ADELOLA ADELOYE: QUINTESSENTIAL NEUROLOGICAL SURGEON, NEUROLOGIST, DISTINGUISHED ACADEMIC, MEDICAL HISTORIAN, AND BIOGRAPHER

B.M. Idowu

Union Diagnostics and Clinical Services, Yaba, Lagos State, Nigeria

ABSTRACT

Adelola Adeloye (formerly Rufus Bandele Adelola Adeloye) is the second Nigerian doctor to qualify as a Neurological surgeon in 1967, having trained in Nigeria, United Kingdom and the United States of America. He worked with the College of Medicine, University of Ibadan and the University College Hospital, Ibadan as an academic Neurosurgeon and honorary Consultant Neurosurgeon, respectively from 1968 to 1995. He subsequently took up appointments in Saudi Arabia, Kuwait, and Malawi where he served in various capacities. He garnered panoply of academic and professional qualifications in the course of his career, matched by an equally prolific array of scholarly publications on diverse subjects. The high points of his career would include the landmark description of the Adeloye-Odeku disease in 1971, helping to institutionalise local Neurosurgical training in Nigeria, helping to set up a Surgery department in the then fledging Medical School in Malawi, his election as an honorary Fellow of the American College of Surgeons and honorary President of the World Federation of Neurosurgical Societies, as well as his appointment as an Emeritus Professor of Neurosurgery by the University of Ibadan. An altruistic and far-sighted man, he ensured that the first Nigerian Neurosurgeon who died prematurely and other Nigerian/African pioneers of Medicine/Neurosurgery are properly immortalised by a painstaking and selfless documentation of their lives and contributions. Biographies of Prof E. Latunde Odeku (Nigeria’s first Neurosurgeon and the first Black Neurosurgeon trained on US soil), Dr James Africanus Beale Horton, and other such writings are testament to this.

Keywords: Adelola Adeloye; Neurosurgery; Nigeria; Adeloye-Odeku disease; Congenital dermoid cyst of the anterior fontanelle

INTRODUCTION

“If you would not be forgotten as soon as you are dead and rotten, either write things worth reading, or do things worth the writing.” – Benjamin Franklin

As with many other African countries, the pioneer Nigerian doctors trained abroad. The first Nigerians to qualify as medical doctors were Dr William Broughton Davies and Dr James Africanus Beale Horton, who graduated from King’s College, London in 1858.1 The first Nigerian (and the first West African) female medical doctor was Dr Agnes Yewande Savage who graduated from the University of Edinburgh in 1929.2 Similarly, the first Nigerian surgeon, Dr (Major) Richard Gabriel Akinwande Savage, Yewande’s brother, obtained the Fellowship of the Royal College of Surgeon of Edinburgh in 1934.3 Local medical education in Nigeria started at the defunct Yaba Medical School (1930 – 1948)4 5 and continued later at the University College, Ibadan [started in 1948; then affiliated to the University of London; now University of Ibadan (UI)]. The Kano medical school which started in April 1955 with 12 students was closed down in 1959 on account of many difficulties, majorly being too expensive to run. Emeritus Professor Adelola Adeloye, Nigeria’s second Neurosurgeon, is an alumnus of UCI, and was one of the first group of UCI medical students to complete their entire 6 years medical education locally in Nigeria in 1960 (Hitherto, after preclinical training in Ibadan, UCI students were sent to various teaching hospitals in the United Kingdom for the clinical years).6 This article describes the genius and humanity of Prof Adeloye whose life fully exemplifies the Yoruba aphorism of “Bibi ire ko sef’owo ri” (Good pedigree is priceless), and also instantiates the need to intensify the quest for poverty eradication in every society.
EARLY YEARS

Adelola Adeloye (Fig. 1) hails from Ikole-Ekiti in Ekiti State, present-day South-West Nigeria but was born in Ilesa, Osun State (also in South-West Nigeria) on July 18, 1935 to Ebenezer Ajayi and Elizabeth (Ajisomo) Adeloye. His father, whom he described as a “Village genius”, started out as a pupil teacher but later opted to be artisanal mechanic (invented cassava grater, double grating cassava machine, and cotton wool spiner) and subsequently, a traditional medicine practitioner. (1953 – 1960), obtaining the MBBS (U. London) degree in 1960. He was the youngest in his graduating class of 1960, a College Scholar (1956 – 1960) and the best student in Chemical Pathology.

He completed his mandatory housemanship postings in various hospitals in Nigeria and the UK from December 1960 to March 1963. Subsequently, he took up appointment as a Demonstrator and Postgraduate research student in Anatomy at Bristol University (1963 – 1964) which he later discontinued in order to concentrate on Clinical Surgery. He was a General Surgery resident at the Postgraduate Medical School, Hammersmith, London; had neurotrauma training at the Radcliffe Infirmary, Oxford (under John Potter); Neurosurgery training at the North Staffordshire Royal Infirmary, Stoke-on- Trent (under Eric Newton) and at the National Hospitals for Nervous Diseases, Queen Square, London, (under Professor Valentine Logue and Professor Symon).

Adelola attended the St. Paul’s CMS (Elementary) School, Ikole-Ekiti, Ekiti state (1941-1946) and Christ’s School, Ado-Ekiti, Ekiti state for his Secondary/High School education from 1947 to 1952. At Christ’s School, he was the Government Scholar (1949-1952), School Prefect (1952) and the Football/Soccer captain (1952). Poverty nearly waylaid his educational aspirations early in High School as stated succinctly in his autobiography: “I found it impossible to get my school fees of 17 Pounds per year paid in 1948. We struggled to pay only apart of it.” He went on: “The Native Administration helped as much as was financially within their means with scholarships and bursaries. Mason judiciously used the funds to keep the Ekiti children in Christ’s School. Some 50 boys were assisted in this manner in 1949 to the tune of 780 Pounds Sterling and another 60 boys benefited with the 870 Pounds Sterling raised in 1950. Thus, a destiny at risk of truncation was rescued. He passed out of Secondary School in 1952 with a Cambridge School Leaving Certificate (Grade One) and several prizes to boot.

MEDICAL EDUCATION AND CAREER

After a stint with the public service of the defunct Western Region of Nigeria (February to September, 1953), Adelola bagged the Western Nigeria government scholarship to study medicine at UCI (1953 – 1960), obtaining the MBBS (U. London) degree in 1960. He was the youngest in his graduating class of 1960, a College Scholar (1956 – 1960) and the best student in Chemical Pathology.

Adelola passed the Membership examination of the Royal College of Physicians (MRCP Edinburgh) with Neurology as his special subject in July 1965 and Fellowship examination of the Royal College of Surgeons of England (FRCS) in November 1966. As a result, he prefers to refer to himself as a Neurological Surgeon (a Neurophysician who operates on the Nervous System) rather than a Neurosurgeon. With that double qualification in Neurology and Neurosurgery, he became one of the very few Nigerian doctors with such distinction (Physician and Surgeon), like the legendary late Sir Samuel Layinka Ayodeji Manuwa (who was the second Nigerian doctor to obtain a specialist qualification in Surgery – FRCSEdin 1938 and also had MRCP, FRCP, and FACs).
Adelola returned to UCH, Ibadan, Nigeria where he was employed as a post-Fellowship Senior Registrar (under late Prof E.L. Odeku) from December 1967 to July 1968. UCH appointed him as Consultant Neurosurgeon (August 1968 – 1995) while UI appointed him as Temporary Lecturer (Aug 1968 – Nov 1969), Senior Lecturer (Nov 1969 – Sept 1972), Professor of Neurological Surgery in October 1972, and Head of Surgery (1974-77). He was Rockefeller Research Fellow Experimental Teratology at the University of Cincinnati, USA (1972 -73) and Ratanji Dalai Scholar of the Royal College of Surgeons of England (1973-74) for the study of CNS malformations (especially Spina Bifida Cystica). He obtained a Masters degree in Surgery (MS) of the University of London in 1973, with a thesis on Neurosurgery.

While at UCH/UI, Ibadan, Prof Adeloye was involved in training neurosurgeons, administrative duties, clinical research, and clinical surgery.

The simplicity, thoughtfulness, far-sightedness, and excellent relational skills which Prof Adeloye brought to bear on his administrative duties are underscored by the testimonies of two other eminent surgeons who worked under him at UCH. First, Prof S.A. Adebonojo (Cardiothoracic Surgeon):

“I must make special mention of Professor Adelola Adeloye who was the Head of Surgery when I arrived at the University College Hospital, UCH, in April 1974 and I later broached to him the idea of establishing a facility for Open Heart Surgery at UCH. Professor Adeloye was very enthusiastic and requested a special grant from the University of Ibadan to procure the remaining surgical equipment we needed. Without this assistance and support, we could not have recorded the landmark achievement we made at UCH in 1978”.

The second testimony is that of Prof O.G. Ajao (General and Renal transplant Surgeon) who gave the following narrative in his autobiography (Prof. Ajao had been training as a Surgeon in USA in the period leading up to 1974):

“So in 1974, I wrote to the head of surgery at University College Hospital (UCH), Ibadan for employment, stating my plans to start a kidney transplant unit in the department. The HOD did not even show me the courtesy of replying my letter!............Later that year when I learnt that there was a change in headsip of the department, I wrote again for employment, stating my desire to start a kidney transplant programme. That time, the new head of surgery, Professor Adelola Adeloye wrote a nice reply to my letter, encouraging me to come.”

Prof Ajao continued:

“It was when I became the head of surgery and had unfettered access to my personal file that I realised the gravity of my actions in those early days of arrival in UCH. The file was full of all sorts of complaints about me. Some reasonable, many were unreasonable........Many of these complaints were from my so-called “senior professional colleagues” who masqueraded as my friends. In fact, some were not even in the department of surgery at all!..............But Adeloye would reply and apologise on my behalf to diffuse the tension. But he never told me anything. But anytime he saw me in the corridor after such a report, he had an unusual way of greeting me.”

Prof Adeloye had a brief stint as Locum Consultant Neurosurgeon to the King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia (Nov – Dec, 1987) before proceeding to the State of Kuwait where he was the Head of Neurosurgery at Al-Adan Government Hospital from January 1988 to October 1990.

He left the Middle East and returned to Africa as the Foundation Professor and Head of Surgery at the University of Malawi (July 1991 – March 2001), where he also served as the Acting Dean of the Faculty of Medicine, Acting Principal of the College of Medicine, University of Malawi, and as member of the University’s Senate. He was in Malawi under the aegis of the World Health Organisation’s short term professional staff scheme.

Professor Adeloye was/is a member of over several professional bodies, served as postgraduate examiner in surgery in Nigeria, Tanzania, Uganda, Scotland, Australia and South Africa, and was also a Visiting Professor of Neurosurgery to various universities at home and abroad. Since retirement, he has taught Neuroanatomy to medical students in Nigeria (Bowen University & Ladoke Akintola University of Technology) and the UK (University of Sheffield) at various times.

FELLOWSHIPS, AWARDS AND HONORS

Professor Adeloye amassed a slew of professional fellowships, awards, honours, leadership positions, and other social garlands during and after his medical career.

These are enumerated below: Member, Royal College of Physicians of Edinburgh (MRCP) (1965); Fellow, Royal College of Surgeons (FRCS), England (1966); Fellow, Royal Society of Medicine, England (1967); Fellow, International College of Surgeons (FICS) (1972); Fellow, Nigerian Medical College of Surgery (FMCS) (1972); Fellow, West African College of Surgeons (1973); Fellow, Royal College of Physicians of Edinburgh (FRCPEd) (1979); Fellow, Nigerian Academy of Science (FAS) (1987); Doctor of Science (Honoris Causa) in Neurological Surgery by the International University Foundation (1987); Fellow, Association of Surgeons of Malawi (1993);
Foundation Fellow, College of Surgeons of East and Central Africa (FCOSECA) (1999); Honourary Fellow, American College of Surgeons (2009); Emeritus Professor of Neurosurgery, University of Ibadan (2010); Foundation member, Pan-African Association of Neurological Sciences (PAANS) (1972); Second Vice-President, World Federation of Neurosurgical Societies (WFNS) (1981-85); President, Neurosurgery section, Nigerian Society of Neurological Sciences (NSNS) (1988); President, Surgical Association of Malawi (1998-2000); Vice-President (1998-2000) & President (2000-2002), PAANS; Foundation President, Neurosurgical Society of East and Central Africa (1999); Ekiti State Merit Award for Scholarship and Excellence (2012); and a traditional Chieftaincy title (Fig. 2) as Atorise of Ikole-Ekiti on 7th April, 2018.

Adeloye and Odeku gave the first comprehensive description of the Adeloye-Odeku disease (Congenital dermoid cyst of the anterior fontanelle) in 1971. Initially hypothesised to be an African disease, the condition has now been reported worldwide and in all racial groups.

His Masters of Surgery thesis (Tangenital wound of the head in Nigerian Soldiers) chronicled his experience of treating neurotrauma during the Nigeria civil war of 1967-1970. Some of his medical books (as sole author and with others) include: Missile Head Injuries in Nigerian Soldiers (159 pages), Davey's Companion to Surgery in Africa (486 pages), Handbook of Surgery for Clinical Officers, Care of the Injured (360 pages), Clinical Surgery in Ibadan: Surgical Grand Rounds of the University College Hospital, Ibadan (1974-1975) (184 pages), Head injuries in civil practice in Nigeria (91 pages), Neurosurgery in Africa (386 pages), Lecture notes in Neurosurgery and Otorhinolaryngology (149 pages), Central Nervous System Plasticity and Repair (184 pages).

Professor Adeloye is also an authority on the history of medicine in Nigeria and West Africa with several journal articles and books such as: Nigerian Pioneers of Modern Medicine: Selected Writings (1977), African Pioneers of Modern Medicine: Nigerian Doctors of the Nineteenth Century (1985), Early medical schools in Nigeria (1998), and Practice and Practitioners of Medicine in Nigeria (2004). An article published in 1973 on the history of sickle cell disease asserted that sickle cell disease had been documented, even in Western medical literature, decades prior to Dr. James Herrick's report of 1910.

He is also a biographer with published documentation of the lives of his father (A village genius: The story of my father; 2004), his own childhood (My salad days: the

**Fig. 2:** Prof Adeloye in traditional ceremonial attire at his investiture as Chief Atorise of Ikole-Ekiti (His hometown in Ekiti State, South West Nigeria)
Primary school years; 2009 My Secondary School Saga; 2013), his secondary school teacher (Henry Dallimore: Founder of Christ’s School, Ado-Ekiti; 1970), Nigeria’s first Neurosurgeon who died young (E. Latunde Odeku: An African Neurosurgeon; 1976), one of Nigeria’s first two doctors (Doctor James Africanus Beale Horton: West African Medical Scientist of the Nineteenth Century; 1992), Principals and Vice Chancellors of UI (Compendium of principals and vice chancellors, University of Ibadan, Ibadan, Nigeria; 2015), and his late Indian wife (The biography of Codanda Kamala Kalappa Adeloye; 2015).13,14 Professor Adeloye is also a much sought-after Guest Lecturer.34,35

Ordeal in Kuwait
As noted earlier, Prof Adeloye was the Chief of Neurosurgery at Al-Adan Government Hospital, Kuwait from January 1988 to October 1990. While he was there, Iraq invaded Kuwait which triggered the First Gulf War (August 2, 1990 – February 28, 1991).36 As a result, he and several other expatriates were marooned inside the small oil-rich country. They were trapped incommunicado as embassies had closed, no air transport services, and telecommunication had been severed. He and the others endured this precarious and dicey situation for almost two months. Medical staffs of his hospital and even patients disappeared on a daily basis as the chaos worsened. Eventually, he played a role as an emergency Diplomat in the later evacuation of 84 Africans to Baghdad. He would later chronicle his bitter-sweet experience in Kuwait in his book, Inside Occupied Kuwait which was published in 2006.37

Committing such a valuable piece of real estate to preservation of literature underscores the premium that he places on knowledge and education. The resource centre is dedicated to the promotion of neurosciences and the history of medicine in Nigeria; the two areas which were the centrepiece of his academic scholarship and professional life.

Over the years, postgraduate students of UI have been visiting The Aqueduct to seek materials for their thesis and writings. The ultimate hope is for the resource centre to evolve into a full-fledged library.

THE AQUEDUCT – A MONUMENT TO SCHOLARSHIP
Ibadan is the capital city of Oyo state in Southwest Nigeria.38 It was also the capital of the defunct Western region of Nigeria where Adelola grew up. Bodija (Old and New axis) is a high brow area in Ibadan. In the heart of Old Bodija lies a choice property belonging to Prof Adeloye which he named “The Aqueduct” (Fig. 3), after the human midbrain structure which connects the third ventricle to the fourth ventricle of the brain.39 The parcel of land was purchased for 50,000 naira in 1974 ($1 = 0.63 naira in 1974) and the building was completed in 1976. Since 2008, the building had been converted to an academic edifice for holding seminars and also serving as a library for his many books, collections, and memorabilia. The first academic seminar held there on 19th July, 2008 with the presentation of a paper titled “Roadmap in research and writing in Neurosciences in Africa” by a Neurologist, Dr (now Prof.) Mayowa O. Owolabi.40

Fig. 3: The Aqueduct Resource Center at Old Bodija, Ibadan, Oyo State, Nigeria

Committing such a valuable piece of real estate to preservation of literature underscores the premium that he places on knowledge and education. The resource centre is dedicated to the promotion of neurosciences and the history of medicine in Nigeria; the two areas which were the centrepiece of his academic scholarship and professional life.

Over the years, postgraduate students of UI have been visiting The Aqueduct to seek materials for their thesis and writings. The ultimate hope is for the resource centre to evolve into a full-fledged library.

Annals of Ibadan Postgraduate Medicine. Vol. 17 No. 1, June 2019
Family Life
Prof Adeloye is the first of five children (4 boys, 1 girl) of his parents. He married the now late Dr Kamala CodandaKappalaAdeloye (Indian), a medical graduate of Madras University who later qualified as a Paediatrician, in October 1967. The union was blessed with three children as well as grand-children. The city of Madras in India is now called Chennai.

Personal Philosophy, Regrets, Avocation
Adelola's philosophy of life is encapsulated by the maxim: “Work and Pray”. He believes that “Without hard, honest, and consistent work, life goes rotten”. This conviction stems partly from his inculcation of one of the sociocultural tenets of his ethnic nationality (Yoruba people) which states that:
Mura siise re, ore mi (Be sedulous/assiduous, my friend)
Ise ni a fi n di eni giga (Because diligence is the path to eminence/greatness)

He avers that the philosophy above and his Christian religious ethos have cast him into an incurable optimist; therefore, he has no regrets in life. He solemnly declares: “My life has been a joy to me, no matter where I go, or what I do”.

His hobbies include playing guitar, watching Soccer, reading English literature, and writing

CONCLUSION
Emeritus Professor Adeloye’s life is inspiring and worthy of emulation. His early struggle with poverty is a sad reminder that, seven decades later, poverty is still aborting the educational aspirations and life potentials of many a child in this clime. It is partly an awareness of this that made him dedicate his biography of Dr James Africanus Beale Horton to the African child: “to inform and inspire”. More than that, this is a tribute to a restless achiever in a nation that has not fully learned to celebrate and commemorate her heroes. Indeed he deserves no less, having selflessly immortalised other (com)patriots (with his copious writings) who would otherwise have been forgotten permanently. Having endured his fair share of deprivation, disappointment, discrimination, discouragement, and disaffection; those coming behind can draw vital lessons from his storied life. His legacy of sacrifice, service, and selflessness would endure. This is a befitting tribute to an outstanding Nigerian, African, and a World Citizen. He has certainly written things worth reading and done things worth writing.

ACKNOWLEDGEMENTS
I also acknowledge my wife (Abigeal), our children, Bukola Ajibola, Lucky Ajibola, and Emmanuel Ajibola for enduring my numerous stressful demands on them while putting this piece together.

Financial and Competing Interest Disclosure: The author declares no real or potential conflict(s) of interest with respect to the research, authorship, and/or publication of this article.

Funding: Nil

REFERENCES
1. Adeloye A. Some early Nigerian doctors and their contribution to modern medicine in West Africa. Med Hist 1974; 18(3):275-293.
2. Mitchell H. Dr Agnes Yewande Savage -West Africa’s First Woman Doctor (1906 - 1964). Available at: https://centreofafricanstudies.files.wordpress.com/2016/11/v2blogpost-agnesyewandesavage-westafricsfirstwomandoctor-7.pdf. Accessed: October 28, 2018.
3. Ajayi OO, Quartey JKM, Adebonojo SA. Knife in hand. The history of the West African College of Surgeons (1960–2010). Ibadan, Nigeria: Bookbuilders; 2010.
4. Adeloye A. Early medical schools in Nigeria. Ibadan: Hienemann Educational Books (Nigeria) Plc; 1998.
5. Fendall NRE. A history of the Yaba School of Medicine, Nigeria. West Afr Med J 1967; 16(4):118-124.
6. Michael OS, Adeloye A. University of Ibadan medical school: The first indigenous fourteen. Ann IbdPg Med 2017; 15(1):67-71.
7. Adelola Adeloye. Available at: https://prabook.com/web/mobile/#profile/644052. Accessed: October 26, 2018.
8. Osso N. Biographical Legacy and Research Foundation (BLERF) Who’s who in Nigeria (Online). Adeloye, Prof Adela. Available at: https://blerf.org/index.php/biography/adeloye-prof-adeola/. Accessed: October 26, 2018.
9. Adeloye A. My salad days: the primary school years. Ibadan: Book Builders Editions Africa; 2009.
10. Adeloye A. A village genius: The story of my father.Ibadan: Stirling-Horden Publishers, Ibadan; 2004.
11. Adeloye A. My Secondary School Saga. Ibadan: Book Builders Africa Edition; 2013.
12. Oluwagbohunmi A. Understanding the sociology of Ekiti People. International Journal for Social Studies 2017; 3(1):72-78. Available at: https://edupediapublications.org/journals/index.php/IJSS/article/download/6706/6513.
13. Emeritus Professor Adelola Adeloye. Available at: https://drive.google.com/open?id=1vGGr15fp2c2j26mSAMaq1oPGveDQCfT2D. Accessed: November 13, 2018.
28. Al-Gahtany MA, Binitie OP. Adeloye-Odeku disease in Aseer region of Saudi Arabia. J West Afr Coll Surg 2011; 1(1):113–120.

29. Yılmaz B, Urgan K, Eksii MS, et al. Bubble over the head: Adeloye-Odeku disease in a Turkish child-case report. Turk Neurosurg 2014; 24(4):579-582. DOI: 10.5137/1019-5149.TJN.9050-13.0.

30. Dadlani R, Furtado S, Ghosal N, et al. Adeloye-Odeku disease: an African disease in the Indian child? Turk Neurosurg 2012; 22(4):515-520. DOI: 10.5137/1019-5149.TJN.3968-10.0.

31. Dadlani R, Ghosal N, Hegde AS. Bregmatic-dermoid cyst in a patent anterior fontanelle. J Neurossis Rural Pract 2013; 4:105-107. DOI: 10.4103/0976-3147.105645.

32. Parízek J, Nemeck S, Nmecková J, et al. Congenital dermoid cysts over the anterior fontanel: Report of 13 cases in Czechoslovak children. Child's Nervous System 1989; 5(4):234-237. DOI: 10.1007/BF00271025.

33. Adeloye A. Sickle cell anaemia. Br Med J 1973; 2:304-305. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1589152/pdf/brmedj01555-0074a.pdf.

34. Adeloye A. The RahimaDawood Memorial Guest Lecture – December 2006 – Malawi. Pattern, Practice and Problems of Neurological Surgery in East and Central Africa. East Cent Afr J Surg 2007; 12(2):4-16. Available at: http://www.bioline.org.br/pdf/eja071032. Accessed: November 13, 2018.

35. Adeloye A. The World of African Neurosurgery. The tenth E.LatundeOdeku Memorial Lecture. Ibadan, Nigeria. 1985. Ann IbdPg Med 2008; 6(1):57-71.

36. Wikipedia contributors. Gulf War. Wikipedia, The Free Encyclopedia. Available at: https://en.wikipedia.org/w/index.php?title=Gulf_War&oldid=872918119. Accessed: December 11, 2018.

37. Adeloye A. Inside Occupied Kuwait. Ibadan: Book Builders Editions, Africa; 2006.

38. Wikipedia contributors. Ibadan. Wikipedia, The Free Encyclopedia. Available at: http://en.wikipedia.org/w/index.php?title=Ibadan&oldid=866855121. Accessed: November 2, 2018.

39. Adeloye A. The aqueduct of Sylvius. Surg Neurol 1977; 8(6):458-460.

40. Michael OS. Archived at the aqueduct: Publications of E. Latunde Odeku compiled by Adeloye Adeloye. Ann IbdPg Med 2018; 16(1):76-82.

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/3.0/), which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.