

Curriculum Vitae – Emilio Casanova

Name and Address Emilio Casanova, Dr.
Ludwig Boltzmann Institute for Cancer Research (LBI-CR)
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Email E-mail: emilio.casanova@lbicr.lbg.ac.at
Date of Birth August 25, 1969
Citizenship Spain

University Studies

1997 PhD thesis “Molecular analysis of the protein kinases JNK/SAPK in mouse” supervised by Dr. Pedro Calvo Fernandez and Dr. Miguel A. Chinchetru Manero, University of Leon, Spain.
1993-1997 PhD student in the Department of Biochemistry and Molecular Biology, University of Leon, Leon, Spain, PhD student
1992-1993 Diploma thesis: “Effects of the chronic ethanol treatment on barbiturate modulation of muscimol binding to GABA_A receptors in rat brain cortex”.
1987-1992 Study of Biology, University of Leon, Leon, Spain

Research and Professional Experience

2006 – present Group leader at the Ludwig Boltzmann Institute for Cancer Research, Vienna, Austria
2002-2006 Postdoc with Dr. Bernhard Bettler at the Biozentrum, Basel, Switzerland
1997-2002 Postdoc with Dr. Günther Schütz at the German Cancer Research Center (DKFZ), Heidelberg, Germany.
1993-1997 PhD student with Prof. Dr. Pedro Calvo and Miguel Chinchetru Department of Biochemistry and Molecular Biology, University of Leon, Leon, Spain.

Funded Grants	n=04	
Scientific Awards	n=02	
Publications	n=47	(including Reviews and Book chapters)
First or co-first author articles	n=11	(including Reviews and Book chapters)
Last or co-last author articles	n=9	(including Reviews and Book chapters)
Total Impact Factor	250.2	
H-Factor	15	
Citation Index Total	1398	

Honors and Awards

Extraordinary award on Diploma thesis from University of Leon (1993)
 Extraordinary award on PhD thesis from University of Leon (1997)

Expert opinion for:

PlosOne, Biotechniques, Frontiers in Biosciences, Hepatology, Journal of Hepatology, Molecular Therapy-Nucleic Acids.

Editor of:

Book/Volume: "Mouse Models of Cancer", Methods in Molecular Biology, Humana Press. Expected to be printed in May 2014 (Editors: Robert Eferl and Emilio Casanova)

Membership in scientific associations:

Member of the "European Association for the Study of the Liver", (EASL).

Number of Peer-Reviewed Publications:

40 original articles, 5 Reviews, 1 book chapter

Grants:

Name	Holder/s	Euros (total)	Date
FFG: GENAU "Austromouse": "Conditional mutagenesis of the <i>Stat5/3</i> locus"	EC/RE	184.200	9/2009 - 12/2012
FFG-Bridge: "BAC-based Expression System Technology"	EC	531.000	3/2011 - 3/2014
CCC Research Fundings: "Regulation of cholestasis-induced HCC formation by Stat3"	RE/EC/MT	96.000	9/2011 - 9/2014
FWF: "Growth hormone resistance and liver fibrosis"	EC/MT	345.000	4/2013 - 4/2016

RE: Robert Eferl; MT: Michael Trauner. EC: Emilio Casanova

FFG: "Die Österreichische Forschungsförderungsgesellschaft"

FWF: "Fonds zur Förderung der wissenschaftlichen Forschung"

CCC: Comprehensive cancer center Vienna.

Patents:

Title: "Artificial Chromosome Vector"

Application number A 1859/2008

Date 28.11.2008

Applicant/Proprietor: Emilio Casanova, Anton Bauer

Inventors: Leander Blass, Anton Bauer, Emilio Casanova

Peer-Reviewed Publications

Original Articles (OA-1 to OA-41)

- OA-41** Kantner HP, Warsch W, Delogu A, Bauer E, Esterbauer H, **Casanova E**, Sexl V, Stoiber D. ETV6/RUNX1 induces reactive oxygen species and drives the accumulation of DNA damage in B cells. *Neoplasia* [Impact Factor: 5.5] in press
- OA-40** Mader A, Prewein B, Zboray K, **Casanova E**, Kunert R. Exploration of BAC versus plasmid expression vectors in recombinant CHO cells. *Appl Microbiol Biotechnol*. [Impact Factor: 3.4] 2012 Oct 19
- OA-39** Musteanu M, Blaas L, Zenz R, Svinka J, Hoffmann T, Grabner B, Schramek D, Kantner HP, Müller M, Kolbe T, Rüllicke T, Moriggl R, Kenner L, Stoiber D, Penninger JM, Popper H, **Casanova E***, Eferl R*. A mouse model to identify cooperating signaling pathways in cancer. *Nat Methods*. [Impact Factor: 19.3] 2012 Sep;9(9):897-900. *Equally contributed
- OA-38** Mueller KM, Kornfeld JW, Friedbichler K, Blaas L, Egger G, Esterbauer H, Hasselblatt P, Schleder M, Haindl S, Wagner KU, Engblom D, Haemmerle G, Kratky D, Sexl V, Kenner L, Kozlov AV, Terracciano L, Zechner R, Schuetz G, **Casanova E**, Pospisilik JA, Heim MH, Moriggl R. Impairment of hepatic growth hormone and glucocorticoid receptor signaling causes steatosis and hepatocellular carcinoma in mice. *Hepatology*. [Impact Factor: 11.7] 2011 Oct;54(4):1398-409.
- OA-37** Eckelhart E, Warsch W, Zebedin E, Simma O, Stoiber D, Kolbe T, Rüllicke T, Mueller M, **Casanova E***, Sexl V*. A novel Ncr1-Cre mouse reveals the essential role of STAT5 for NK cell survival and development. *Blood*. [Impact Factor: 9.9] 2011 3;117(5):1565-73. *Equally contributed
- OA-36** Grabner B, Blaas L, Musteanu M, Hoffmann T, Birbach A, Eferl R and **Casanova E**. A mouse tool for conditional mutagenesis in ovarian granulosa cells. *Genesis* [Impact Factor: 2.5] 2010 1;48(10):612-7.
- OA-35** Guetg N, Aziz S, Holbro N, Turecek R, Riad S, Gassmann M, Moes S, Jenoe P, Oertner T, **Casanova E** and Bettler B. NMDA Receptor-Dependent GABAB Receptor Internalization via CaMKII Phosphorylation of Serine 867 in GABAB1. *Proc Natl Acad Sci U S A*. [Impact Factor: 9.7] 2010 3;107(31)
- OA-34** Mair M; Zollner G; Schneller D; Musteanu M; Fickert P; Gumhold J; Schuster C; Fuchsbichler A; Bilban M; Tauber S; Esterbauer H; Kenner L; Poli V; Blaas L; Kornfeld JW; **Casanova E**; Mikulits W; Trauner M; Eferl R. Stat3 protects from liver injury and fibrosis in a mouse model of sclerosing cholangitis. *Gastroenterology*. [Impact Factor: 11.7] 2010 138(7):2499-508
- OA-33** Musteanu M, Blaas L, Mair M, Schleder M, Bilban M, Tauber S, Esterbauer H, Mueller M, **Casanova E**, Kenner L, Poli V and Eferl R. Stat3 is a negative regulator of intestinal tumor progression in ApcMin mice. *Gastroenterology*. [Impact Factor: 11.7] 2010 138(3):1003-11
- OA-32** Blaas L, Kornfeld JW, Schramek D, Musteanu M, Zollner G, Gumhold J, Schneller D, Esterbauer H, Mair M, Kenner L, Mikulits W, Eferl R, Moriggl R, Penninger J, Trauner

- M and **Casanova E.** Disruption of the GH-STAT5-IGF-1 axis severely aggravates liver fibrosis in a mouse model of cholestasis. *Hepatology*. [Impact Factor: 11.7] 2010 51(4):1319-260
- OA-31** Birbach A, **Casanova E** and Schmid JA. A Probasin-MerCreMer BAC allows inducible recombination in the mouse prostate. *Genesis*. [Impact Factor: 2.5] 2009 47(11):757-64
- OA-30** **Casanova E***, Guetg N*, Vigot R, Seddik R, Julio-Pieper M, Hyland NP, Cryan JF, Gassmann M and Bettler B. A Mouse Model for Visualization of GABA(B) Receptors. *Genesis*. [Impact Factor: 2.5] 2009 47(9):595-602. * **Equally contributed**
- OA-29** Blaas L, Musteanu M, Eferl R, Bauer A and **Casanova E.** Bacterial artificial chromosomes improve recombinant protein production in mammalian cells. *BMC Biotechnol*. [Impact Factor: 2.4] 2009 14;9(1):3
- OA-28** Wellendorph P, Johansen L, Jensen A, **Casanova E**, Gassmann M, Deprez P, Clement-Lacroix P, Bettler B and Bräuner-Osborne H. No evidence for a bone phenotype in GPRC6A knockout mice under normal physiological conditions. *J Mol Endocrinol*. [Impact Factor: 4.5] 2009 42(3):215-23
- OA-27** Maison SF, **Casanova E**, Holstein GR, Bettler B and Liberman MC. Lack of GABA_B receptors in cochlear neurons suggests modulation of outer hair cell function by type-II afferent fibers. *J Assoc Res Otolaryngol*. [Impact Factor: 2.8] 2009 10(1):50-63
- OA-26** Bentzinger CF, Romanino K, Cloëtta D, Lin S, Mascarenhas JB, Oliveri F, Xia J, **Casanova E**, Costa CF, Brink M, Zorzato F, Hall MN and Rüegg MA. Skeletal Muscle-Specific Ablation of raptor, but Not of rictor, Causes Metabolic Changes and Results in Muscle Dystrophy. *Cell Metab*. [Impact Factor: 13.7] 2008 8(5):411-24
- OA-25** Blaas L., Musteanu M., Zenz R., Eferl R. and **Casanova E.** PhiC31 Mediated Cassette Exchange into a BAC. *Biotechniques*. [Impact Factor: 2.7] 2007 43(5):659-60, 662, 664
- OA-24** Lemberger T, Parlato R, Dassesse D, Westphal M, **Casanova E**, Turiault M, Tronche F, Schiffmann SN, Schutz G. Expression of Cre recombinase in dopaminergic neurons. *BMC Neurosci*. [Impact Factor: 3.0] 2007 3;8(1):4
- OA-23** Yuan X, Zhou Y, **Casanova E**, Chai M, Kiss E, Grone HJ, Schutz G, Grummt I. Genetic Inactivation of the Transcription Factor TIF-IA Leads to Nucleolar Disruption, Cell Cycle Arrest, and p53-Mediated Apoptosis. *Mol Cell*. [Impact Factor: 14.2] 2005 1;19(1):77-87
- OA-22** Alberti, S., Krause, SM., Kretz, O., Philippar, U., Lemberger, T., **Casanova, E.**, Wiebel, FF., Schwarz, H., Frotscher, M., Schütz, G., and Nordheim, A. Neuronal migration in the murine rostral-migratory stream requires serum response factor. *Proc Natl Acad Sci U S A*. [Impact Factor: 9.7] 2005 26;102(17):6148-53
- OA-21** Callejo AI, **Casanova E**, Calvo P, Galetto R, Rodriguez-Rey JC, Chinchetru MA. Characterization of the promoter of the mouse c-Jun NH(2)-terminal/stress-activated protein kinase alpha gene. *Biochim Biophys Acta*. [Impact Factor: 5] 2004 24;1681(1):47-52
- OA-20** Zhang Z, Hofmann C, **Casanova E**, Schütz G and Lutz B. Generation of a conditional allele of the *CBP* gene in mouse. *Genesis* [Impact Factor: 2.5] 2004 40(2):82-9

- OA-19** Haller* C, **Casanova E***, Müller M*, Vacher C, Vigot R, Barbieri S, Gassmann M, and Bettler B. A Floxed Allele for Conditional Inactivation of the GABA_{B(1)} Gene. **Genesis** [Impact Factor: 2.5] 2004 40(3):125-30. *Equally contributed
- OA-18** Marsicano G, Goodenough S, Monory K, Hermann H, Eder M, Cannich A, Azad SC, Cascio MG, Gutierrez SO, van der Stelt M, Lopez-Rodriguez ML, **Casanova E**, Schutz G, Zieglgansberger W, Di Marzo V, Behl C, Lutz B. CB1 cannabinoid receptors and on-demand defense against excitotoxicity. **Science** [Impact Factor: 31.2] 2003 3;302(5642):84-8
- OA-17** **Casanova E**, Fehsenfeld S, Lemberger T and Schütz G. Alpha complementation in the Cre recombinase enzyme. **Genesis** [Impact Factor: 2.5] 2003 37(1):25-9
- OA-16** **Casanova E***, Fehsenfeld S, Lemberger T, Shimshek DR, Sprengel R and Mantamadiotis T. A Er-based Double iCre Fusion Protein Allows Partial Recombination in Forebrain. **Genesis** [Impact Factor: 2.5] 2002 34(3):208-14 *Corresponding author
- OA-15** **Casanova E**, Fehsenfeld S, Greiner E, Stewart AF and Schütz G. Conditional Mutagenesis of CamKIV. **Genesis** [Impact Factor: 2.5] 2002 32(2):161-4
- OA-14** **Casanova E**, Fehsenfeld S, Greiner E, Stewart AF and Schütz G. Construction of a Conditional Allele of RSK-B/MSK2 in the mouse. **Genesis** [Impact Factor: 2.5] 2002 32(2):158-60
- OA-13** Shimshek DR, Kim J, Hübner MR, Spengel DJ, Buchholz F, **Casanova E**, Stewart AF, Seeburg PH and Sprengel R. Codon-improved Cre recombinase (iCre) expression in the mouse. **Genesis** [Impact Factor: 2.5] 2002 32(1):19-26
- OA-12** **Casanova E**, Lemberger T, Fehsenfeld S, Greiner E and Schütz G. Rapid localization of a gene within BACs and PACs. **Biotechniques** [Impact Factor: 2.7] 2002 32(2):240-2
- OA-11** **Casanova E**, Fehsenfeld S, Mantamadiotis T, Lemberger T, Greiner E, Stewart AF and Schütz G. A CamKIIa iCre BAC allows brain-specific gene inactivation. **Genesis** [Impact Factor: 2.5] 2001 31(1):37-42
- OA-10** **Casanova E**, Callejo AI, Calvo P and Chinchetru MA. Analysis of splicing of four mouse JNK/SAPKalpha variants. **Neuroreport** [Impact Factor: 1.7] 2000 7;11(2):305-9
- OA-09** Kellendonk C, Tronche F, **Casanova E**, Anlag K, Opherk C and Schütz G. Inducible Site-specific Recombination in the Brain. **J. Mol. Biol.** [Impact Factor: 4] 1999 8;285(1):175-82
- OA-08** Alonso-Llamazares A, Lopez-Alonso J, del Barrio M, **Casanova E**, Calvo P and Chinchetru MA. Cloning of chicken and mouse $\alpha 1b$ adrenergic receptor. **Biochim. Biophys. Acta** [Impact Factor: 5] 1998 13;1396(3):263-6
- OA-07** Alonso-Llamazares A, **Casanova E**, Zamanillo D, Ovalle S, Calvo P and Chinchetru MA. Phosphorylation of the third intracellular loop of the mouse $\alpha 1b$ - Adrenergic receptor by cAMP-dependent protein kinase. **Brain Res. Bull.** [Impact Factor: 2.8] 1997 42(6):427-30

- OA-06** Casanova E, Garate C, Ovalle S, Calvo P and Chinchetru MA. Identification of four splice variants of the mouse stress activated protein kinase JNK/SAP a isoform. **NeuroReport** [Impact Factor: 1.7] 1996 17;7(7):1320-4
- OA-05** Casanova E, Alonso-Llamazares A, Zamanillo D, Garate C, Calvo P and Chinchetru MA. Identification of a long huntingtin mRNA transcript in mouse brain. **Brain Res.** [Impact Factor: 2.7] 1996 16;743(1-2):320-3
- OA-04** Ovalle S, Casanova E, Garate C, Alonso-Llamazares A, Chinchetru MA and Calvo P. Immunodetection of serotonin transporter from mouse brain. **NeuroReport** [Impact Factor: 1.7] 1995 27;6(17):2353-6
- OA-03** Alonso-Llamazares A, Zamanillo D, Casanova E, Ovalle S, Calvo P and Chinchetru MA. Molecular cloning of $\alpha 1d$ -adrenergic receptor and tissue distribution of tree $\alpha 1$ -adrenergic receptors subtypes in mouse. **J. Neurochem.** [Impact Factor: 4.1] 1995 65(6):2387-92
- OA-02** Zamanillo D, Casanova E, Alonso-Llamazares A, Ovalle S, Chinchetru MA and Calvo P. Identification of a cyclic adenosine 3', 5'-monophosphate-dependent protein kinase phosphorylation site in the carboxy terminal tail of D1 dopamine receptor. **Neurosci. Lett.** [Impact Factor: 2.1] 1995 31;188(3):183-6
- OA-01** Negro M, Casanova E, Chinchetru MA, Fernandez-Lopez A and Calvo P. Differential effect of chronic ethanol treatment on barbiturate and steroid modulation of muscimol binding to rat brain cortex. **Neurosci. Lett.** [Impact Factor: 2.1] 1993 6;158(1):83-6

Review Articles

- RA-5** Kunert R and **Casanova E**. Recent advances in recombinant protein production: BAC-based expression vectors, the bigger the better. *BioEngineered*. in press. Commentary
- RA-4** Rampetsreiter P, **Casanova E** and Eferl E. Genetically modified mouse models of cancer invasion and metastasis. *Drug Discovery Today*, [Impact Factor: 6.8] 2011 8, No. 2–3. Review
- RA-3** Mair M, Blaas L, Osterreicher CH, **Casanova E**, and Eferl R. JAK-STAT signaling in hepatic fibrosis. *Front Biosci*. [Impact Factor: 3.5]. 2011 Jun 1;17:2794-811. Review
- RA-2** Tronche F, **Casanova E**, Turiault M, Sahly I, Kellendonk C. When reverse genetics meets physiology: the use of site-specific recombinases in mice. *FEBS Lett*. [Impact Factor: 3.5] 2002 529: 116-121. Review
- RA-1** Chinchetru MA, **Casanova E** and Calvo P. Stress-activated protein kinases (JNK/SAPKs) of mammalian brain. *Trends in Comparative Biochem.and Physiol*. 1998 4: 255-259. Review

Book Chapters

- B-1** Blaas L, Musteanu M, Grabner B, Eferl R, Bauer A and **Casanova E**. The Use of Bacterial Artificial Chromosomes for Recombinant Protein Production in Mammalian Cell Lines. *Methods in Molecular Biology*. 2012 824:581-93. Book Chapter.

Invited lectures:

Title: "The Use of Bacterial Artificial Chromosomes for Recombinant Protein Production in Mammalian Cell Lines"

November, 2012. PEGS-Europe summit, Vienna, Austria.

Title: "A mouse model to identify cooperating signaling pathways in cancer"

September 2012. Institute for Genetics, Cologne, Germany

Title: "Bacterial artificial chromosomes improve recombinant protein production in mammalian cell lines"

February, 2011. RPP 6 Conference Meeting, Vienna, Austria.

Title: "Life imaging of GABA(B) Receptors in vivo"

October, 2010. University of Patras, Patras, Greece.

Title: "Mouse models for cancer and liver fibrosis"

September, 2010. "Research Retreat in Sopron", Hungary.

Title: "Role of Stat5 in liver fibrosis"

May, 2010. Leibniz Institute for Age Research – Fritz-Lipmann-Institute. Jena, Germany.

Title: "Life imaging of GABA(B) Receptors in vivo"

April, 2009. Faculty of Pharmaceutical Sciences, Copenhagen, Denmark.

Title: "Role of Stat5 in liver fibrosis"

April, 2009. "Research Retreat Vienna", Austria.

Title: "Role of Stat5 in liver fibrosis"

January, 2009. Collège de France, Paris, France.

Title: "Role of Stat5 in liver fibrosis"

September, 2008. "Research Retreat in Sopron", Hungary.

Title: "Life imaging of GABA(B) Receptors in vivo"

May, 2008. Neuroscience institute, Alicante, Spain.

Title: "Life imaging of GABA(B) Receptors in vivo"

October, 2007. Instituto de Biología y Genética Molecular, Valladolid, Spain.

Title: "Analysis of GABA(B) Receptors"

February, 2007. Leibniz Institute for Age Research – Fritz-Lipmann-Institute. Jena, Germany.

Title "Life imaging of GABA(B) receptors"

September, 2005. 11th Scientific Symposium of Austrian Pharmacology Society (APHAR) Vienna.

Title: "Conditional Gene Targeting"

March, 2005. Leibniz Institute for Age Research – Fritz-Lipmann-Institute. Jena, Germany.

Title: "Conditional mutagenesis in the brain"

October, 2004. Controlling gene expression inducible in mice: conditional mutagenesis, inducible expression and RNAi. Marseille, France.

Teaching experience:

May-July, 1995: Intensive course of Molecular Biology, University of the Leon, Leon, Spain

1994-1997: Practical courses of chemistry and biochemistry, University of Leon, Leon, Spain.

2002-2006: Practical courses of neurophysiology, University of Basel, Basel, Switzerland.

2006- present: Organizer and responsible person of the following seminars in the Ludwig Boltzmann Institute for Cancer Research, Vienna, Austria:

“Signal transduction and tumorigenesis” (094 PhD-Doctoral Program)

“JC Transgenic mouse models” (094 PhD-Doctoral Program)

“TS Transgenic mouse models” (094 PhD-Doctoral Program)

Supervision of PhD students:

2006-2010: Dr. Leander Blaas

2009-present: Beatrice Grabner

2010-present: Patricia Stiedl

2011-present: Katalin Zboray

Supervision of diploma students:

2009-2010: Victoria Stanek

Supervision of technicians:

1999-2002: Sandra Fehsenfeld

2006-2009: Deeba Khan

2011-present: Edith Bogner