UNIVERSITÀ DEGLI STUDI DI MILANO

CURRICULUM VITAE

INFORMAZIONI PERSONALI

Cognome	Kobia
Nome	Francis Mungathia
Data Di Nascita	02/10/1982

OCCUPAZIONE ATTUALE

Incarico	Struttura
Lecturer, department of biological sciences	Meru University of Science & Technology

ISTRUZIONE E FORMAZIONE

Titolo	Corso di studi	Università	anno conseguimento titolo
Laurea Magistrale o equivalente	Molecular Biology & genetics	Università degli studi di Pavia	2011
Specializzazione			
Dottorato Di Ricerca	Molecular Medicine (Molecular oncology)	Università degli studi di Milano	2016
Master			
Diploma Di Specializzazione Medica			
Diploma Di Specializzazione Europea			
Altro			

ISCRIZIONE AD ORDINI PROFESSIONALI

Data iscrizione	Ordine	Città
2014:	Member of SIBBM – Società Italiana di Biofisica e Biologia Molecolare	Milan
2012:	ABCD – Associazione di Biologia Cellulare e del Differenziamento	Milan

LINGUE STRANIERE CONOSCIUTE

lingue	livello di conoscenza
English	Excellent (Native)

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PREMI, RICONOSCIMENTI E BORSE DI STUDIO

anno	Descrizione premio
2012 - 2014	IIT PhD fellowship
2014 - 2016	IFOM PhD fellowship

ATTIVITÀ DI FORMAZIONE O DI RICERCA

descrizione dell'attività:

Current activity: Definition of cancer incidence in Meru, Kenya.

Summary: Cancer incidence in Kenya is poorly characterized. At present, IARC's cancer incidence estimates for Kenya are based on only two cancer registries (Nairobi and Eldoret) and thus majority of the country is inadequately represented in these estimates. We have carried out a retrospective study of >3500 cancer cases seen at the Meru hospice. Our analysis shows that gastric and esophageal cancer rates are markedly elevated with respect to GLOBOCAN's estimates of global, regional and Kenyan cancer rates; suggesting that the Meru region may be a hotspot for these cancers. Curiously, the incidence of lung cancer (most frequent globally, 11.6% incidence) is strikingly low in this region (1.3% of all cancers) – the reasons for this modest lung cancer rate are unclear. Our findings bridge a critical cancer information gap and will greatly inform cancer prevention and control strategy as well as cancer research prioritization.

Postdoc Research project: The role of nuclear Notch Intracellular domain dimerization in physiologic signaling and cancer development in vivo.

Postdoc Research summary: The Notch pathway mediates direct cell-cell communication and regulates various cellular processes including cell proliferation, cell fates and cell death. Excessive Notch signaling is associated with various cancers. I have been investigating how loss of nuclear Notch dimerization affects Notch signaling in vivo. Inhibiting intracellular Notch dimerization has been proposed as a novel therapeutic strategy against Notch driven cancers. We find that loss of Notch dimerization suppresses Notch signaling output. Ironically, the loss of Notch dimerization triggers Splenic Marginal Zone Lymphoma (SMZL)-like disease in mouse models – a disease associated with excessive Notch signaling in humans.

PhD Research projects:

a. Pharmacologic inhibition of the vacuolar H^+ ATPase reduces physiologic and oncogenic Notch signaling
b. A high Content siRNA screen for novel components in the Notch signaling pathway.

PhD Research summary: I employed various cell and molecular biology techniques to investigate whether V-ATPase inhibition blocks oncogenic Notch signaling in human cancer cells. We found that V-ATPase inhibitors suppress Notch activation, signaling and Notch dependent proliferation of human breast cancer cells. V-ATPase inhibition in Notch addicted leukemia cells strongly inhibits proliferation. In the second project, I set up an siRNA high-content screen for the identification of novel Notch trafficking modulators.

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ATTIVITÀ PROGETTUALE

Anno	Progetto
2012	Pharmacologic inhibition of the vacuolar H+ ATPase reduces physiologic and oncogenic Notch signaling
2014	High Content Screen for Novel modulators of the Notch pathway
2016	The in vivo role of Notch Intracellular Domain dimerization
2019	Definition of cancer incidence in Meru, Kenya

CONGRESSI, CONVEGNI E SEMINARI

Data	Titolo	Sede
3-4 May 2018	Developmental Mechanisms, Organogenesis and Stem Cells Annual Retreat	Cincinnati – USA
27-28 April 2017	Developmental Mechanisms, Organogenesis and Stem Cells Annual Retreat	Cincinnati – USA
17-19 Sept 2015	Italian Association of Cell Biology and Differentiation - ABCD, meeting	Bologna – Italy
14-15 May 2015	IFOM-DFG symposium, Milan – Italy. Conference theme: Vacuolar ATPase – a novel anti- tumor target. Poster presentation.	Milan - Italy
17-18 Feb 2015	Screening Europe, Berlin – Germany.	Berlin - Germany
11-13 Jun 2014	Società Italiana di Biofisica e Biologia Molecolare (SIBBM) - Emerging Arenas in Molecular Biology: from basic mechanisms to personalized medicine	Trento – Italy
6-10 Oct 2013	The Notch meeting VII	Athens – Greece
12-14 Sep 2013	Italian Association of Cell Biology and Differentiation - ABCD, meeting	Ravenna - Italy
25th Oct 2012	1st IFOM IFOM-Kyoto University Joint Symposium: Mechanisms of cell transformation and metastasis	Milan - Italy
1–3 Oct 2012	15th Italian Drosophila congress	Palermo - Italy

Articoli su riviste
Kobia F, Duchi S, Deflorian G, Vaccari T. 2014. Pharmacologic inhibition of vacuolar H+ ATPase reduces physiologic and oncogenic Notch signaling. Mol. Oncol. 8:207–20
Tognon E, Kobia F, Busi I, Fumagalli A, De Masi F, Vaccari T. 2016. Control of lysosomal biogenesis and Notch-dependent tissue patterning by components of the TFEB-V-ATPase axis in Drosophila melanogaster. Autophagy. 12(3):
Kobia F., Nicholas, W., Kristina, P., Eric, B., Thi, N., Warren, P., & Kopan, R. 2019. The role of nuclear Notch intracellular domain dimerization in physiologic Notch signaling in vivo ***(manuscript in preparation)***
Kobia F., Mugo M., Mucee M., Kibera J. 2019. An analysis of cancer incidence in Meru County, Kenya ***(manuscript in preparation)***

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Atti di convegni
A High Content Screen for Novel modulators of the Notch pathway. IFOM-DFG symposium, Milan – Italy. Conference theme: Vacuolar ATPase – a novel anti- tumor target. Poster presentation. Milan- Italy, 2015
Pharmacologic inhibition of vacuolar H+ ATPase (V-ATPase) reduces physiologic and oncogenic Notch signaling. Società Italiana di Biofisica e Biologia Molecolare (SIBBM) - Emerging Arenas in Molecular Biology: from basic mechanisms to personalized medicine. Poster presentation. Trento - Italy, 2014
Pharmacologic inhibition of vacuolar H+ ATPase reduces physiologic and oncogenic Notch signaling. Italian Association of Cell Biology and Differentiation - ABCD, meeting. Poster presentation. Ravenna – Italy, 2014
Pharmacologic inhibition of vacuolar H^+ ATPase (V-ATPase) reduces physiologic and oncogenic Notch signaling. Oral presentation. The Notch meeting VII. Athens – Greece, 2013
High Content Screen for Novel modulators of the Notch pathway. Screening Europe, Berlin – Germany. Poster. Berlin – Germany, 2013
Pharmacologic inhibition of vacuolar H^+ ATPase (V-ATPase) reduces physiologic and oncogenic Notch signaling. Oral presentation. 15th Italian Drosophila congress. Oral presentation. Palermo – Italy, 2012
Pharmacologic inhibition of vacuolar H^+ ATPase (V-ATPase) reduces physiologic and oncogenic Notch signaling. Oral presentation. 15th Italian Drosophila congress. Poster presentation. Palermo – Italy, 2012
Reduction of Notch signaling by pharmacologic inhibition of V-ATPase activity. 1st IFOM IFOM-Kyoto University Joint Symposium: Mechanisms of cell transformation and metastasis. Poster presentation. Milan – Italy, 2012

Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del DPR n. 445/2000.

Il presente curriculum, non contiene dati sensibili e dati giudiziari di cui all'art. 4, comma 1, lettere d) ed e) del D.Lgs. 30.6.2003 n. 196.

Luogo e data: Nairobi, 07/08/2019

FIRMA _____

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