

# RECAMO

Regional Centre  
for Applied Molecular  
Oncology



THROUGH CANCER RESEARCH  
TOWARDS APPLIED MOLECULAR ONCOLOGY

[WWW.RECAMO.CZ](http://WWW.RECAMO.CZ)

**Dalibor Valik, MD, PhD, DABCC, FACB, EurClinChem**  
Associate Professor of Oncology

# ...let's start behind the corner

- nearly every kind of human activities is nicely described in stories
- but the difference is that the classic ones end up usually as „success cases“
  - ...whereas the modern „(techno)stories“ can be quite variable...
    - » ...„Pat a Mat“
    - » ....the pink panther
    - » .....and many, many, many others

...from a raw material → ...work → ...to a product

The Little Mole is gathering flax and then making dress linen...

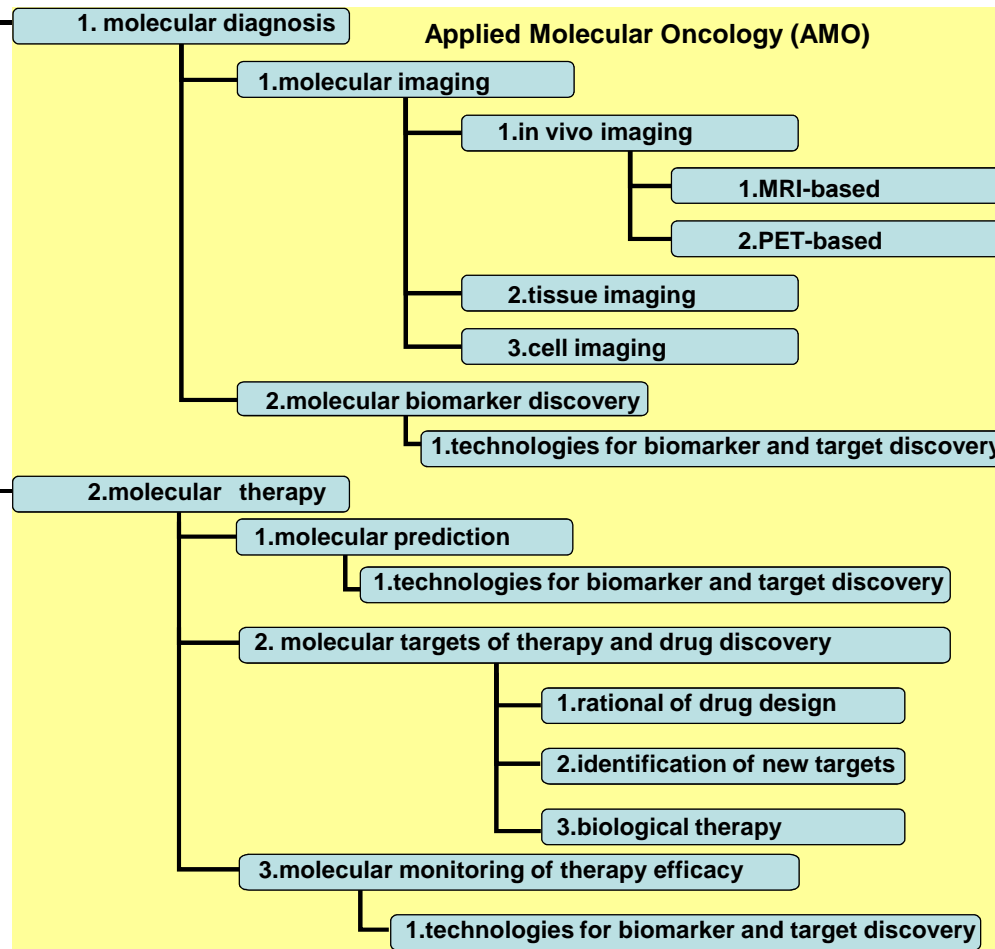
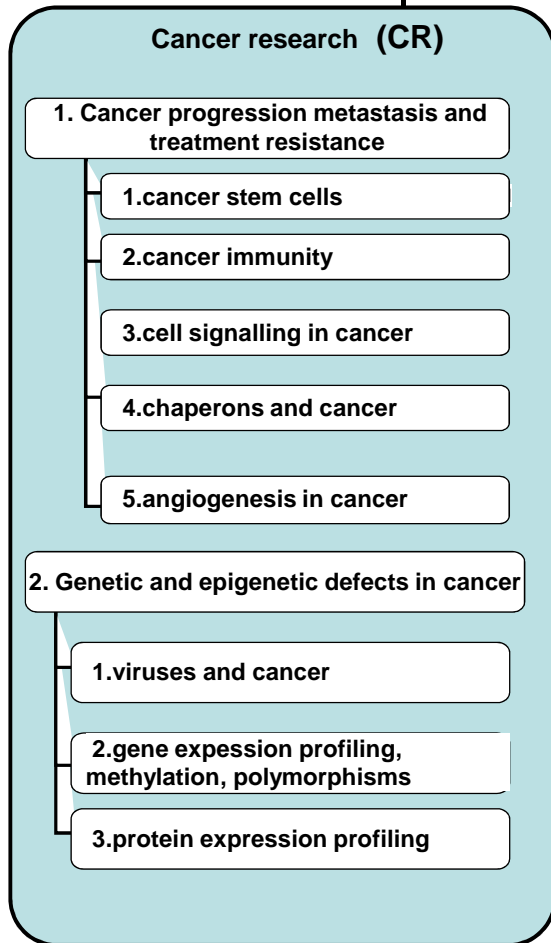
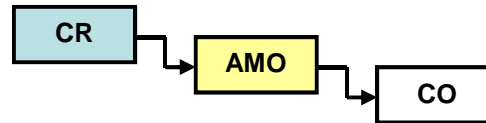


...gatěěě  
!  
= the  
product



*...through cancer research towards applied molecular oncology*  
**Regional Centre for Applied Molecular Oncology (RECAMO)**

**Molecular oncology for 21<sup>st</sup> century**



usable outputs („products“)

[www.mou.cz](http://www.mou.cz) | [www.prevenenadoru.cz](http://www.prevenenadoru.cz) | [www.telemedicinabrno.cz](http://www.telemedicinabrno.cz)



AA A

pošta MOU  
Intranet  
mapa webu

Wyhledat

[O NÁS](#) | [PRO PACIENTY](#) | [PRO ODBORNÍKY](#) | [PRO STUDENTY](#) | [TIŠKOVÉ INFORMACE](#) | [ZAMĚŠTNÁNÍ](#) | [PREVENCE](#) | [PORADNA](#) | [ZAKÁZKY](#) | [KONTAKTY](#)

Úvod

## O ústavu

**Jediné zdravotnické zařízení, které má dva platné certifikáty kvality: mezinárodní JCI a SAK ČR**

Nejlepší nemocnice hodnocené pacienty - průzkum společnosti Stern/Mark zadané MZČR



Člen OECEI, jako jediné pracoviště v ČR

Jedno ze třinácti komplexních onkologických center v ČR  
Akreditované pracoviště pro specializační vzdělávání zdravotníků

Centrum kompetencí IAEA



**Masarykův onkologický ústav - MOU  
(onkologie)  
Žlutý kopec 7, 656 53 Brno**

### Aktuality - novinky

[>> Nová DVD věnovaná cvičení při různých potížích pohybového aparátu](#)

[>> VIDEOREPORTÁŽE z dění v našem ústavu](#)  
pro více informací [klikněte ZDE...](#)

[>> VYBĚROVÁ ŘÍZENÍ na rezidenční místa](#)  
pro více informací [klikněte ZDE...](#)

### Projekty z Evropského fondu pro regionální rozvoj

#### "SIMULÁTOR"

Zrealizovali jsme projekt z Evropského fondu pro regionální rozvoj za 70 milionů korun.

Díky dotaci z Integrovaného operačního programu jsme vybavili pracoviště Kliniky radiční onkologie novým **simulátorem** a podpůrnými systémy. Projekt výrazně zvýší kvalitu a kapacitu zařízení využívaných u radioterapie onkologicky nemocných.

Pro více informací [klikněte ZDE...](#)

#### "Wi-Fi"

### Ke stažení

[Mapa DPMB k MOU \(PDF, 271.5 KB\)](#)  
Síť linek Dopravního Podniku Města Brna.

[Jízdní řády DPMB k MOU \(PDF, 310.9 KB\)](#)  
Jízdní řády linek Dopravního Podniku Města Brna.

### Mamografický screening

Objednávky na mamografický screening elektronickou cestou [klikněte ZDE...](#)

### Preventivní prohlídky

Informace o preventivních prohlídkách v MOU [klikněte ZDE...](#)

### Doporučujeme

[Poradna pro zdravotnou výživu a odvykání kouření](#)

[Liga proti rakovině Brno](#)

[Projekt "Zdravá nemocnice"](#)

[Protikorupční opatření](#)

Hotovo



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for Applied Molecular  
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THROUGH CANCER RESEARCH  
TOWARDS APPLIED MOLECULAR ONCOLOGY



## CONTACT

MASARYK MEMORIAL CANCER  
INSTITUTE - BRNO HOSPITAL

Dalibor Valík, MD, PhD  
RECAMO coordinator

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Brno 656 53, Czech Republic

Phone +420 543 136 700

RECAMO... translating the human cancer genome and proteome into treatment target identification, novel biomarkers for diagnosis and monitoring, and cancer drug response prediction.

The purpose of RECAMO is to bring together research scientists and clinicians with a common aim - to translate the advances in our increasing ability to study cancer into real advances in patient care. Although all bodies that fund cancer research accept that a collaborative approach is required, most cancer research is performed without the input of clinicians on scientists, and vice versa. Furthermore, many different research disciplines work independently of each other. Finally, developing an idea into a clinical application is hampered by the lack of experience and connections between laboratories and commercialization. Future progress in turning knowledge into application now requires the long-term investment to establish national centres that will allow long-term international and interdisciplinary collaborations with experts in various fields.

3<sup>rd</sup> joint meeting on the role of p53, MDM2, AGR2/3 and ubiquitin/chaperone system in tumour biology

**1<sup>st</sup> RECAMO joint meeting**  
September 27<sup>th</sup> – 29<sup>th</sup> 2010

Conference center  
Lipova 26, 602 00 Brno  
Czech Republic

*"... I am convinced that this interdisciplinary effort is required for progress in cancer research and treatment to make it available to the patient and RECAMO is unique in this expertise and its potential to help translate this knowledge into patient needs."*

**Prof. Theodore Hupp** (Cancer Research-UK, University of Edinburgh)  
RECAMO project leader

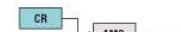
*"... The ability to interact and collaborate with world-class scientists and clinicians in a state-of-the-art institute with the latest medical and scientific technology is key for the future of cancer research. The beauty of RECAMO is the additional abilities for quickly translating scientific and clinical findings through the inclusion of commercialization plans into the concept."*

**Dr. Philip Coates** (University of Dundee)  
RECAMO project leader

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MOLECULAR ONCOLOGY FOR 21<sup>ST</sup> CENTURY







ORIGINAL ARTICLE

## Expression of p53 and p53/47 are controlled by alternative mechanisms of messenger RNA translation initiation

MM Candeias<sup>1,3</sup>, DJ Powell<sup>1,3</sup>, E Roubalova<sup>2</sup>, S Apcher<sup>1</sup>, K Bourougaa<sup>1</sup>, B Vojtesek<sup>2</sup>, H Bruzzoni-Giovanelli<sup>1</sup> and R Fähræus<sup>1</sup>

Oncogene (2008), 1–13  
 © 2008 Nature Publishing Group All rights reserved 0950-9232/08 \$30.00  
 www.nature.com/onc

ORIGINAL ARTICLE

## Chaperone-dependent stabilization and degradation of p53 mutants

P Muller<sup>1,2</sup>, R Hrstka<sup>1</sup>, D Coomber<sup>2</sup>, DP Lane<sup>2</sup> and B Vojtesek<sup>1</sup>

<sup>1</sup>Masaryk Memorial Cancer Institute, Brno, Czech Republic and <sup>2</sup>Institute of Molecular and Cell Biology, Proteos, Singapore

## The novel platinum(IV) complex LA-12 induces p53 and p53/47 responses that differ from the related drug, cisplatin

Roman Hrstka<sup>a,\*</sup>, Darren J. Powell<sup>c,\*</sup>, Veronika Kvardova<sup>a</sup>, Eva Roubalova<sup>a</sup>, Karima Bourougaa<sup>c</sup>, Marco M. Candeias<sup>c</sup>, Petr Sova<sup>b</sup>, Frantisek Zak<sup>b</sup>, Robin Fähræus<sup>c</sup> and Borivoj Vojtěšek<sup>a</sup>

Apoptosis Review Series

J. Cell. Mol. Med. Vol 13, No 3, 2009 pp. 440–453

Guest Editor: A. Samali

### Polymorphisms in p53 and the p53 pathway: roles in cancer susceptibility and response to treatment

Roman Hrstka<sup>a</sup>, Philip J. Coates<sup>b</sup>, Borivoj Vojtesek<sup>a,\*</sup>

Total **52** scientific articles published in cooperation with collaborators

The papers were cited **3.466x**

The total impact factor of published collaborative papers **325,702**

Biochem. J. (1999) 342, 133–141 (Printed in Great Britain)

133

### Novel phosphorylation sites of human tumour suppressor protein p53 at Ser<sup>20</sup> and Thr<sup>18</sup> that disrupt the binding of mdm2 (mouse double minute 2) protein are modified in human cancers

Ashley L. CRAIG<sup>†</sup>, Lindsay BURCH<sup>†</sup>, Borek VOJTESEK<sup>‡</sup>, Jaroslava MIKUTOWSKA<sup>‡</sup>, Alastair THOMPSON§ and Ted R. HUPP<sup>\*†</sup>

<sup>\*</sup>Department of Molecular and Cellular Pathology, Ninewells Medical School, University of Dundee, Dundee DD1 9SY, Scotland, U.K.

<sup>†</sup>Department of Molecular Oncology, Ninewells Medical School, University of Dundee, Dundee DD1 9SY, Scotland, U.K.

<sup>‡</sup>Department of Cellular and Molecular Oncology, Masaryk Memorial Cancer Institute, Zluty Kopec 7, 656 53 B

<sup>§</sup>Department of Surgery, Dundee Cancer Institute, Ninewells Medical School, University of Dundee, Dundee DD

Antiviral Chemistry & Chemotherapy 2009 20: in press (doi: 10.3851/IMPxx)

Nat Immunol. 2005 February ; 6(2): 181–188. doi:10.1038/nri1156.

Original article

### Downregulation of natural killer cell-activating ligand CD155 by human cytomegalovirus UL141

Peter Tomasec<sup>1,6</sup>, Eddie C Y Wang<sup>1,6</sup>, Andrew J Davison<sup>2</sup>, Borivoj Vojtesek<sup>3</sup>, Melanie Armstrong<sup>1</sup>, Cora Griffin<sup>1</sup>, Brian P McSharry<sup>1</sup>, Rebecca J Morris<sup>1</sup>, Sian Llewellyn-Lacey<sup>1</sup>, Carole Rickards<sup>1</sup>, Akio Nomoto<sup>4</sup>, Christian Sinzger<sup>5</sup>, and Gavin W G Wilkinson<sup>1</sup>

### Phosphatidylinositol-dependent kinases, pDK1 and pDK2, exhibit potent antiviral properties

Schim J Bugert<sup>2</sup>, Eddie CY Wang<sup>2</sup>, Gavin WG Wilkinson<sup>2</sup>, Slav Strnad<sup>4</sup> and Borivoj Vojtesek<sup>1\*</sup>

Oncogene (2007) 26, 1517–1521  
 © 2007 Nature Publishing Group All rights reserved 0950-9232/07 \$30.00  
 www.nature.com/onc

Journal of  
 proteome  
 research

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Article

### Biomarker Discovery in Low-Grade Breast Cancer Using Isobaric Stable Isotope Tags and Two-Dimensional Liquid Chromatography-Tandem Mass Spectrometry (iTRAQ-2DLC-MS/MS) Based Quantitative Proteomic Analysis

Pavel Bouchal, Theodoros Roumeliotis, Roman Hrstka, Rudolf Nenuil, Borivoj Vojtesek, and Spiros D. Garbis

Res., 2009, 8 (1), 362–373 • DOI: 10.1021/pr800622b • Publication Date (Web): 20 November 2008

Downloaded from http://pubs.acs.org on February 2, 2009

ORIGINAL ARTICLE

### The p53 knowledgebase: an integrated information resource for p53 research

YP Lim<sup>1</sup>, TT Lim<sup>1,3</sup>, YL Chan<sup>1,3</sup>, ACM Song<sup>1,3</sup>, BH Yeo<sup>1,3</sup>, B Vojtesek<sup>2</sup>, D Coomber<sup>2</sup>, G Rajagopal<sup>1</sup> and D Lanc<sup>2</sup>

<sup>1</sup>Bioinformatics Institute, Matrix, Singapore, Singapore and <sup>2</sup>Institute of Molecular and Cell Biology, Proteos, Singapore, Singapore



**P. J. Coates**

Celkem článků s IF: 98

Citací celkem: 4.418

H-index: 35

**D. P. Lane**

Celkem článků s IF: 337

Celkem citací: 36.218

H-index: 97

**Ted R. Hupp**

Celkem článků s IF: 86

Citace celkem: 3.726

H-index: 29

**R.Nenutil**

Celkem článků s IF: 35

Celkem citací: 501

H-index: 11

**G. Klement**

Celkem článků s IF: 25

Celkem citací: 1289

H-index: 14

**B. Vojtesek**

Celkem článků s IF: 122

Celkem citací: 4.892

H-index: 32

**P. Tomasec**

Celkem článků s IF: 27

Celkem citací: 641

H-index: 13

**Robin Fahraeus**

Celkem článků s IF: 46

Citace celkem: 1.794

H-index: 17

**G. W. G. Wilkinson**

Celkem článků s IF: 66

Celkem citací: 2.916

H-index: 26

**P. Muller**

Celkem článků s IF: 8

Celkem citací: 87

H-index: 5

**D. Valík**

Celkem článků s IF: 29

Celkem citací: 155

H-index: 7

**R. Hrstka**

Celkem článků s IF: 22

Celkem citací: 147

H-index: 7

**L. Dubska**

Celkem článků s IF: 19

Celkem citací: 48

H-index: 4

**E. B. Lane**

Celkem článků s IF: 200

Celkem citací: 9.932

H-index: 54

**K. L. Ball**

Celkem článků s IF: 33

Celkem citací: 1.000

H-index: 19

# Genome guardian

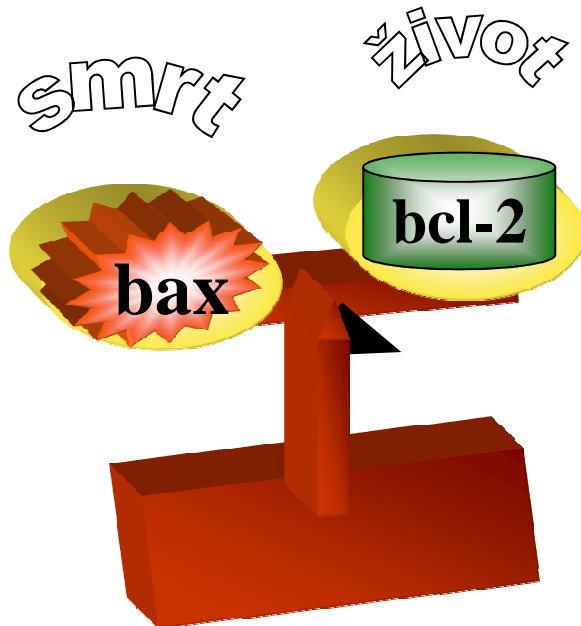
CANCER

## p53, guardian of the genome

D. P. Lane

RESEARCH on the p53 protein is at fever pitch. In the past couple of years it has become clear that inactivation of its tumour-suppressor activity is an almost universal step in the development of human cancers<sup>1</sup>. But what does normal p53 do that protects us so efficiently

MDM2 may, like the DNA tumour virus oncoproteins, simian virus 40 large T antigen, adenovirus E1b and papilloma virus E6, inactivate the tumour-suppressor activity of p53 by complexing to it. Amplification of MDM2 production may have the same functional effect



CANCER

## A death in the life of p53

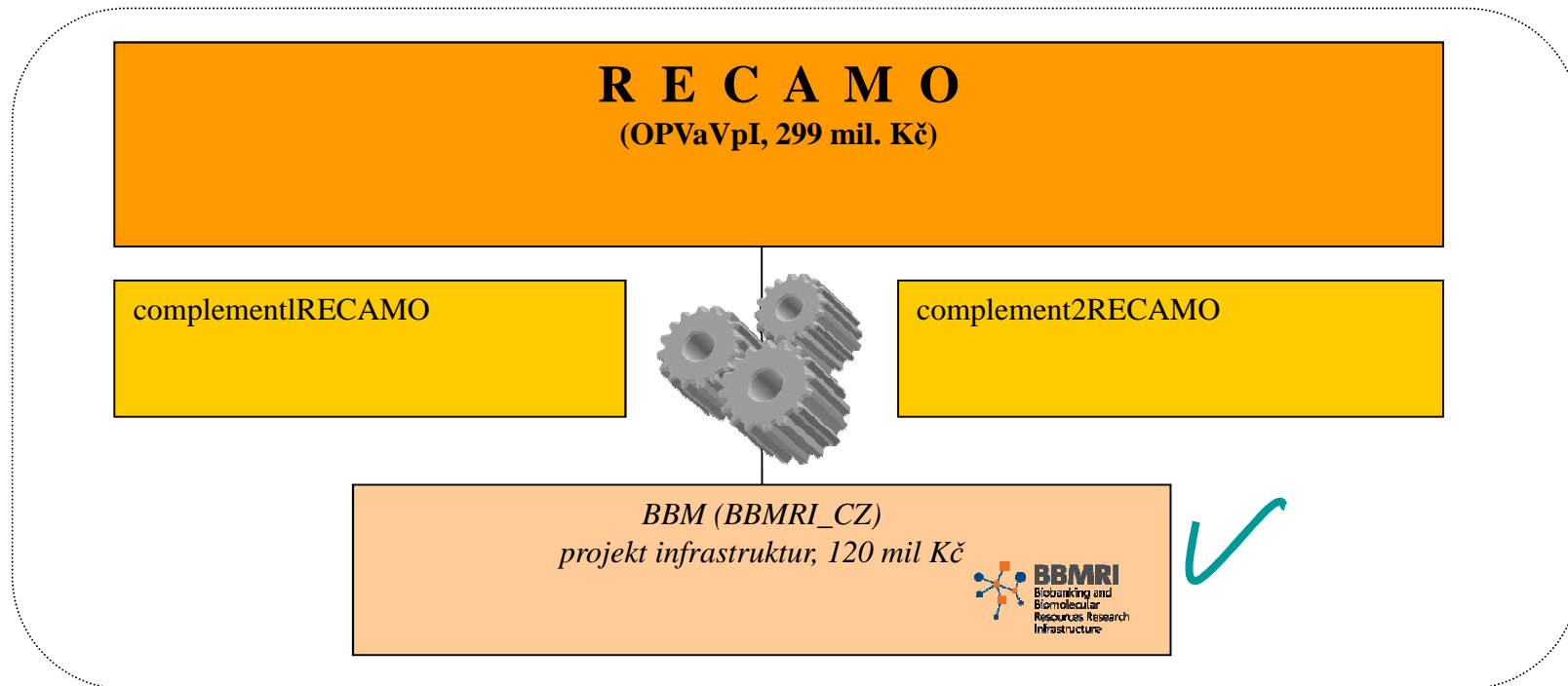
D. P. Lane

THE papers on pages 847 and 849 of this issue<sup>1,2</sup> establish the involvement of p53 in the induction of apoptosis by radiation and chemotherapeutic DNA-damaging drugs. This discovery brings together

work in normal development<sup>12,13</sup>.

The new studies provide compelling evidence in support of these concepts. Lowe *et al.*<sup>1</sup> and Clarke *et al.*<sup>2</sup> decided to investigate the role of p53 in a classic

- ...RECAMO is a principal development project of MMCI
- at this stage we plan two complementary projects,
  - one „infrastructural“ project:



RECAMO – regional centre for applied molecular oncology - Mozilla Firefox

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http://www.recamo.cz/

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MOLECULAR ONCOLOGY FOR 21<sup>ST</sup> CENTURY

CR AMO

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Start Total Commander ... Dalibor Valik - Všec... RECAMO – regio... Stav projektůVR10... gate2biotechRECA... 10:53



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