

BIOGRAPHICAL SKETCH

NAME: Koronyo-Hamaoui, Maya, PhD

eRA COMMONS USER NAME (credential, e.g., agency login): KoronyoM

POSITION TITLE: Associate Professor, Research Scientist III, Neurosurgery & Biomedical Sciences

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date MM/YYYY	FIELD OF STUDY
Life Sciences Faculty, Tel-Aviv University, Israel (IL)	B.Sc. <i>cum laude</i>	08/1995	Natural Sciences, Biology
Sackler School of Medicine, Tel-Aviv University, IL	M.Sc. <i>summa cum laude</i>	08/1998	Human Molecular Genetics (Neurological Disorders)
Sackler School of Medicine, Tel-Aviv University, IL	Ph.D.	02/2005	Psychiatric Genetics
The Weizmann Institute of Science, Rehovot, IL	Postdoc	11/2006	Neuroimmunology

A. Personal Statement

I have been involved in the research of neurological disorders for the past 15 years, with a major focus on neuroimmunology and exploring the signs of Alzheimer's disease (AD) in the retina. My laboratory identified the pathological amyloid β -protein (A β) plaque hallmarks in the retina of AD patients, including early-stage cases. My team then developed the first-ever approach for noninvasive imaging of retinal A β deposits in live rodent models using curcumin as a contrast agent. This approach is a feasible, repeatable modality that allows for a high-spatial resolution detection and monitoring of an individual A β plaque. Together with NeuroVision, this technique was recently translated to humans and is being tested in multiple clinical trials in the US, Australia (AIBL), and Europe. In the realm of basic research, my team has been able to explore novel signs of AD in the human retina, as well as quantify and map these retinal biomarkers across geometrical subregions and cellular layers. By comparing A β pathology in retinal and brain tissues, we investigate the relationship between these two CNS tissues during AD continuum. New and improved technologies in retinal imaging are desperately needed to facilitate early detection and monitoring of AD.

In addition to examining AD in the retina, my laboratory has been involved in investigating the role of innate and adaptive immune cells in repair and regeneration of the CNS under chronic neurodegeneration. We have developed several promising immunomodulation approaches, using altered myelin-derived antigens or engraftment of bone marrow-derived monocytes, which lead to synaptic and cognitive preservation and diminished neuropathology in transgenic murine models of AD. My investigation into AD has garnered multiple awards and has been published in important neuroscience journals.

Key publications:

- **Koronyo-Hamaoui, M.**, Koronyo, Y., et al. (2011). Identification of amyloid plaques in ex vivo retinas of Alzheimer's patients and noninvasive in vivo imaging of retinal plaques in the mouse model. **Featured Cover Article:** *NeuroImage*. 54(1): S204-17. PMID: 20550967
- Koronyo, Y., et al., and **Koronyo-Hamaoui, M** (2017). Retinal amyloid pathology and proof-of-concept imaging trial in Alzheimer's disease. *JCI Insight*. 2(16):e93621. PMID: 28814675
- **Koronyo-Hamaoui, M.**, Sheyn, J., et al. (2020). Peripherally derived angiotensin converting enzyme-enhanced macrophages alleviate Alzheimer-related disease. *Brain*. 143(1): 336-358. PMID: 31794021
- Shi H., et al., and **Koronyo-Hamaoui, M.** (2020). Identification of Early Pericyte Loss and Vascular Amyloidosis in Alzheimer's Disease Retina. *Acta Neuropathol*. doi: 10.1007/s00401-020-02134-w. PMID: 32043162

B. Positions and HonorsRecent Positions and Employment

2000 - 2003 Staff Tutor, Sackler School of Medicine, Tel-Aviv University, Israel

2000 - 2003 Faculty Trainer, Sackler School of Medicine, Tel-Aviv University, Israel
 2006 - 2009 Research Scientist I, Neurosurgery, Cedars-Sinai Medical Center (CSMC), Los Angeles, CA
 2010 - 2016 Assistant Professor, Faculty Research Scientist II and Principal Investigator, Dept. of Neurosurgery and Biomedical Sciences, CSMC, Los Angeles, CA
 2017 - 2018 Associate Professor, Faculty Research Scientist II and Principal Investigator, Dept. of Neurosurgery and Biomedical Sciences, CSMC, Los Angeles, CA
 2019-Current Associate Professor, Faculty Research Scientist III and Principal Investigator, Dept. of Neurosurgery and Biomedical Sciences, CSMC, Los Angeles, CA

Other Experience and Professional Memberships

2006 - Member, Society for Neuroscience
 2007 - Member, Alzheimer's Association (ISTAART)
 2008 - Peer Reviewer (>20 journals): Nature Communications, JAMA Neurology, and JAMA Ophthalmology, Journal of Clinical Investigation, Acta Neuropathologica, Alzheimer's & Dementia, Journal of Neuroscience, Journal of Alzheimer's Disease, Neurobiology of Aging, NeuroImage, Journal of Experimental Medicine, Journal of Molecular Medicine
 2011 - Founding Member, Inventor, Consultant, NeuroVision Imaging, Inc. (NVI)
 2011 - Editorial Board: Public Library of Science (PLoS and PLoS ONE), Frontiers in Immunology
 2011 - Grant Reviewer: NIH/NIA, Medical Research Council, The Alzheimer's Association Foundation, Israel Science Foundation, The Michael J. Fox Foundation for Parkinson's Research
 2012 ARVO Expert Panel Speaker, SIG 'Ocular Biomarkers for Early Detection of AD'
 2012 - Member, International Society of Neuroimmunology
 2012 - Member, Association for Research in Vision and Ophthalmology (ARVO)
 2012 - Invited Organizer/Chair, Annual Society for Brain Mapping & Therapeutics World Congress
 2015 - Board of Directors & Science Committee, Society for Brain Mapping & Therapeutics (SBMT)
 2016 SfN Chair, 'Mechanisms and Role of Synaptic Pathology in Alzheimer's Disease' Session
 2017 NIH/CSR Grant Reviewer, Neuroscience Assay, Diagnostics and Animal Model Development, Emerging Technologies and Training in Neurosciences
 2016-2017 DGSOM/CSMC Mid-Career Women Faculty Leadership Development Program, Member
 2017 Cedars-Sinai Task Force for Improving Research Efficiency, Member
 2017 Invited ASNI Chair, 'CNS Barriers and Cell Trafficking' Session
 2017 Invited SfN Co-Chair, 'Alzheimer's Disease: Neuroinflammation and Immune Actions' Session
 2018 Invited Co-Organizer & Chair, 3-day SBMT-AD Conference 'A Primer on Recent Advances in AD Research: Pathogenic Mechanisms, Early Diagnosis, Prevention & Treatment'
 2018 SfN Invited Nanosymposium Co-Chair, 'Neurotoxicity, Inflammation, and Neuroprotection: Neuroinflammation: Neurodegeneration' Session
 2018 NIH Grant Reviewer, PAR15-359: R01 on 'Biomarker Studies for Diagnosing Alzheimer's Disease and Predicting Progression,' NIH/CSR Emerging Technologies and Training in Neurosciences
 2019 SBMT Organizer & Chair, 'Alzheimer's Disease: mechanism, diagnosis, prevention, & treatment
 2019 ARVO Moderator & Panelist Speaker, Basic/Clinical Session: 'A window on the soul: How systemic disease manifests in the eye' and Invited Panelist and Speaker, Special Interest Group: 'Eye and Brain – the interrelationship and pathology (2nd Edition)', Vancouver, BC, Canada
 2018 - Lead Host & Topic Editor, Frontiers in Immunology, Research Topic: Role of Inflammation in Neurodegenerative Diseases. Co-hosts: Sally Ann Frautschy (UCLA), Jorge Iva Alvarez (U Penn). Section: Multiple Sclerosis and Neuroimmunology
 2019 Alzheimer's Association AAIC Satellite Symposium Invited Panelist & Speaker, Session: 'Novel Biomarkers', Sydney, Australia
 2019 - NIH Grant Reviewer, ZRG1 BDCN-Q (90) Special Emphasis Panel Study Section
 2020 ADRD-TP Invited Speaker, NIH-supported AD and related dementia Training Program at UIC
 2020 - Editorial Board, Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring (A&D:DADM)

Awards & Honors

1992 - 1995 The Dean's Honor & Prize for Excellency from the George S. Wise Life Sciences Faculty
 1996 The Wolf Fund Honor & Prize for Excellent Achievements from Sackler School of Medicine Dean

2001, 2004	Awards for Excellent Oral and Poster Presentations in Psychiatric Genetic Research, SMC
2004	The ISPG Travel Scholarship for the XII-World Congress on Psychiatric Genetics
2004	Joan and Jaime Constantiner Institute for Molecular Genetics Travel Scholarship
2008	Media Press Selection by the Society for Neuroscience (SfN 2008)
2008	'Hot Topics' Selection, The International Conference on Alzheimer's Disease (ICAD 2008)
2010	Media Press Coverage, The International Conference on Alzheimer's Disease (ICAD 2010)
2010, 2011	Best Research Poster Award & Prize - 1 st & 2 nd Annual Cedars-Sinai Research Days
2012	The Alzheimer's Association International Conference (AAIC) 2012 Travel Award
2012 - 2014	Primary Research Award from the Coins for Alzheimer's Research Trust Fund
2013	Pioneer in Medicine Award, the Brain Mapping Foundation (Retinal Amyloid Imaging in AD)
2013, 2014	DNRCA - CSMC Department of Neurosurgery and RMI Collaborative Research Award
2013 - 2016	The BrightFocus Foundation (AHAF) - Alzheimer's Disease Research Award
2017	XPRIZE Alzheimer's Biomarker Prize nomination
2017	ALZFORUM article featuring Koronyo-Hamaoui Lab's Retinal Amyloid Imaging Research
2017	ISTAART Alzheimer's Association Member in News and Alzforum Feature Article (Eye and AD)
2018	JAMA Ophthalmology Editorial Coverage: Invited Commentary
2018	Alzheimer's XPRIZE Expert Community Member (Invited Committee Member)
2018	Neuroscience 2018 Selected 'Hot Topic' Abstract and News Highlight
2018	Invited Subcommittee Organizer & Speaker, 'Think Tank' Alzheimer's Association-sponsored Retinal Imaging in Alzheimer's & Neurodegenerative Diseases Workshop (RIAD)
2019	Invited Speaker & Distinguished Panel Member, Alzheimer's Association AAIC-Sydney Satellite Symposium, Session: 'Novel Biomarkers'

C. Contribution to Science

1. Pioneer work of identifying the pathological hallmarks of AD, A β plaques and tauopathy, as well as vascular amyloidosis and early pericyte and PDGFR β loss in the retina of MCI and AD patients. Development of the first-of-its-kind noninvasive retinal amyloid imaging to facilitate detection and monitoring of AD in human patients. Noninvasive monitoring of individual A β deposit dynamic appearance and clearance in live rodent models following immune-based therapy. Identification of abnormal circadian rhythms and a selective retinal ganglion cell degeneration in AD patients associated with accumulation of retinal A β deposits.

- a. **Koronyo-Hamaoui, M.**, Koronyo, Y., Ljubimov, A.V., Miller, C.A., Ko, M.K., Black, K.L., Schwartz, M., & Farkas, D.L. (2011). Identification of amyloid plaques in ex vivo retinas of Alzheimer's patients and noninvasive in vivo imaging of retinal plaques in the mouse model. **Featured Cover Article: *NeuroImage*, 54(1): S204-17. PMID: 20550967**
- b. La Morgia, C., Ross-Cisneros, F.N., Koronyo, Y., Hannibal, J., Cantalupo, R., Sambati, L., Tozer, K.R., Barboni, P., Provini, F., Avanzini, P., Carbonelli, M., Pelosi, A., Chui, H., Liguori, R., **Koronyo-Hamaoui, M.**, Sadun, A.A., & Carelli, V. (2016). Melanopsin retinal ganglion cell loss in Alzheimer's disease. *Annals of Neurology*, 79(1): 90-109. PMID: 26505992
- c. Koronyo, Y., Biggs, D., Barron, E., Boyer, D.S., Pearlman, J.A., Au, W.J., Kile, S.J., Blanco, A., Fuchs, D.T., Ashfaq, A., Frautschy, S., Cole, G.M., Miller, C.A., Hinton, D.R., Verdooner, S.R., Black, K.L., **Koronyo-Hamaoui, M.** (2017). Retinal amyloid pathology and proof-of-concept imaging trial in Alzheimer's disease. **Featured Article in Editorials in JAMA, JCI This Month: *JCI Insight*. 2(16):e93621. PMID: 28814675**
- d. Shi H., Koronyo Y., Rentsendorj A., Regis G.C., Sheyn J., Fuchs D.T., Kramerov A.A., Ljubimov A.V., Black K.L., Dumitrascu O.M., Mirzaei N., Miller C.A., **Koronyo-Hamaoui, M.** (2020). Identification of Early Pericyte Loss and Vascular Amyloidosis in Alzheimer's Disease Retina. *Acta Neuropathol*. doi: 10.1007/s00401-020-02134-w. PMID: 32043162

2. Discovery of a therapeutic role for bone marrow-derived monocytes and macrophages in preserving synapses and cognitive function in transgenic models of AD. The effects of GA, and, moreover, targeted ACE overexpression on innate immune cell phenotype: enhancing their ability to clear the pathogenic forms of A β and modulating immune responses in the brain. The identification of a protective function of osteopontin in peripheral macrophages in AD models: crucial for cell migration, phagocytosis of A β , and synaptic protection.

- a. Bernstein, K.E., Koronyo, Y., Salumbides, B., Sheyn, J., Pelissier, L., Lopes, D.H.J., Kandarp, S.H., Bernstein, E.A., Fuchs, D.T., Yu, J., Pham, M., Black, K.L., Shen, Z.X., Fuchs, S. & **Koronyo-Hamaoui,**

- M.** (2014). Angiotensin-converting enzyme overexpression in myelomonocytes prevents Alzheimer's-like cognitive decline. *Journal of Clinical Investigation*, 124(3): 1000-1012. PMID: 24487585
- b. Zuroff, L., Daley, D., Black, K.L., **Koronyo-Hamaoui, M.** (2017). Clearance of cerebral A β in Alzheimer's disease: reassessing the role of microglia and monocytes. *Cellular and Molecular Life Sciences*. 74(12): 2167-2201 (2017). PMID: 28197669
- c. Rentsendorj, A., Sheyn, J., Fuchs, D.T., Daley, D., Salumbides, B.C., Schubloom, H.E., Hart, N.J., Li, S., Hayden, E.Y., Teplow, D.B., Black, K.L., Koronyo, Y., and **Koronyo-Hamaoui, M.** (2018). A novel role for osteopontin in macrophage-mediated amyloid- β clearance in Alzheimer's models. *Brain Behavior and Immunity*. 67:163-180. doi: 10.1016/j.bbi.2017.08.019. PMID: 28860067
- d. **Koronyo-Hamaoui, M.**, Sheyn, J., Hayden, E.Y., Li, S., Fuchs, D.T., Regis, G.C., Lopes, D.H.J., Black, K.L., Bernstein, K.E., Teplow, D.B., Fuchs, S., Koronyo, Y., & Rentsendorj, A. (2020). Peripherally derived angiotensin converting enzyme-enhanced macrophages alleviate Alzheimer-related disease. *Brain*. 143(1): 336-358. PMID: 31794021
3. The discovery of novel immune-modulation approaches for AD therapy, tested in transgenic murine models and currently undergoing translation to human clinical trials. Identifying molecular and cellular immune mechanisms essential for the development of AD and for resisting disease pathology.
- a. Butovsky, O., **Koronyo-Hamaoui, M.** (Equal First Author), Kunis, G., Ophir, E., Landa, G., Cohen, H., & Schwartz, M. (2006). Glatiramer acetate fights against Alzheimer's disease by inducing dendritic-like microglia expressing insulin-like growth factor 1. **Featured Cover Article:** *Proceedings of the National Academy of Sciences*, 103(31): 11784-9. PMID: 16864778
- b. **Koronyo-Hamaoui, M.**, Ko, M.K. Koronyo, Y. Azoulay, D., Seksenyan, A., Kunis, G, Pham, M. Bakhsheshian, J., Rogeri, P., Black, K.L., Farkas, D.L., & Schwartz, M. (2009). Attenuation of AD-like neuropathology by harnessing peripheral immune cells: local elevation of IL-10 and MMP-9. *Journal of Neurochemistry*, 111(6): 1409-24. PMID: 19780903
- c. Koronyo, Y., Salumbides, B., Sheyn, J., Pelissier, L., Li, S., Ljubimov, V., Moyseyev, M., Daley, D., Fuchs, D.T., Pham, M., Black, K.L., Rentsendorj, A., & **Koronyo-Hamaoui, M.** (2015). Therapeutic effects of glatiramer acetate and grafted CD115⁺ monocytes in a mouse model of Alzheimer's disease. *Brain*, **Editor's Choice Article**, 138(8): 2399-2422. PMID: 26049087
- d. Li, S, Hayden, EY, Garcia, VJ, Fuchs D-T, Sheyn, J, Daley DA, Rentsendorj, A, Torbati, T, Black, KL, Rutishauser, U, Teplow, DB, Koronyo Y, **Koronyo-Hamaoui, M.** (2020). Activated Bone Marrow-derived Macrophages Eradicate Alzheimer's-Related A β 42 Oligomers and Protect Synapses. *Frontiers in Immunology*. 11:49. doi: 10.3389/fimmu.2020.00049
4. Identifying thymic involution as a co-morbidity factor in amyotrophic lateral sclerosis (ALS). Discovery that peripheral insults, or, on the other hand, insufficient immune response and immunosenescence can lead to pathogenesis of neurodegenerative diseases, such as ALS and Parkinson's, AD, and glaucoma.
- a. Seksenyan, A., Ron-Harel, N., Azoulay, D., Cardon, M., Cahalon, L., Rogeri, P., Ko, K.M., Weil, M., Bulvik, S., Rechavi, G., Amariglio, N., **Koronyo-Hamaoui, M.** (Equal Last Author), Somech, R. and Schwartz, M. (2010). Amyotrophic lateral sclerosis is associated with thymic involution. *Journal of Cellular & Molecular Medicine* 14(10): 2470-82. PMID: 19650830
- b. Finkelstein, A., Kunis G, Seksenyan A, Ronen A, Berkutzki T, Azoulay D, **Koronyo-Hamaoui M.**, Schwartz M. (2011). Abnormal Changes in NKT Cells, the IGF-1 Axis, and Liver Pathology in an Animal Model of ALS. *Public Library of Science One*. 6(8):e22374. PMID: 21829620
- c. Wheeler, C.J., Seksenyan, A., Koronyo, Y., Rentsendorj, A., Sarayba, D., Wu, H., Gragg, A., Siegel, E., Thomas, D., Espinosa, A., Thompson, K., Black, K.L., **Koronyo-Hamaoui, M.**, Pechnick, R., Irvin, D.K. (2014). T-Lymphocyte Deficiency Exacerbates Behavioral Deficits in the 6-OHDA Unilateral Lesion Rat Model for Parkinson's Disease. *Journal of Neurology & Neurophysiology*. 5(3): 209. PMID: 25346865
- d. Lahiri, S, Regis GC, Koronyo Y, Fuchs DT, Sheyn J, Kim EH, Mastali M, Van Eyk JE, Rajput PS, Lyden PD, Black KL, Ely EW, D Jones H, **Koronyo-Hamaoui M.** (2019). Acute neuropathological consequences of short-term mechanical ventilation in wild-type and Alzheimer's disease mice. *Critical Care*. 23(1):63. PMID: 30795776
5. The discovery of polymorphisms in genes encoding for components of the glutamatergic system that confer higher risk for the development of complex psychiatric disorders in humans, including schizophrenia, obsessive compulsive disorder and anorexia nervosa.

- a. **Koronyo-Hamaoui, M.**, Danzinger, Y., Frisch, A., Stein, D., Leor, S., Laufer, N., Carel, C., Fennig, S., Minoumi, M., Apter, A., Goldman, B., Barkai, G., Weizman, A. & Gak, E. (2002). Association between anorexia nervosa and the hskCa3 gene: a family-based and case control study. *Molecular Psychiatry*, 7(1): 82-5. PMID: 11803450
- b. Ritsner, M., Amir, S., **Koronyo-Hamaoui, M.**, Gak, E., Ziv, H., Halperin, T., Kitain, L. & Navon, R. (2003). Association study of CAG repeats in the KCNN3 gene in Israeli patients with major psychosis. *Psychiatric Genetics*, 13(3):143-50. PMID: 12960745
- c. **Koronyo-Hamaoui, M.**, Gak, E., Stein, D., Frisch, A., Danzinger, Y., Leor, S., Michaelovsky, E., Laufer, N., Carel, C., Fennig, S., Mimouni, M., Apter, A., Goldman, B., Barkai, G. & Weizman, A. (2004). CAG repeat polymorphism within the KCNN3 gene is a significant contributor to susceptibility to anorexia nervosa: a case-control study of female patients and several ethnic groups in the Israeli Jewish population. *American Journal of Medical Genetics: Neuropsychiatric Genetics*, 131B(1): 76-80. PMID: 15389773
- d. **Koronyo-Hamaoui, M.**, Frisch, A., Stein, D., Denzinger, Y., Leor, S., Michaelovsky, E., Laufer, N., Carel, C., Fennig, S., Mimouni, M., Ram, A., Zubery, E., Jeczmiem, P., Apter, A., Weizman, A. & Gak, E. (2007). Dual contribution of NR2B subunit of NMDA receptor and SK3 Ca(2+)-activated K+ channel to genetic predisposition to anorexia nervosa. *Journal of Psychiatric Research*, 41(1-2): 160-7. PMID: 16157352

Complete List of Published Work in MyBibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/1na7nqYRpimAz/bibliography/public/>

D. Research Support

Ongoing:

1. NIA R01 AG055865 Koronyo-Hamaoui (PI) 04/01/18 – 12/31/22
 Title: Alzheimer's Disease Hallmark Pathology and Associated Inflammation in the Retina
 Goal: To explore novel A β and tau pathologies, as well as the associated local inflammation, in retinal tissues from AD patients and live transgenic murine models.
 Role: PI
2. NIA R01 AG056478 Koronyo-Hamaoui (PI) 09/15/17 – 05/31/22
 Title: Retinal Imaging of Alzheimer's Disease Pathology
 Goal: Explore pathological hallmarks of AD in the retina and evaluate retinal amyloid imaging as a novel approach for diagnosis and monitoring of AD.
 Role:PI
3. Clinical Trial Rush U/NVI Award Koronyo-Hamaoui (PI) 01/01/19 – 12/31/21
 Title: An In Vivo and Post Mortem Substudy to Explore the Correlation between A β Plaques in the Retina, Identified by Autofluorescence Imaging, and A β Plaques Identified in Brain and Retinal Pathology
 Goal: To validate live imaging of A β plaques in MCI and AD patients of the ROS/MAP study by postmortem histological analysis.
 Role: PI
4. CSRI/ Neurodegeneration Repair Award Koronyo-Hamaoui (PI) 01/01/19 – 12/31/21
 Title: Assessing the Therapeutic Effects of Compound ETP69 on Aged and AD-model Mice Brain
 Goal: To study the effect of ETP69 compound on memory and synaptic integrity in the aging brain
 Role: PI

Completed:

1. BrightFocus Foundation A2013328S00 Koronyo-Hamaoui (PI) 07/01/13 - 06/30/16
 Title: Therapeutic roles of ACE-overexpressing monocytes in AD
 Goal: To assess the therapeutic capacity of ACE-overexpressing monocytes in transgenic models of AD and study innate immune mechanisms involved in curbing amyloid-beta neurotoxicity.
 Role: PI
2. NIA R41 AG044897 Koronyo-Hamaoui (PI) 7/15/13 – 3/30/15
 Title: A non-invasive optical imaging methodology to detect retinal amyloid- β in Alzheimer's disease patients
 Goal: To develop and validate a methodology for detecting the characteristic A β deposits in the retina of AD patients utilizing a noninvasive retinal imaging system following oral administration of curcumin, a natural and safe A β -plaque-labeling flourochrome.

Role: PI

3. The Saban Foundation Grant

Koronyo-Hamaoui (PI)

07/01/14 - 06/30/20

Title: Neurodegenerative Disease Research

Goal: To investigate neurodegenerative diseases, including identifying early pathological hallmarks as targets for immunomodulation therapies.

Role: PI

4. Joseph Drown Foundation

Wheeler (PI)

07/01/15 - 06/30/16

Title: Maximizing beneficial T cell activity in brain tumors and Alzheimer's through IDH1/IDH1R132H

Goal: This study investigates the influence of IDH1 and its mutant form (IDH1R132H), on immunotherapy failure in brain tumors, and on resistance to Cytotoxic T Lymphocyte (CTL)-induced neuronal damage in Alzheimer's. The purpose of this study is to determine how IDH1 and its functional down-regulation impact beneficial and detrimental activities of CTL.

Role: Co-Investigator

5. DNCRA Collaborative Research Award

Koronyo-Hamaoui (PI)

07/01/13 - 06/30/16

Title: Capacity of monocytes derived from familial Alzheimer's patient iPS cells to eradicate and resist toxic A β

Goal: To assess the capacity of monocytes derived from familial AD patient iPS cells to clear and resist the neuropathology associated with AD.

Role: PI

6. The CART Fund

Koronyo-Hamaoui (PI)

07/01/12 - 06/30/14

(Coins for Alzheimer's Research Trust)

Title: Targeted macrophage ACE-overexpression as a therapy for Alzheimer's disease

Goal: To evaluate if targeted over-expression of the peptidase angiotensin-converting enzyme (ACE) by inflammatory cells can facilitate enzymatic degradation of A β and alter the behavior of these cells in several ways that make them much more effective in combating Alzheimer's disease (AD) pathology.

Role: PI