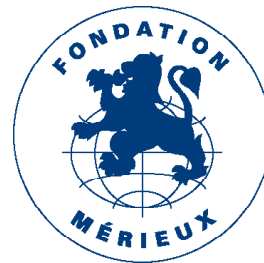


Aging and Immunity II

Campus Novartis
Siena - Italy
April 22-24, 2012

Steering Committee:

- Teresa AGUADO
- Giuseppe DEL GIUDICE
- Catherine DUTEL
- Jorg GORONZY
- Beatrix GRUBECK-LOEBENSTEIN
- Agnies HOFFENBACH
- Jacques LOUIS
- Sandrine SAMSON



Background

Prolongation of life expectancy in the 20th century has been one of the humanity's greatest triumphs. This significant increase of life length however raises the crucial issue of healthy aging. Since infectious diseases in the elderly clearly contributes to morbidity in this particularly vulnerable population, strategies for prevention of these diseases would clearly impact on its frailty. However, given the characteristics of the immune responsiveness of the elderly, vaccines and immunization strategies tailored for this particular population are needed and should be developed.

These issues were reviewed and discussed during a meeting organized by Fondation Mérieux in Siena in September 2009. During this meeting, the various bases for immune senescence were reviewed and the possibilities of counteracting this waning of immune responsiveness and restoring immunocompetence in the elderly were discussed. In addition, examples of diseases that should be targeted by vaccination in the senior population were considered.

Thus, inasmuch as aging represents one of the main problems of the 21st century, vaccines specifically directed to the elderly become a public health priority both in developed and in developing countries. Within this context, Fondation Mérieux is organizing this second meeting on « Aging and Immunity » with the objectives to review the progress made during the last 2 and ½ years. During this meeting, particular attention will be given to discuss the advancement made in relation to several issues raised and considered as high priority for further research efforts by participants to the 2009 workshop.

These issues include:

- Assessing the progress in recent years of the understanding of the cellular and molecular basis for immune senescence. Strategies for strengthening the immune reactivity of the elderly during vaccination without triggering potentially adverse inflammatory reactions will be considered.
- Reviewing the evidence that vaccination in the elderly delays the transition between « young old » to « old old » and thus discuss the age groups within the elderly population that should be particularly targeted by vaccination.
- Discussing the needs for reliable and robust biomarkers of vaccine-induced protection in the elderly (correlates of protective immunity) and better diagnostic tools.
- Defining strategies by which to integrate the efforts made in understanding the basis of immunosenescence with vaccinology and gerontology, and the most appropriate ways to translate the current scientific knowledge into the development of vaccination strategies for the poorest countries.

Reference: D. Boraschi, G. Del Giudice, C. Dutel, B. Ivanoff, R. Rappuoli and B. Grubeck-Loebenstein : Ageing and immunity: addressing immune senescence to ensure healthy ageing. Vaccine, 2010, 28, 3627-3631.



Scientific Programme

Sunday 22 April 2012

15.00 - 16.00	Registration	
16.00 - 16.30	Welcome Address	Rino RAPPUOLI (Global Head, Vaccines Research, Novartis Vaccines & Diagnostics) & Fondation Mérieux
16.30 - 17.10	Keynote lecture: Strategies for making vaccines efficacious in the elderly	Gary NABEL

Session 1 The burden of infectious diseases in the elderly

17.10 - 18.30

17.10 - 17.30	Burden and relative importance of infectious diseases in the elderly	Karl-Heinz KRAUSE
17.30 - 17.50	Discussion	
17.50 - 18.10	WHO initiatives in relation to aging and immunity	Teresa AGUADO
18.10 - 18.30	Discussion	

Monday 23 April 2012

Session 2 Progress in the understanding of the mechanisms underlying immunosenescence

08.30 - 15.20

08.30 - 08.50	Loss of naïve T cells and repertoire constriction in the elderly	J. NIKOLICH-ZUGICH
08.50 - 09.10	Discussion	



Scientific Programme

09.10 - 09.30	Altered naïve and memory CD4+ T cell homeostasis and immunosenescence	Jorg GORONZY
09.30 - 09.50	Discussion	
09.50 - 10.20	<i>Coffee break</i>	
10.20 - 10.40	CD8+ T cell response in the elderly	Beatrix GRUBECK-LOEBENSTEIN
10.40 - 11.00	Discussion	
11.00 - 11.20	B cell repertoire and aging	Deborah DUNN-WALTERS
11.20 - 11.40	Discussion	
11.40 - 12.00	Impairment of DC functions and aging	Albert SHAW
12.00 - 12.20	Discussion	
12.30 - 14.00	<i>Lunch</i>	
14.00 - 14.20	Skin Aging and the immune response (emphasis on Treg)	Arne AKBAR
14.20 - 14.40	Discussion	
14.40 - 15.00	HIV infection, inflammation, immunosenescence and aging	S.G. DEEKS
15.00 - 15.20	Discussion	

Session 3

New technologies to redefine biomarkers of immune responsiveness in the elderly

15.20 - 17.50

15.20 - 15.40	Multiplex flow cytometry	Wendy FANTL
15.40- 16.00	Discussion	
16.00 - 16.30	<i>Coffee break</i>	



Scientific Programme

16.30 - 16.50	A system biology approach to predict immunogenicity and provide new mechanistic insights about vaccines	B. PULENDRAN
16.50 - 17.10	Discussion	
17.10 - 17.30	Computational biology to evaluate genes expression following vaccination	Damien CHAUSSABEL
17.30 - 17.50	Discussion	

Tuesday 24 April 2012

Session 3 Continued

08.30 - 09.50

08.30 - 08.50	Deep sequencing of B cell repertoire and aging	Scott BOYD
08.50 - 09.10	Discussion	
09.10 - 09.30	Dissecting the human T cell response to pathogens and Vaccines	Federica SALLUSTO
09.30 - 09.50	Discussion	

Session 4 Improving vaccine efficacy in the elderly

09.50 - 15.10

09.50 - 10.10	The needs of the aging population with new vaccines	M. DENIS
10.10 - 10.30	Discussion	



Scientific Programme

10.30 - 11.00	<i>Coffee break</i>	
11.00 - 11.20	Adjuvants for the elderly	Giuseppe DEL GIUDICE
11.20 - 11.40	Discussion	
11.40 - 12.00	Pneumococcal vaccines in the elderly (conjugated vs polysaccharides)	David GOLDBLATT
12.00 - 12.20	Discussion	
12.20 - 12.40	Herpes zoster vaccines for the elderly	M. LEVINE
12.40 - 13.00	Discussion	
13.00 - 14.30	<i>Lunch</i>	
14.30 - 14.50	Efficacy of influenza vaccines in the elderly	H. GREENBERG
14.50 - 15.10	Discussion	

Session 5 Round table discussion and closing of the meeting

15.10 - 16.30

15.10 - 16.30	Discussion on future development and needs	
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