



# Annual Report

# 2014

# ANNUAL REPORT 2014

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## INTRODUCTION

WELBIO is an inter-university life sciences research institute with 23 programmes of excellence. The institute is characterised by the individualised support given to WELBIO investigators in establishing an integrated research and valorisation strategy. Inventions are developed working closely with the host universities and, in particular, with members of technology transfer offices.

When founded by the Walloon Government on 12 December 2008, WELBIO received an initial budget of EUR 15 million. In December 2012, the Walloon and Wallonia-Brussels Federation Governments guaranteed WELBIO an annual budget of EUR 6 million.

In 2013, the administrative structure of WELBIO was modified. Following the decrees approving the cooperation agreement of 4 December 2012 between the French Community and the Walloon Region concerning the funding of strategic fundamental research in the framework of cross-funding policies, WELBIO was integrated, as a delegated mission of Wallonia, into the Fund for Strategic Fundamental Research (FRFS) as the strategic line of Life Sciences. The FRFS is an affiliated fund of the FNRS, tasked by the Walloon Government with organising the administrative and financial management of calls for projects for Wallonia's strategic lines of research.

In 2014, in the new context of the FRFS, the launch of a new call for projects was organized.

## SET FOR A NEW WAVE OF EXCELLENCE

### 1. A NEW CALL FOR PROJECTS

In the new context of the FRFS, WELBIO and the FNRS have coordinated with each other to organise the next call for projects, scheduled to be launched in January 2015.

The improvements implemented during the previous WELBIO call are being maintained for this new call, namely:

- A "starting grant" category aimed at talented young investigators. These young investigators must have no more than 12 years' post-doctoral experience. They must also have demonstrated their scientific independence by being the last-named author of several publications and their ability to set up their own research team. Furthermore, they must have a guaranteed salary, outside the project, for its entire term. In contrast, experienced investigators must apply in the "advanced grant" category.
- An interview carried out by the Scientific Council of the pre-selected candidates in the "starting grant" category, integrated into the selection procedure.

The administrative management of this new call by the FNRS has resulted in further changes:

- The dossiers will be submitted electronically, via the FNRS Semaphore platform.
- The Scientific Council will be comprised of nine international experts and four members from Wallonia-Brussels Federation universities or scientific establishments.

## 2. RENEWAL OF THE PROGRAMMES ISSUED FROM THE 2012 CALL

The budget allocation for the 2012 call for projects is EUR 7,800,000 for four years. Principal investigators who received WELBIO funding for the first two years (2013–2015) of their four-year WELBIO programme were eligible to submit a renewal request for the period 2015–2017. Projects had to be submitted by no later than 12 November 2014.

The Scientific Council assessed the renewal requests and made a renewal recommendation that was submitted to the Governing Body, which then had to decide on the funding.

The Governing Body decided to renew the eight research programmes for 2013–2015, for a total budget of EUR 3,900,000 for two years.

### "Starting grants" for 2013–2017



**Fabrice Bureau –EUR 200,000 /year**  
Université de Liège

*Ontogeny and molecular differentiation pathways of lung interstitial macrophages*



**Patrice D. Cani – EUR 200,000 /year**  
Université catholique de Louvain

*Study of the dialogue that exists between intestinal bacteria and host: impact on the development of obesity and type 2 diabetes*



**Stanislas Goriely – EUR 200,000 /year**  
Université libre de Bruxelles

*Transcriptional control of memory CD8 T cell differentiation*



**Cédric Govaerts – EUR 200,000 /year**  
Université libre de Bruxelles

*Structural characterisation of CFTR using nanobodies*



**Charles Pilette – EUR 200,000 /year**  
Université catholique de Louvain

*Impaired mucosal immunity in severe asthma*

## "Advanced grants" for 2013–2017



**Michel Georges – EUR 350,000 /year**  
Université de Liège

*Integrating genetics and functional genomics to identify causative genes and variants controlling inherited predisposition to inflammatory bowel disease*



**André Goffinet – EUR 250,000 /year**  
Université catholique de Louvain

*Mechanisms of brain wiring*



**Marc Parmentier – EUR 350,000 /year**  
Université libre de Bruxelles

*Role of leukocyte chemotactic factors in tumour progression*

## EXCELLENCE IN RESEARCH

### 1. WELBIO INVESTIGATORS

The results achieved by WELBIO investigators are the product of many years of research. The excellence of these results is highlighted, year after year, by the awarding of prestigious scientific honours to WELBIO investigators, such as :

- The Francqui Prize (2011 awarded to Dr Pierre Vanderhaeghen, ULB) ;
- The Clerdent Prize (2011 awarded to Dr Pierre Maquet, ULg) ;
- The Francqui Chair (2012 awarded to Dr Emile Van Schaftingen, UCL; 2014 awarded to Dr Michel Georges, ULg) ;
- The ISSCR Prize (2012 awarded to Dr Cédric Blanpain) and inclusion in theNature's Top 10 (2012, Dr Cédric Blanpain) ;
- The InBev-Baillet Latour Fund Clinical Research Prize (2013 awarded to Dr Miikka Vikkula) ;
- Election as a member of the prestigious National Academy of Sciences (2013 for Dr Michel Georges, ULg).

It is also remarkable that five WELBIO investigators [Drs Jean-François Collet (UCL), Patrice Cani (UCL), Pierre Vanderhaeghen (ULB), Cédric Blanpain (ULB) and Michel

Georges (ULg)] obtained funding from the "European Research Council" (ERC) between 2011 and 2014.

In 2014, the excellence of the work carried out by Dr Etienne Pays (ULB) was also rewarded.



*The Sanofi-Institut Pasteur Prize 2014 was awarded to Etienne Pays (ULB).*

Etienne Pays (ULB) was awarded the prestigious "Senior" Sanofi-Pasteur Prize for his many discoveries relating to trypanosomiases, ranging from discovering genetic mechanisms of antigenic variation to describing the innate immunity protecting humans against infection by some trypanosomes, and also the various mechanisms of resistance developed by other trypanosomes against this immunity.

## 2. RESEARCH TEAMS

In order to successfully carry out the 23 funded research programmes underway in 2014, WELBIO investigators employed a cumulative total of 283 people across various French Community host universities in Belgium.

Most are scientists (approximately 75%), supported in their work by laboratory technicians.

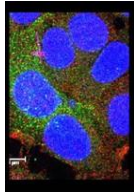
Around a third of the staff is subsidised by WELBIO, with the remaining members being supported by the ERC, the FNRS, the FRIA, as well as Télévie and the Foundation against Cancer.

Of this cumulative total of 283 positions, 170 contracts are still current. . The difference is mainly accounted for by scientists who have defended their doctoral thesis or completed their post-doctoral studies.

## 3. SCIENTIFIC PUBLICATIONS

More than fifty publications appeared in 2014 in prestigious journals such as *Nature*, *Cell* and *Cancer Cell* which have an "impact factor" greater than 10, and in other renowned journals such as *Proc Natl Acad Sci U S A* which have an "impact factor" greater than five.

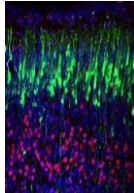
Most notably:



Shostak K., Patrascu F., Göktuna S.I., Close P., Borgs L., Nguyen L., Olivier F., Rammal A., Brinkhaus H., Bentires-Alj M., Marine J.-C. and Chariot A.

*MDM2 restrains estrogen-mediated AKT activation by promoting TBK1-dependent HPIP degradation*

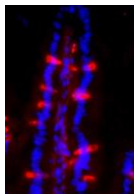
**Cell Death Differ (2014) 21: 811–824**



Volvvert M.-L., Prévot P.-P., Close P., Laguesse S., Pirotte S., Hemphill J., Rogister F., Kruzy N., Sacheli R., Moonen G., Deiters A., Merckenschlager M., Chariot A., Malgrange B., Godin J. D. and Nguyen L.

*MicroRNA Targeting of CoREST Controls Polarization of Migrating Cortical Neurons*

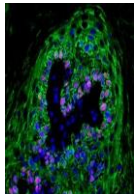
**Cell Rep (2014) 7: 1168–1183.**



Göktuna S.I., Canli O., Bollrath J., Fingerle A. A., Horst D., Diamanti M. A., Pallangyo Ch., Bennecke M., Nebelsiek T., Mankan A. K., Lang R., Artis D., Hu Y., Patzelt Th., Ruland J., Kirchner Th., Taketo M., Chariot A., Arkan M. C. and Greten F. R.

*IKK $\alpha$  Promotes Intestinal Tumorigenesis by Limiting Recruitment of M1-like Polarized Myeloid Cells*

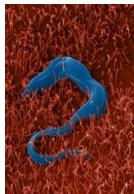
**Cell Rep (2014) 7: 1914–1925**



Boumahdi S., Driessens G., Lapouge G., Rorive S., Nassar D., Le Mercier M., Delatte B., Caauwe A., Lenglez S., Nkusi E., Brohée S., Salmon I., Dubois Ch., del Marmol V., Fuks F., Beck B. and Blanpain C.

*SOX2 controls tumour initiation and cancer stem-cell functions in squamous-cell carcinoma*

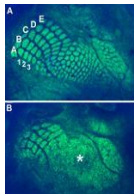
**Nature (2014) 511: 246–250**



Pays E., Vanhollebeke B., Uzureau P., Lecordier L. and Pérez-Morga D.

*The molecular arms race between African trypanosomes and humans*

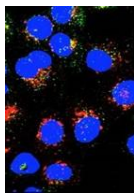
**Nat Rev Microbiol (2014) 12: 575–584**



Qu Y., Huang Y., Feng J., Alvarez-Bolado G., Grove E. A., Yang Y., Tissir F., Zhou L. and Goffinet A. M.

*Genetic evidence that Celsr3 and Celsr2, together with Fzd3, regulate forebrain wiring in a Vangl-independent manner*

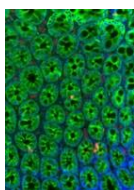
**Proc Natl Acad Sci USA (2014) 111: E2996–3004**



Shostak K., Zhang X., Ubert P., Göktuna S. I., Jiang Z., Klevernic I., Hildebrand J., Roncarati P., Henuy B., Ladang A., Somja J., Gothot A., Close P., Delvenne Ph. and Chariot A.

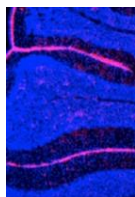
*NF- $\kappa$ B-induced KIAA1199 promotes survival through EGFR signaling*

**Nat Commun (2014) 5: 5232**



Everard A., Geurts L., Caesar R., Van Hul M., Matmoros S., Duparc T., G. P. Denis R., Cochez P., Pierard F., Castel J., Bindels L.B., Plovier H., Robine S., Muccioli G.G., Renauld J.-Ch., Dumoutier L., Delzenne N. M., Luquet S., Bäckhed F. and Cani P.D.

*Intestinal epithelial MyD88 is a sensor switching host metabolism towards obesity according to nutritional status* **Nat Commun (2014) 5: 5648**



Tiberi L., Bonnefont J., Van den Aemele J., Le Bon S.-D., Herpoel A., Bilheu A., Baron B. W., Vanderhaeghen P.  
*A BCL6/BCOR/SIRT1 Complex Triggers Neurogenesis and Suppresses Medulloblastoma by Repressing Sonic Hedgehog Signaling*  
**Cancer Cell (2014) 26: 797–812**



Cho S.H., Szewczyk J., Pesavento C., Zietek M., Banzhaf M., Roszczenko P., Asmar A., Laloux G., Hov A.K., Leverrier P., Van der Henst C., Vertommen D., Typas A. and Collet J.-F.  
*Detecting Envelope Stress by Monitoring  $\beta$ -Barrel Assembly*  
**Cell (2014) 159: 1652–1664**

## OPTIMISATION

The fact that three patent applications have been filed and that meetings have taken place between WELBIO investigators and clinical and industrial stakeholders shows the strong focus on optimising results.

WELBIO has also established solid links with Biowin, the "health" cluster, to ensure that the major efforts made to date in life sciences research can have a long-term impact on the socio-economic future and quality of healthcare for Wallonia, Brussels and Belgium.

## COMMUNICATION

One of the missions assigned to WELBIO by the Walloon Government is to “*show the importance of Walloon research for society, for the development of the investigators and the well-being of the population, and [...] to enhance the image of its quality and its contribution to international scientific knowledge, economic activity and employment both inside and outside Wallonia.*”<sup>1</sup>

### 1. ABOUT WELBIO



A two minute video clip describing WELBIO's missions has been produced in the framework of the "Minute Marshall", which highlights the projects supported by the Marshall Plan 2.Green with the aim of promoting Wallonia's economic reorientation.

[http://welbio.org/upload/docs/video/mp4/2014-09/welbio\\_en\\_120\\_sec.mp4](http://welbio.org/upload/docs/video/mp4/2014-09/welbio_en_120_sec.mp4)

<sup>1</sup> Walloon Government memorandum of 12 December 2008, available at <http://welbio.org>



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"Fundamental research into life sciences is fundamental!"

In the "Biotechnology" supplement of La Libre Belgique in June 2014.

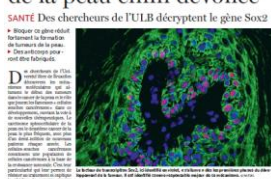


"Research in line with companies' expectations"

In the "Innovation" supplement of Trends in November 2014.

## 2. ABOUT WELBIO INVESTIGATORS

La cause d'un cancer de la peau enfin dévoilée



"The cause of one skin cancer finally revealed"

Cédric Blanpain (ULB)

Le Soir – 10/06/2014



"We have found a target to activate"

Pierre Vanderhaeghen (ULB)

Le Soir – 09/12/2014



"Bacterial resistance decoded"

Jean-François Collet (UCL)

Le Soir – 18/12/2014

La Libre – 18/12/2014

## ADMINISTRATIVE AND FINANCIAL RESOURCES

### Governance at WELBIO

The Governing Board consists of representatives from academia, industry and government. The Board is chaired by Jean Stéphane, with Jacques Dumont as Deputy Chairman. The composition of the Board is as follows:

Representatives of the Walloon Government:

- Philippe Busquin, Minister of State
- Marcel Crochet, Honorary Rector, Catholic University of Leuven
- Benoît Bayenet, Representative of the Office of Minister Marcourt

Representatives of the economic and industrial sector with an interest in life sciences:

- Jean Stéphane, former Chairman and President, GlaxoSmithKline Biologicals
- Didier Malherbe, Vice-President, UCB
- Jean-Pierre Delwart, CEO, Eurogentec SA

Representatives of French-speaking university academies:

- Jacques Dumont, Professor, Free University of Brussels (Wallonia-Brussels Academy)
- Louis Hue, Professor, Catholic University of Leuven (Leuven Academy)
- Pierre Lekeux, Professor, University of Liège (Wallonia-Europe Academy)

Representative of the FNRS:

- Véronique Halloin, Secretary-General, Scientific Research Fund (FNRS)

Representative of SPW/DG06:

- Yves Sennen, Managing Director, represented by Pierre Villers, Inspector-General

## Management report

### Preamble

- This is the fifth financial year, covering the period between 1 January 2014 and 31 December 2014.
- Although WELBIO is considered to be a small not-for-profit association with regard to the criteria of the Law of 2 May 2002, double entry accounts are kept.
- Up until the end of 2013, WELBIO's evaluation rules specified that subsidies should be recorded based on received amounts. The portion of subsidies granted but not yet received is not shown in the accounts. EUR 15 million was received as of the closing date of the 2013 accounts.
- From 2014, the Walloon Region is granting the FNRS an annual subsidy intended to enable it to carry out its delegated mission of integrating WELBIO into the Fund for Strategic Research (FRFS) within the FNRS.
- The presentation of the 2014 accounts is therefore affected by the implementation of this framework agreement between the Walloon Region and the FNRS. On the one hand, the available cash balances correspond to all the subsidies received directly by WELBIO less the management costs of the not-for-profit association and the eligible costs of the research projects selected prior to 2014. These liquid assets are reserved in three categories: Bridge Fund, 2014 running costs, agreements 2013–2015 for calls for projects launched in 2010 and 2012. On the other hand, provisions have been set aside to cover university claim declarations to be received in 2015 for the agreements 2013–2015.

### Assets

- Tangible fixed assets total EUR 4,617.37 and consist of IT equipment.
- Financial assets total EUR 3,450.00 and consist of the security for rented office space in Wavre.
- Receivables within one year total EUR 3,211,116.00 and correspond to the amounts claimed from the FNRS-FRFS, on the one hand, to cover WELBIO's cash flow requirements to honour 2013–2015 research programme payments totalling EUR 2,635,116.00 and, on the other hand, to receive the 2014 subsidy totalling EUR 576,000 allocated to running costs and the Bridge Fund.
- Cash investments total EUR 3,777,689.43 and are presented in the form of three reserves in order to allocate WELBIO's remaining liquid assets.
- As at 31 December 2014, the sum of the available liquid assets in WELBIO's various bank accounts comes to:
  - o Green account: EUR 1,926,767.85
  - o Flexibonus: EUR 3,682.30
  - o Demand account: EUR 1,847,239.28

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EUR 3,777,689.43

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- These liquid assets are allocated as follows:
  - o Provision for running costs: EUR 280,000.00
  - o Bridge Fund provision: EUR 400,000.00
  - o Payment of research contracts 2013–2015: EUR 3,097,689.43

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EUR 3,777,689.43
- Available cash totals EUR 1,847,239.28, consists of a demand account and has been incorporated into the cash investments heading for the purposes of this presentation.
- Adjustment accounts total EUR 3,236.11 and consist of deferred charges.

Total assets come to EUR 6,996,658.91.

## *Liabilities*

- As at 31/12/2013, permanent cash receipts total EUR 15,000,000, distributed as follows:
  - o Research fund subsidies: EUR 5,000,000, paid on 21/01/2010
  - o Sofipôle subsidies: EUR 2,500,000, paid on 31/12/2009
  - o Sofipôle subsidies: EUR 2,500,000, paid on 14/08/2012
  - o S.R.I.W.: EUR 5,000,000, paid on 28/03/2013
- The following amounts were received during the financial year 2014:
  - o Walloon Region excluding Marshall Plan 2.Green: EUR 1,000,000 on 14/02/2014
  - o Walloon Region Marshall Plan 2.Green: EUR 2,000,000 on 17/02/2014
  - o Walloon Region Marshall Plan 2.Green: EUR 3,000,000 on 10/09/2014
- Receivables within one year, as described above, have been recorded as permanent receipts:
  - o FNRS-FRFS claim for agreements 2013–2015: EUR 2,635,116
  - o FNRS-FRFS claim, running costs and Bridge Fund 2014: EUR 576,000
- As of the closing date of the financial year 2014, permanent receipts total EUR 24,211,116.
- The loss carried forward totals EUR 23,021,015.58, and is broken down as follows:
  - o Profit for the 2010 financial year : EUR 15,659.14
  - o Loss for the 2011 financial year : EUR 2,341,408.43
  - o Loss for the 2012 financial year : EUR 3,961,616.53
  - o Loss for the 2013 financial year : EUR 6,821,707.25.
  - o Loss for the 2014 financial year : EUR 9,911,942.51.
- Accounts payable total EUR 3,272.62

- Invoices yet to be received total EUR 5,774,305.92 and are made up of the following provisions:
  - o Provisions of EUR 1,500 to prepare the 2014 balance sheet
  - o Provisions of EUR 1,305,134.02 for claim declarations from UCL which were paid in January 2015
  - o Provisions of EUR 1,122,766.92 for the balance of agreements 2013–2015
  - o Provisions of EUR 3,304,904.98 for claim declarations to be received in March 2015
  - o Provisions of EUR 40,000 for the Bridge Fund.
- Estimated tax expenses total EUR 40.45.
- Outstanding wage tax totals EUR 4,497.43
- Outstanding social security contributions total EUR 2,258.53
- Provisions for holiday pay total EUR 22,183.54

Total liabilities come to EUR 6,996,658.91

## *Result*

- Claim declarations from universities, in the framework of research agreements 2013–2015, were accepted and paid totalling EUR 3,929,483.76. The sum of EUR 10,000 was paid in the framework of the Bridge Fund agreement 2014. Provisions, as described in the invoices to be received heading, were recorded totalling EUR 5,772,805.92.
- Miscellaneous goods and services total EUR 57,827.88, and consist mainly of running costs and fees.
- Remuneration and social security contributions total EUR 153,691.35.
- Depreciation totals EUR 757.55.
- Estimated tax expenses come to EUR 40.45.
- Net bank interest, after deducting the discharging withholding tax of 15%, totals EUR 12,823.60.
- Financial costs total EUR 159.20.

The result for the financial year is a loss of EUR 9,911,942.51.

## WELBIO CONTACT DETAILS

### Address

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### Website

<http://welbio.org>