, and to identify novel targets for treatment of this blinding disease.

6. Rosa AM, Miranda ÂC, Patrício M, McAlinden C, Silva FL, Murta JN, Castelo-Branco M. Functional Magnetic Resonance Imaging to Assess the Neurobehavioral Impact of Dysphotopsia with Multifocal Intraocular Lenses. *Ophthalmology*. 2017 Sep;124(9):1280-1289
7. Rosa AM, Miranda ÂC, Patrício MM, McAlinden C, Silva FL, Castelo-Branco M, Murta JN. Functional magnetic resonance imaging to assess neuroadaptation to multifocal intraocular lenses. *J Cataract Refract Surg*. 2017 Oct;43(10):1287-1296
Neuroadaptation is believed to represent an important factor determining favourable outcomes after multifocal intraocular lens (IOL) implantation, especially with regard to concerns of positive dysphotopsia (glare, haloes and starbursts), which has remained a drawback to the more widespread use of multifocal IOLs.
Neuroplasticity refers to the ability of the brain to reorganize its function and structure in response to changes in the environment. Functional Magnetic Resonance Imaging (fMRI) allows studying brain activity in vivo.
These studies evaluated the use of functional magnetic resonance imaging (fMRI) to assess neuroadaptation to multifocal intraocular lenses (IOLs). They showed the association between patient-reported subjective difficulties and fMRI outcomes, independent of optical parameters and psychophysical performance. The increased activity of cortical areas dedicated to attention (frontoparietal circuits), to learning and cognitive control (cingulate), and to task goals (caudate) likely represents the beginning of the neuroadaptation process to multifocal IOLs.
Neuroadaptation to multifocal IOLs took place initially through recruitment of visual attentional and procedural learning networks. Thereafter, a form of long-term adaptation/functional plasticity occurred, leading to brain activity regularization toward a non-effort pattern. These findings, which reinforce the crucial role of higher-level brain regions in the perceptual construction of vision, were consistent with functional and questionnaire outcomes and were unrelated to optical properties. Comparison of neuroadaptation in different settings and discovering new ways of facilitating neuroadaptation will be major targets in near future.

