## **ASSOCIATION UPDATE**



Check for updates

## The Nairobi Declaration—Reducing the burden of dementia in low- and middle-income countries (LMICs): Declaration of the 2022 Symposium on Dementia and Brain Aging in LMICs

Delegates of the 2022 Symposium on Dementia and Brain Aging in Low- and Middle-Income Countries, representing over 40 countries, met in Nairobi, Kenya, December 5–9 to highlight advances in dementia prevention, diagnosis, care, and research, as well as explore the future needs of the global community.

Dementia poses a major threat to optimal brain health and remains a priority for the demographically ever-changing worldwide population. It incurs substantial individual, societal, and global costs. By 2030, the majority of the 78 million people with dementia will be living in low- and middle-income countries (LMICs). Upon consideration of these grave statistics and new diagnostic paradigms with available prevention and treatment strategies, we, the undersigned delegates of the symposium, including the Organizing Committee and speakers, and the African Dementia Consortium (AfDC), with frontline and lived experience, call upon the global community, including governments, policymakers, international economic forums, health and social care providers, together with private and public research funding agencies, research-focused organizations such as universities, nongovernmental organizations, and technology and pharmaceutical companies, to act as follows:

- Rethink a global approach to dementia, being more focused on the diversity of underserved and underrepresented populations.
- Shift the balance of investment further toward LMICs, which bear
  a high burden, to tackle the challenges and seize opportunities
  and to mitigate the burden of various forms of dementia, including
  Alzheimer's disease, vascular dementia, and others, globally.
- Engage and influence policymakers and advocacy organizations to encourage implementation and evaluation of population-level dementia risk reduction interventions at a more diverse global level.
- In addition to promoting education, controlling cardiovascular risk, and preventing stroke, seriously consider nutritional factors as well as psychosocial activities for brain health and longevity.
- Ensure that the health and social care systems are equipped to meet the needs of aging populations in the LMICs as well as low-resource settings in high-income countries (HICs).
- Support research into more affordable, pragmatic, and effective solutions to improve the quality of life of people living with dementia and reduce the expenses of hospitalization, long-term care, and loss of income and indirect costs resulting from dementia.
- Equip higher education institutions in HICs and LMICs with the capacity to develop a pipeline of local highly motivated early career

- researchers (ECRs) to ensure future research will be responsive to local population needs and to leverage opportunities offered by different countries.
- Ensure a research framework with international collaboration that will unwind the rigid structures in LMICs and encourage young, enthusiastic people to give the best of their potential in their countries, thereby preventing brain drain.

We believe that timely intervention to address these goals will bring about significant and sustainable improvements in the prevalence, outcomes, and personal and societal impacts of dementia, resulting in a higher quality of life, better care, and global benefits.

Nairobi, Kenya, December 9, 2022

Organizing Committee and Speakers of the 2022 Symposium on Dementia and Brain Aging in Low- and Middle-Income Countries.

Gladys Maestre<sup>1</sup>

Maria Carrillo<sup>2</sup>

Raj Kalaria<sup>3</sup>

Daisy Acosta<sup>4</sup>

Larry Adams<sup>5</sup>

Thierry Adoukonou<sup>6</sup>

Kazeem Akinwande<sup>7</sup>

Joshua Akinyemi<sup>8</sup>

Rufus Akinyemi<sup>9</sup>

Onoja Akpa<sup>10</sup>

Suvarna Alladi<sup>11</sup>

Ricardo Allegri<sup>12</sup>

Raul Arizaga<sup>13</sup>

Faheem Arshad<sup>14</sup>

Ovedunni Arulogun<sup>15</sup>

Jyeuuriii Aruloguri

David Babalola<sup>16</sup> Olusegun Baiyewu<sup>17</sup>

Thomas Bak<sup>18</sup>

Tarek Bellaj<sup>19</sup>

Judith Boshe<sup>20</sup>

Carol Brayne<sup>21</sup>

David Brodie-Mends<sup>22</sup>

Richard Brown<sup>23</sup>

- Jennifer Cahn<sup>24</sup>
- Nkouonlack Cyrille<sup>25</sup>
- Albertino Damasceno<sup>26</sup>
  - Ranil de Silva<sup>27</sup>
  - Rohan de Silva<sup>28</sup>
  - Mamuka Djibuti<sup>29</sup>
  - Anna Jane Dreyer<sup>30</sup>
- Ratnavalli Ellajosyula<sup>31</sup>
  - Temitope Farombi<sup>32</sup>

  - Bernard Fongang<sup>33</sup>
    - Stefania Forner<sup>34</sup>
      - Rob Friedland<sup>35</sup>
        - Noe Garza<sup>36</sup>
- Antoine Gbessemehlan<sup>37</sup>
- Eliza (Eleni- Zacharoula) Georgiou<sup>38</sup>
  - Riadh Gouider<sup>39</sup>
    - Ishtar Govia<sup>40</sup>
  - Lea Grinberg<sup>41</sup>
  - Maëlenn Guerchet<sup>42</sup>
    - Seid Gugssa<sup>43</sup>
  - Joy Louise Gumikiriza-Onoria<sup>44</sup>
    - Deborah Gustafson<sup>45</sup>
      - Eef Hogervorst<sup>46</sup>
    - Michael Hornberger<sup>47</sup>
      - Agustin Ibanez<sup>48,49</sup>
        - Masafumi Ihara<sup>50</sup>
        - Ozama Ismail<sup>51</sup>
        - Thomas Issac<sup>52</sup> Linus Jönsson<sup>53</sup>
        - Celestin Kaputu<sup>54</sup>
      - Wambui Karanja<sup>55</sup>
      - Jackline Karungi<sup>56</sup>
    - Desire Tshala-Katumbay<sup>57</sup>
      - Brian Kunkle<sup>58</sup>
      - Joseph H Lee<sup>59</sup>
      - Iracema Leroi<sup>60</sup>
      - Raphaella Lewis<sup>61</sup>
      - Gill Livingston<sup>62</sup>
      - Francisco Lopera<sup>63</sup>
      - Kamada Lwere<sup>64</sup> Facundo Manes<sup>65</sup>
    - Lingani Mbakile-Mahlanza<sup>66</sup>
      - Pedro Mena<sup>67</sup>
      - Bruce Miller<sup>68</sup>
      - Athanase Millogo<sup>69</sup>
      - Abdul Mohamed<sup>70</sup>
      - Christine Musyimi<sup>71</sup>
      - Victoria Mutiso<sup>72</sup>

      - Noeline Nakasujja<sup>73</sup>
      - David Ndetei<sup>74</sup>
      - Sam Nightingale<sup>75</sup>
      - Alfred K. Njamnshi<sup>76</sup>

- Gabriela Novotni<sup>77</sup>
- Primrose Nyamayaro<sup>78</sup>
  - Solomon Nyame<sup>79</sup>
    - Julius Ogeng'o<sup>80</sup>

15525279, 2023, 3, Downloaded from https://alz-journals

library.wiley.com/doi/10.1002/alz.13025 by Qatar Universitaet, Wiley Online Library on [08/02/2024]. See the Terms and Conditi

- Adesola Ogunniyi81
- Maira Okada De Oliveira<sup>82</sup>
  - Njideka Okubadejo<sup>83</sup>
    - Martin Orrell<sup>84</sup>
  - Akintunde Orunmuyi85
    - Mayowa Owolabi<sup>86</sup>
      - Stella Paddick<sup>87</sup>
- Margaret A Pericak-Vance<sup>88</sup>
  - Zvezdan Pirtosek<sup>89</sup>
    - Felix Potocnik<sup>90</sup>
      - Bill Preston<sup>91</sup>
    - Rema Raman<sup>92</sup>
    - Kirti Ranchod<sup>93</sup>
      - Mie Rizig<sup>94</sup>
    - Monica Rosselli<sup>95</sup>
      - Roy Deepa<sup>96</sup>
        - Upal Roy<sup>97</sup>
  - Marufjon Salokhiddinov<sup>98</sup>
    - Mary Sano<sup>99</sup>
    - Fred Sarfo<sup>100</sup>
    - Claudia L Satizabal 101
  - Diego Sepulveda-Falla<sup>102</sup>
    - Sudha Seshadri 103
      - Claire Sexton<sup>104</sup>
      - Ingmar Skoog<sup>105</sup>
  - Peter St George-Hyslop<sup>106</sup>
    - Claudia Suemoto<sup>107</sup>
      - Jeremy Tanner<sup>108</sup>
    - Prekshya Thapa<sup>109</sup>
    - Kamadore Toure<sup>110</sup>
    - Valentine Ucheagwu<sup>111</sup>
  - Chinedu Udeh-Momoh<sup>112</sup>
    - Victor Valcour<sup>113</sup> Jeffery Vance<sup>114</sup>
    - Mathew Varghese<sup>115</sup>

      - Jaime Vera<sup>116</sup>
      - Richard Walker<sup>117</sup>
    - Wendy Weidner<sup>118</sup> Walsh Sebastian 119
  - Patrice Whitehead Gay<sup>120</sup> Henrik Zetterberg<sup>121</sup>
    - Yared Zewde<sup>122</sup>

e) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons Licens

The African Dementia Consortium  $^{123}$ 

<sup>1</sup>Departments of Neuroscience and Human Genetics, University of Texas Rio Grande Valley, Brownsville, TX, USA

<sup>2</sup>Alzheimer's Association, Chicago, IL, USA

<sup>3</sup>Translational and Clinical Research Institute, Newcastle University, Campus for Ageing and Vitality, Newcastle upon Tyne, UK

<sup>41</sup>Department of Neurology, University of San Francisco, San Francisco, CA, USA

<sup>42</sup>Inserm U1094, IRD UMR270, Univ. Limoges, CHU Limoges, EpiMaCT -Epidemiology of chronic diseases in tropical zone, Institute of Epidemiology and Tropical Neurology, OmegaHealth, Limoges, France <sup>43</sup>Department of Neurology, Addis Ababa University,

Addis Ababa, Ethiopia

<sup>44</sup>Department of Psychiatry, Makerere University, Kampala, Uganda <sup>45</sup>Department of Neurology, State University of New York Downstate

Health Sciences University, Brooklyn, NY, USA

<sup>46</sup>Department of Psychology, University of Loughborough, Loughborough, UK

<sup>47</sup>Department of Neurology, University of East Anglia, Norwich, UK <sup>48</sup>Global Brain Health Institute, Trinity College, Dublin, Ireland <sup>49</sup>Latin American Brain Health Institute (BrainLat), Universidad Adolfo Ibañez, Chile

<sup>50</sup>Department of Neurology, National Cerebral and Cardiovascular Center, Suita, Japan

<sup>51</sup>Alzheimer's Association, Chicago, IL, USA

<sup>52</sup>Centre for Brain Research (CBR), Indian Institute of Science (IISc), Bengaluru, India

<sup>53</sup>Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, Sweden

<sup>54</sup>Department of Neurology, University of Kinshasa, Kinshasa, Democratic Republic of the Congo

<sup>55</sup>Global Brain Health Institute, Trinity College, Nairobi, Kenya <sup>56</sup>Department of Psychiatry, Makerere University, Kampala, Uganda <sup>57</sup> Department of Neurology, Oregon Health & Science University, Portland, OR, USA

<sup>58</sup>Institute of Human Genomics, University of Miami, Miami, FL, USA <sup>59</sup> Sergievsky Center & Taub Institute, Columbia University,

New York, NY, USA

<sup>60</sup>TCIN, Lloyd Building, Trinity College, Dublin, Ireland <sup>61</sup>Department of Psychology, University of Cape Town,

Cape Town, South Africa

<sup>62</sup>Department of Psychiatry, University College London, London, UK <sup>63</sup>Grupo de Neurociencias de Antioquia, Universidad de Antioquia, Medellin, Colombia

> <sup>64</sup>Department of Medical Microbiology, Makerere University, Mulago, Uganda

<sup>65</sup>Institute of Cognitive and Translational Neuroscience (INCYT), INECO Foundation, Favaloro University, Buenos Aires, Argentina

<sup>66</sup>Department of Psychology, University of Botswana, Gabrone, Botswana <sup>67</sup> Institute of Human Genomics, University of Miami, Miami, FL, USA <sup>68</sup> Department of Neurology, University of San Francisco,

San Francisco, CA, USA

<sup>69</sup>Department of Neurology, University of Ouagadougou,

Ouagadougou, Burkina Faso

<sup>70</sup>Department of Psychology, Linnaeus University, Vaxjo, Sweden <sup>71</sup>African Mental Health Research & Training Foundation, Nairobi, Kenya <sup>72</sup> African Mental Health Research & Training Foundation, Nairobi, Kenya <sup>73</sup>Department of Psychiatry, Makerere University, Kampala, Uganda

<sup>4</sup>Internal Medicine Department, Universidad Nacional Pedro Henriquez Ureña, Santo Domingo, Dominican Republic

<sup>5</sup> Institute of Human Genomics, University of Miami, Miami, FL, USA <sup>6</sup>Department of Neurology, University of Parakou, Parakou, Benin <sup>7</sup>Department of Chemical Pathology and Immunology, Federal Medical Centre, Abeokuta, Nigeria

<sup>8</sup>College of Medicine, University of Ibadan, Ibadan, Nigeria <sup>9</sup>Institute for Advanced Medical Research and Training, University of Ibadan, Ibadan, Nigeria

> <sup>10</sup>College of Medicine, University of Ibadan, Ibadan, Nigeria <sup>11</sup>Department of Neurology, NIMHANS, Bangalore, India

<sup>12</sup>Department of Cognitive Neurology, Instituto Neurologico Fleni, Buenos Aires, Argentina

<sup>13</sup>Neurología Cognitiva y Neuropsicología, Hospital Dr. Cesar Milstein, Buenos Aires, Argentina

<sup>14</sup>Department of Neurology, NIMHANS, Bengaluru, India

<sup>15</sup>Department of Health Promotion and Education, University of Ibadan, Ibadan, Nigeria

<sup>16</sup>University College Hospital, University of Ibadan, Ibadan, Nigeria <sup>17</sup>Department of Psychiatry, University of Ibadan, Ibadan, Nigeria <sup>18</sup>Department of Neurology, University of Edinburgh, Edinburgh, UK <sup>19</sup>Department of Psychological Sciences, Qatar University, Doha, Qatar <sup>20</sup>Department of Medicine, Kilimanjaro Christian Medical College, Moshi, Tanzania

<sup>21</sup>Cambridge Public Health, University of Cambridge, Cambridge, UK <sup>22</sup>Department of Medicine, Korle-Bu Teaching Hospital, Accra, Ghana <sup>23</sup>Department of Psychology, Dalhousie University, Halifax, Canada

<sup>24</sup>Departments of Neuroscience and Human Genetics, University of Texas Rio Grande Valley, Brownsville, TX, USA

<sup>25</sup> Faculty of Health Sciences, University of Buea, Buea & Brain Research Africa Initiative, Yaounde, Cameroon

<sup>26</sup>Department of Medicine, University of Maputo, Maputo, Mozambique <sup>27</sup> Faculty of Medical Sciences, University of Sri Jayewardenepura, Rathmalana, Sri Lanka

<sup>28</sup>Institute of Neurology, University College London, London, UK <sup>29</sup> Partnership for Research and Action for Health, Tbilisi, Georgia <sup>30</sup>Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa

<sup>31</sup>Department of Neurology, Manipal Hospitals, Bangalore, India <sup>32</sup>Department of Neurology, University of Ibadan, Ibadan, Nigeria

<sup>33</sup>Glenn Biggs Institute, University of Texas, San Antonio, TX, USA <sup>34</sup>Alzheimer's Association, Chicago, IL, USA

<sup>35</sup>Department of Neurology, University of Louisville, Louisville, USA <sup>36</sup>Departments of Neuroscience and Human Genetics, University of Texas Rio Grande Valley, Harlingen, TX, USA

<sup>37</sup>institute of Epidemiology and Tropical Neurology, University of Limoges, Bordeaux, France

<sup>38</sup>Department of Psychiatry, Medicine, University of Patras, Patras, Greece <sup>39</sup> Neurology Department, Razi University Hospital, Tunis, Tunisia <sup>40</sup>Caribbean Institute for Health Research, University of the West Indies, Kingston, Jamaica

<sup>74</sup>Africa Mental Health Research and Training Foundation and University of Nairobi, Nairobi, Kenya

> <sup>75</sup>Department of Neurology, University of Cape Town, Cape Town, South Africa

<sup>76</sup>Department of Neurology, FMBS, The University of Yaoundé I & Brain Research Africa Initiative, Yaounde, Cameroon

<sup>77</sup>Department of Neurology, Ss. Cyril and Methodius University, Skopje, North Macedonia

<sup>78</sup>Department of Psychology, University of Harare, Harare, Zimbabwe

<sup>79</sup> Kintampo Health Research Centre, Ghana Health Service, Kintampo,

<sup>80</sup>Department of Human Anatomy & Medical Physiology, University of Nairobi. Nairobi. Kenya

<sup>81</sup>Department of Medicine, University of Ibadan, Ibadan, Nigeria
<sup>82</sup>Cognitive and Behavioral Neurology Unit, University of São Paulo, São
Paulo, SP, Brazil

<sup>83</sup>Neurology Unit, Department of Medicine, College of Medicine, University of Lagos, Nigeria

<sup>84</sup>Institute of Mental Health, University of Nottingham, Nottingham, UK

<sup>85</sup>Integrated Molecular Imaging Centre, Kenyatta University,
Nairobi, Kenya

<sup>86</sup>Center for Genomic and Precision Medicine, College of Medicine, University of Ibadan, Ibadan, Nigeria

<sup>87</sup>Translational and Clinical Research Institute, Newcastle University, Newcastle upon Tyne, UK

<sup>88</sup>Institute of Human Genomics, University of Miami, Miami, FL, USA
<sup>89</sup>Department of Neurology, Ljubljana University Medical Centre,
Ljubljana, Slovenia

<sup>90</sup>Department of Geriatric Psychiatry, Stellenbosch University,
Durbanville, South Africa

<sup>91</sup>Roots Worldwide LLC and Innovative California Biosciences International Inc. Fullerton, CA, USA

<sup>92</sup>Alzheimer's Therapeutic Research Institute, University of Southern California, San Diego, CA, USA

<sup>93</sup>Global Brain Health Institute, Trinity College, Johannesburg, South Africa <sup>94</sup>UCL Queen Square Institute of Neurology, London, UK

<sup>95</sup> Department of Psychology, Florida Atlantic University, Miami, FL, USA
<sup>96</sup> Department of Health and Biomedical Science, The University of Texas
Rio Grande Valley, Brownsville, TX, USA

<sup>97</sup>Department of Health and Biomedical Science, The University of Texas Rio Grande Valley, Brownsville, TX, USA

> <sup>98</sup>Zangiota-2 Clinical Hospital, Tashkent Medical Academy, Tashkent, Uzbekistan

<sup>99</sup>Alzheimer's Disease Center, Mount Sinai School of Medicine,

Bronx, NY, USA

<sup>100</sup>Department of Medicine, Kwame Nkrumah University of Science & Technology, Kumasi, Ghana

<sup>101</sup>Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases and Department of Population Health Sciences, UT Health San Antonio, San Antonio, Texas, United States

> <sup>102</sup>Institute of Neuropathology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

<sup>103</sup>Glenn Biggs Institute, University of Texas, San Antonio, MA, USA

<sup>104</sup>Alzheimer's Association, Chicago, IL, USA

<sup>105</sup>Center of Health and Aging (AgeCap), University of Gothenburg, Goteborg, Sweden

106 Tanz Centre for Research in Neurodegenerative Diseases and Division of Neurology, University of Toronto, Toronto, Canada

107 Division of Geriatrics, Universidade de São Paulo, São Paulo, Brazil
 108 Glenn Biggs Institute, University of Texas, San Antonio, TX, USA
 109 Department of Psychiatric Nursing, B.P. Koirala Institute of Health
 Sciences, Dharan, Nepal

110 Department of Neurology, Université de Thiès, Thies, Senegal
 111 Global Brain Health Institute, Trinity College, Onitsha, Nigeria

<sup>112</sup>School of Public Health, Imperial College London, Worcester Park, UK
<sup>113</sup>Global Brain Health Institute, University of San Francisco, San Francisco, CA, USA

114 Institute of Human Genomics, University of Miami, Miami, FL, USA
 115 Department of Psychiatry, St John's Medical College, Bangalore, India
 116 Brighton and Sussex Medical School, University of Sussex, Brighton, UK
 117 Department of Medicine, North Tyneside General Hospital,
 North Shields, UK

<sup>118</sup>Alzheimer's Disease International, London, UK

119 Cambridge Public Health, University of Cambridge, Cambridge, UK
 120 Institute of Human Genomics, University of Miami, Miami, FL, USA
 121 Clinical Neurochemistry Laboratory, Moelndal Hospital, Moelndal,
 Sweden

<sup>122</sup>Department of Neurology, Addis Ababa University, Addis Ababa, Ethiopia

<sup>123</sup>The African Dementia Consortium, University of Ibadan, Ibadan, Nigeria

Countries represented: Argentina, Benin, Botswana, Brazil, Burkina Faso, Cameroon, Canada, Colombia, Croatia, Democratic Republic of Congo, Dominican Republic, Egypt, Ethiopia, Finland, France, Germany, Ghana, Greece, India, Indonesia, Ireland, Italy, Jamaica, Japan, Kenya, Republic of Korea, Mozambique, Nepal, Netherlands, Nigeria, North Macedonia, Portugal, Singapore, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Tanzania, Tunisia, Uganda, United Kingdom, United States, Uzbekistan, Venezuela, Zambia, Zimbabwe.

## Correspondence

Raj Kalaria, Translational and Clinical Research Institute, Newcastle University, Campus for Ageing and Vitality, Newcastle upon Tyne NE4 5PL, United Kingdom.

Email: raj.kalaria@newcastle.ac.uk