


**Faculté de médecine  
Département de nutrition**



**CENTRE COLLABORATEUR OMS SUR LA TRANSITION  
NUTRITIONNELLE ET LE DÉVELOPPEMENT**  
**WHO COLLABORATING CENTRE ON NUTRITION  
CHANGES AND DEVELOPMENT**


Faculté de médecine  
Département de nutrition  




Centre collaborateur OMS sur la transition  
nutritionnelle et le développement, Canada.

- WHO/PAHO Collaborating Centre designated in 2003
- Status renewed for 3 years in 2007 and 2011
- Mandate of TRANSNUT (2003- )  
 Technical support to WHO/PAHO and partners for training, research and communication on nutrition transition and *the double burden of malnutrition* (2007-....)

Nutrition, lifestyle transition  
 ↓  
 ↗ Nutrition-related chronic diseases





+  
 Persistence of undernutrition and micronutrient malnutrition  
 =  
***Double burden of malnutrition***


**TRANSNUT as WHO/PAHO  
Collaborating Centre**





- ♦ 19 WHO CC in nutrition in the world  
 Australia (2); Chile; Denmark; India (3); Italy; Japan; Kazakhstan; Lebanon; Netherlands; New-Zealand; Thailand; UK (2); Emirates
- ♦ TRANSNUT: only CC in nutrition in Canada
- ♦ 26 WHO CC in Canada



## TRANSNUT Faculty Members

- Dr. Hélène Delisle (Dir.) *International nutrition*
- Dr J.-Marie Ékoé *Diabetology*
- Dr Dominique Garrel *Endocrinology*
- Dr Bart. Kuate-Defo *Demography*
- Dr Marielle Ledoux *Physical activity*
- Dr Bryna Shatenstein *Dietary assessment*
- Dr Irene Strychar *Nutrition education*
- Dr Malek Batal *Food environment*


## TRANSNUT Faculty Members (cont.)

- Dr Michèle Rivard *Biostatistics*
- Dr Parviz Ghadirian *Epidemiology*
- Dr Rémi Rabasa-Lhoret *Endocrinology*
- Dr Geneviève Mailhot *Fundamental nutrition*
- Dr Victor Gavino *Food Science*
- Dr Olivier Receveur *Eating patterns*

## International Workshop on Early Nutrition and Chronic disease 2004

*June 4, University of Montreal*




JULY 2005  
VOLUME 1  
ISSUE 3

1008-2704-0000

# Maternal & Child Nutrition

Edited by  
Victoria Hall Moran and Peter Aggett

Special Issue  
Early nutritional influences on obesity, diabetes and cardiovascular disease risk. Proceedings of an International Workshop, Université de Montréal, June 6-9, 2004.

Organised by TRANSNUT, WHO Collaborating Centre on Nutrition Changes and Development, Department of Nutrition, Université de Montréal, Canada

Blackwell Publishing Available online www.blackwellpublishing.com/journals

Proceedings published in 3<sup>rd</sup> issue of *Maternal and Child Nutrition*

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WHO COLLABORATING CENTRE ON NUTRITION CHANGES AND DEVELOPMENT

Université de Montréal

Seminar Professor David Barker  
**MATERNAL NUTRITION AND ADULT DISEASE**  
Wednesday April 20 2005, 16h00  
Liliane-Stewart Building

Initial TRANSNUT studies in developing countries

*The coexistence of child malnutrition and maternal overweight/obesity in the urban poor*  
Gervais NTANDOU (M.Sc., 2004)  
Cotonou, Bénin


*Darline RAPHAËL (M. Sc., 2004)*  
Port-au-Prince, Haïti

*Nutrition transition and syndrome X among men in Oaxaca (Mexico)*  
Stanislao RAMIREZ (Ph.D., 2006)  
Xochil PONCE (M.Sc., 2006)

Past studies In Aboriginal Populations [First Nations] (Québec)  
Supervision of Dr Olivier RECEVEUR

*Determinants of food choices of children in Kahnawake*  
Nudelle PIERRE (M.Sc., 2006)

*Quality of the diet and obesity among adult Cree (Baie James) compared to that of Quebec adults*  
Karimou MOROU (Ph.D., 2009)




## Multi-country study on nutrition transition and markers of CVD risk (2002-8)


**African groups in 3 sites:**  
Haiti, Benin, Haitian community in Montreal

Funding: Canadian Population Health Initiative (2002-4)  
Canadian Institutes of Health Research (2004-8)


**Study in Haitians in Montreal**



Marie-Claude DÉSILETS (*Ph.D.*, 2007)




Amel ZERTAL (*M.Sc.*, 2006)




## Multi-country Study on Nutrition Transition (cont.)


**Studies in Haiti and Benin**



Roger SODJINOU. (*Ph.D.* 2008). Nutrition transition and cardiovascular disease risk factors, Cotonou, Benin




Gervais NTANDOU (*Ph.D.* 2010). Nutrition transition and cardiovascular disease risk factors, Study in the city of Ouidah and its rural outskirts, Benin




## A hub on the double burden of malnutrition in French-speaking Africa

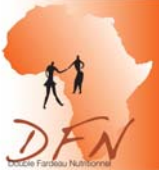

CIDA-funded UPCD project 2008-2014




Organisation mondiale de la Santé



Faculté de médecine  
Département de nutrition  
Unité de Santé Internationale

Institut régional de santé publique, Ouidah, Bénin



## Aim of DFN Project

To strengthen the capacity of West Africa French-speaking countries to address the double burden of malnutrition

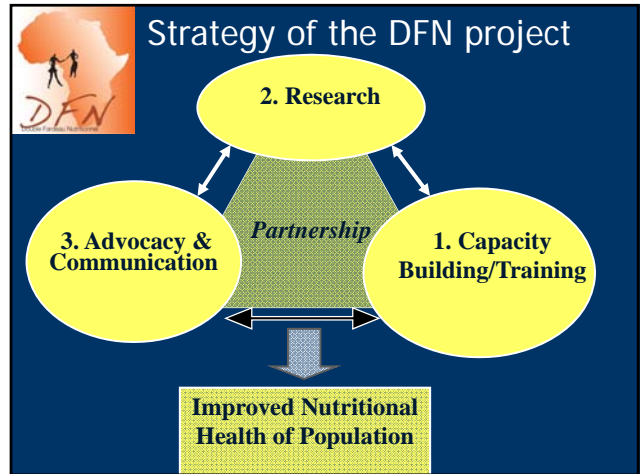
*Through the development of a hub involving partners in Benin, Burkina Faso and the West-African Region, and University of Montreal*

## Partners of DFN project

- ◆ Benin
  - IRSP - Regional Institute for Public Health, & Faculty of Health Sciences, U Abomey-Calavi
  - ISBA - Institute for Higher Biomedical Sciences
- ◆ Burkina Faso
  - IRSS – Institute for Health Science Research
  - University of Ouagadougou
  - HKI Helen Keller International
- ◆ Mali
  - Department of Endocrinology U of Bamako
  - Santé Diabète (NGO)
- ◆ WHO; AFRO; country offices; Inter-country Technical support Office, Ouagadougou



Pr Victoire Agueh



## 1) Institutional strengthening and training of human resources

- ◆ New degree-granting university programs in Benin for the region :
  - M.Sc. in public nutrition 2009
  - Professional B.Sc. in Dietetics and Nutrition 2011
- ◆ Training of trainers at University of Montreal;
- ◆ Continuous education /e-courses
  - Nutrition transition and the double burden of malnutrition
  - Management of severe malnutrition

## Two on-going cohorts, Master program in Populations' Nutrition, IRSP, Benin

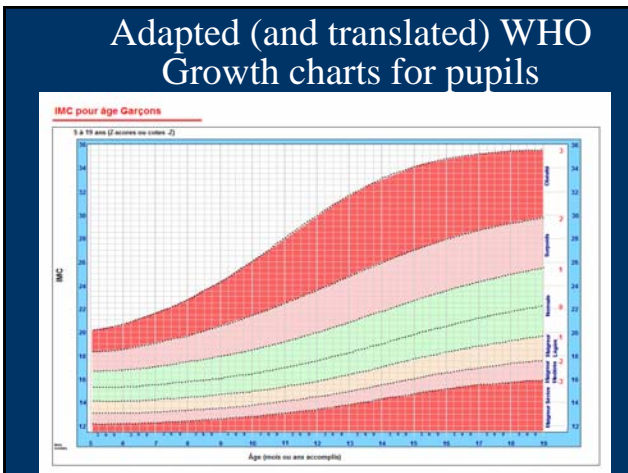


**DFW** First graduates, B.Sc. Program in Nutrition and Dietetics, FSS, Benin  
December 2013

CÉRÉMONIE OFFICIELLE DE REMISE DE DIPLOME  
À LA PREMIÈRE PROMOTION DE NUTRITIONNISTES DIÉTÉTISTES  
DE LA FACULTÉ DES SCIENCES DE LA SANTÉ  
SOUS LE COMMANDEMENT DU MINISTRE DE LA SANTÉ ET  
DU MINISTRE D'ÉTAT CHARGÉ DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE SCIENTIFIQUE

**DFW** 2) Action research in schools and communities and other studies

- In schools: pilot-testing of Nutrition-Friendly School Initiative of WHO
  - Ouagadougou
  - Cotonou
- In communities: Self-help groups for the prevention of nutrition-related non-communicable diseases, Benin



**DFW** TRANSNUT Ph.D. students

Charles Daboné 2012 Burkina  
Charles Sossa 2013 Bénin  
Colette Azandjè... Bénin  
Augustin Zeba 2013 Burkina

02/17/2012

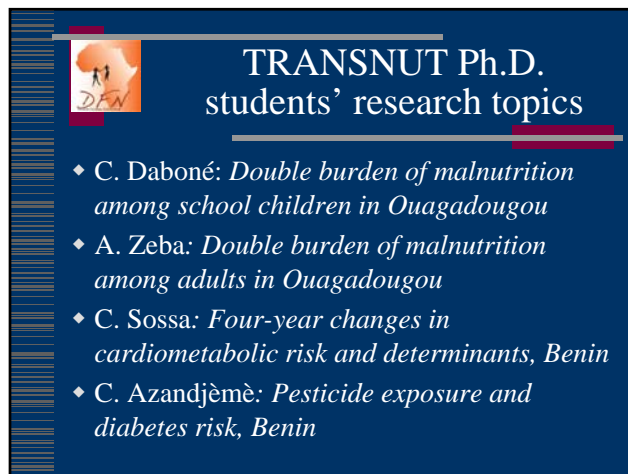


## TRANSNUT Ph.D. students (cont.)

Koffi Alouki  
Togo

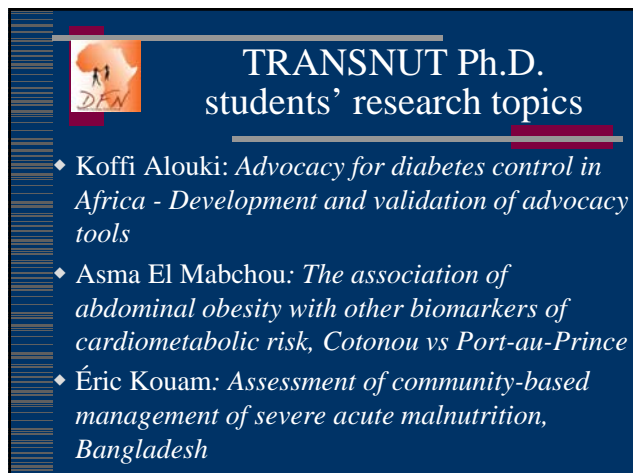
Asma El  
Mabchour Maroc

Éric Kouam  
Cameroun



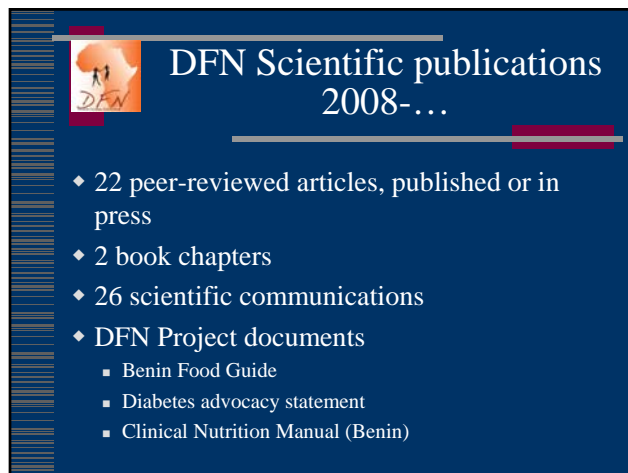
## TRANSNUT Ph.D. students' research topics

- ♦ C. Daboné: *Double burden of malnutrition among school children in Ouagadougou*
- ♦ A. Zeba: *Double burden of malnutrition among adults in Ouagadougou*
- ♦ C. Sossa: *Four-year changes in cardiometabolic risk and determinants, Benin*
- ♦ C. Azandjèmè: *Pesticide exposure and diabetes risk, Benin*



## TRANSNUT Ph.D. students' research topics

- ♦ Koffi Alouki: *Advocacy for diabetes control in Africa - Development and validation of advocacy tools*
- ♦ Asma El Mabchou: *The association of abdominal obesity with other biomarkers of cardiometabolic risk, Cotonou vs Port-au-Prince*
- ♦ Éric Kouam: *Assessment of community-based management of severe acute malnutrition, Bangladesh*



## DFN Scientific publications 2008-...

- ♦ 22 peer-reviewed articles, published or in press
- ♦ 2 book chapters
- ♦ 26 scientific communications
- ♦ DFN Project documents
  - Benin Food Guide
  - Diabetes advocacy statement
  - Clinical Nutrition Manual (Benin)

### 3) Communication and advocacy

- ◆ Development of a Food Guide for Benin
- ◆ Development of advocacy strategies and tools focusing on management and prevention of type-2 diabetes
- ◆ Electronic platform:
  - Website with access to on-line training modules
  - Newsletter

### Development of advocacy tools for diabetes control

1. Set of core statements with supporting scientific evidence
2. Medical cost calculator: *Cost to patients for standard care for diabetes with and without complications*



**Diabetes is a killer, it is costly and it is a crippling disease**

**10 good reasons to act now**



Maryse Hamelin-Raynaud

**Double fardeau nutritionnel (DFN)  
Pôle francophone en Afrique**

**Le diabète tue, il coûte cher et il progresse vite vers les complications invalidantes**

**Un appel à l'action pour le diabète en Afrique**

**Dix signaux d'alerte**

1. Le diabète augmente plus vite en Afrique qu'ailleurs
2. Le diabète et les maladies cardiovasculaires tuent plus que le VIH/SIDA en Afrique
3. Le diabète affecte davantage de sujets actifs en Afrique
4. Le diabète est diagnostiqué souvent tardivement, au stade des complications parfois graves et mutilantes
5. Le diabète est responsable d'importantes pertes de productivité et de revenu national
6. Le diabète précipite des individus et ménages dans la pauvreté
7. Le diabète augmente rapidement avec l'urbanisation galopante et la transition nutritionnelle
8. La malnutrition maternelle et infantile augmente le risque de diabète à l'âge adulte
9. Le diabète creuse encore les écarts de santé entre hommes et femmes
10. Le diabète peut et doit être évité.

**Il faut agir maintenant**

**Groupe de travail :**  
Pr Naby Bolédé, Guinée-Conakry; Pr Joseph Drabo, Burkina Faso;  
Pr Sidibe Traoré, M. Stéphane Besançon, Mali;  
Pr François Djoko, Pr Ousmane Houdouma, Bénin;  
Pr Hélène Delisle, Montréal, Canada



**Food Guide for Bénin**



Sarah Levesque

**Guide alimentaire du Bénin**



**EXEMPLES DE MENUS JOURNALIERS POUR DES ADULTES**

Menu 1	Menu 2	Menu 3	Menu 4
<ul style="list-style-type: none"> <li>1/ 2 tasses de riz</li> <li>1/ 2 tasse de poulet</li> <li>1/ 2 tasse de légumes</li> <li>1/ 2 tasse de fruits</li> <li>1/ 2 tasse de lait</li> <li>1/ 2 tasse de pain</li> </ul>	<ul style="list-style-type: none"> <li>1/ 2 tasse de riz</li> <li>1/ 2 tasse de poulet</li> <li>1/ 2 tasse de légumes</li> <li>1/ 2 tasse de fruits</li> <li>1/ 2 tasse de lait</li> <li>1/ 2 tasse de pain</li> </ul>	<ul style="list-style-type: none"> <li>1/ 2 tasse de riz</li> <li>1/ 2 tasse de poulet</li> <li>1/ 2 tasse de légumes</li> <li>1/ 2 tasse de fruits</li> <li>1/ 2 tasse de lait</li> <li>1/ 2 tasse de pain</li> </ul>	<ul style="list-style-type: none"> <li>1/ 2 tasse de riz</li> <li>1/ 2 tasse de poulet</li> <li>1/ 2 tasse de légumes</li> <li>1/ 2 tasse de fruits</li> <li>1/ 2 tasse de lait</li> <li>1/ 2 tasse de pain</li> </ul>

**DIFFÉRENTES ACTIVITÉS PHYSIQUES**

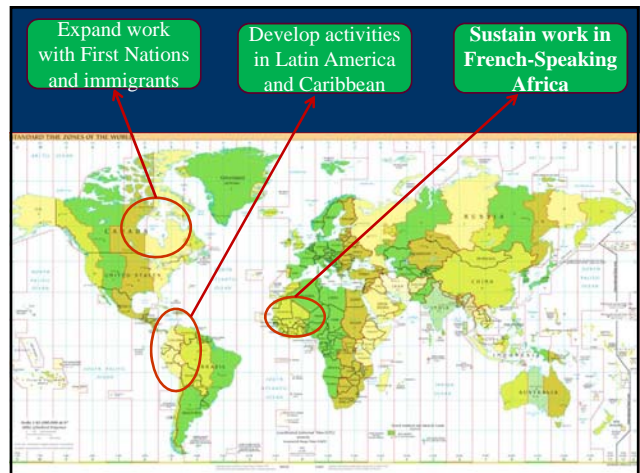






## Perspectives for TRANSNUT

- ◆ Support by University, Faculty and Department
- ◆ Redesignation in 2015
- ◆ New composition
  - Malek Batal (Director) (H. Delisle ex-Director)
  - Dominique Garrel
  - Barthelemy Kuate-Defo
  - Marielle Ledoux
  - Bryna Shattenstein
  - Louise St-Denis
  - Irene Strychar
  - Jean-Claude Moubarac, Charles Daboné, post-doc fellows
- ◆ Expansion





*Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful men with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent.*

Calvin Coolidge, 30<sup>th</sup> US President (1872-1933)

