



Curriculum vitae Standardized form

Total number of pages: **52**

Name: **KEPA RUIZ-MIRAZO**

Research career summary: **Full-time researcher (IDP) at the UPV/EH**
Sexenios (+evaluated 6-year research periods): **3** [last: 2012-17]
Total number of citations: 1592 (WoS) / **3201** (Google Scholar)
Number of publications in Q1 journals: 25
h-index: 18 (WoS) / **27** (Google Scholar)

Habilitation for Full Research Professor (Unibasq, April 2018)

Date: **May 31st, 2023**

PERSONAL DATA

Family name: **RUIZ MIRAZO**
ID/Passport no: **PAA885074**
Nationality: **SPANISH**

Forename: **KEPA**
Date of birth : **09/DEC/1970**
Gender: **MALE**

CURRENT PROFESSIONAL POSITION

Institution: **UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU)**
Faculty, School or Institute: **EDUCATION, PHILOSOPHY AND ANTHROPOLOGY (HEFA)**
Department: **PHILOSOPHY**
Address: **AVDA. TOLOSA 70, DONOSTIA-SAN SEBASTIAN**
Post Code: **20018** Province: **GIPUZKOA** Country: **SPAIN**

Telephone (indicate prefix, number and extension): **+34 943 015628 / +34 946 018005**
E-mail: **kepa.ruiz-mirazo@ehu.eus**

Field of study (UNESCO codes): **720501-720102**

Professional status: **STAFF RESEARCHER (IDP)**

Start date: **01/OCT/2012**

Administrative status

Permanent Staff Hired on contracts Acting Fellowship holder
 Others specify:

Full-time **Statistical data:** total number of citations: **1592** (WoS) / **3201** (Google Scholar)
Part-time (May 2023) h-index: **18** (WoS – Thomson Reuters) / **27** (Google Scholar)
number of publications in top (WoS – JCR-- Q1) journals: **25**

PRESENT RESEARCH AREA/INTERESTS

Brief summary (key words).

Origins of Life, Complex Systems, Protocell modelling, Synthetic Biology, Artificial Life, Systems Chemistry, Biophysics, Bioenergetics, Minimal Cell, Systems Biology, Theoretical Biology, Philosophy of Biology, Philosophy of Science.

ACADEMIC BACKGROUND

Bachelor	Centre	Date
PHYSICS (SOLID STATE PHYSICS, 5 years)	UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU)	JULY 1994
Masters: EUROPEAN STUDIES ON SOCIETY SCIENCE AND TECHNOLOGY	NOTRE DAME DE LA PAIX (NAMUR-BELGIUM) & UPV/EHU	SEPT. 1995

Ph.D.	Centre	Thesis Supervisor	Date
SCIENCES (PHYSICS, COMPLEX SYSTEMS)	UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU)	ALVARO MORENO	NOV. 2001

PAST SCIENTIFIC EXPERIENCE (*)

<i>Position</i>	<i>R&D Centre</i>	<i>Institution (**)</i>	<i>Start date</i>	<i>End date</i>
INTA-POSTDOC FELLOWSHIP	CENTRE OF ASTROBIOLOGY (CAB)	INTA-CSIC	01/04/2002	16/09/2002
LECTURESHIP	D. BASIC SCIENCES	MONDRAGON UNIVERSITY	17/09/2002	01/03/2003
FPI-POSTDOC FELLOWSHIP	INSTITUTE FOR POLYMERS	ETH-Zurich	01/03/2003	01/10/2003
LECTURESHIP	D. BASIC SCIENCES	MONDRAGON UNIVERSITY	01/10/2003	01/01/2004
FPI-POSTDOC FELLOWSHIP	D. BIOLOGY	UNIV. ROMA TRE	01/01/2004	01/03/2005
HPC-EUROPA FELLOWSHIP	D. CHEMISTRY	UNIV. BARI (ITALY)	01/09/2005	01/12/2005
POST-DOC FELLOWSHIP GV (MOD. E)	D. LOGIC & PHILOSOPHY OF SCIENCE	UPV/EHU	01/10/2005	31/12/2006
RAMÓN y CAJAL RESEARCH FELLOW	D. LOGIC & PHILOSOPHY OF SCIENCE	UPV/EHU	01/01/2007	31/12/2011
TEMPORARY PDI RESEARCHER	D. LOGIC & PHILOSOPHY OF SCIENCE	UPV/EHU	01/01/2012	30/09/2012

(*) The information contained in this chart will be used to verify the placement requirements, according to the Call.

(**) If the Institution is a "joint centre", you should specify all the centres involved in running it.

LANGUAGES (N = NORMAL, G = GOOD, P = PERFECTLY)

<i>Language</i>	<i>Speaking</i>	<i>Reading</i>	<i>Writing</i>
ENGLISH	P	P	P
ITALIAN	N	G	N
FRENCH	N	G	N
BASQUE (EUSKERA)	P	P	P

PARTICIPATION IN RESEARCH PROJECTS

NOTE: As **full member/researcher** after 2001 and as **Student** (PhD Grant holder) in the previous years.

PROJECT TITLE: **IAS-Research Centre for Life, Mind & Society (Grupos Consolidados -- GV)**

FINANCING ENTITY: **GV (Basque Government) -- Ref. IT1668-22.**

FROM: **01/01/2022** TO: **31/12/2025**

PRINCIPAL INVESTIGATOR: **JON UMEREZ**

AMOUNT: **107.000€**

PROJECT TITLE: **Integration & individuation: key properties in the origin of agency and cognition**

FINANCING ENTITY: **JOHN TEMPLETON FOUNDATION (JTF) -- grant #62220**

FROM: **01/11/2021** TO: **31/07/2024**

PRINCIPAL INVESTIGATORS: **ALVARO MORENO & KEPA RUIZ-MIRAZO**

AMOUNT: **250.000 USD (\$)**

PROJECT TITLE: **“OUTONOMY’: fleshing out autonomy beyond the individual”**

FINANCING ENTITY: **MINECO – Spanish Government (PID2019-104576GB-I00)**

FROM: **01/06/2020** TO: **31/12/2023**

PRINCIPAL INVESTIGATORS: **XABIER BARANDIARAN & LEONARDO BICH**

AMOUNT: **33.094€**

PROJECT TITLE: **IAS-Research Centre for Life, Mind & Society (Grupos Consolidados -- GV)**

FINANCING ENTITY: **GV (Basque Government) -- Ref. IT1228-19.**

FROM: **01/01/2019** TO: **31/12/2021**

PRINCIPAL INVESTIGATOR: **KEPA RUIZ-MIRAZO**

AMOUNT: **170.000€**

PROJECT TITLE: **Protometabolic pathways: exploring the chemical roots of systems biology**

(ProtoMet – Role:UPV/EHU Principal Investigator)

FINANCING ENTITY: **EUROPEAN COMMISSION – Marie Curie Training Network**

(H2020 – MSCA – ITN – 2018; Grant Agreement Ref.: 813873)

FROM: **2018** TO: **2023**

NETWORK COORDINATOR: **SHEREF MANSY (KEPA RUIZ-MIRAZO, PI at UPV/EHU)**

AMOUNT (total): **2.174.000€** --- AMOUNT (UPV/EHU): **250.000€**

PROJECT TITLE: **Identity in interaction – ‘inter-identity’ (Identidad en interacción)**

FINANCING ENTITY: **MINECO – Spanish Government (FFI2014-52173)**

FROM: **01/01/2015** TO: **31/12/2018**

PRINCIPAL INVESTIGATORS: **ARANTZA ETXEBERRIA & KEPA RUIZ-MIRAZO**

AMOUNT: **60.500€**

PROJECT TITLE: **Origins and Evolution of Life on Earth and in the Universe**

(Role: MC Member from Spain)

FINANCING ENTITY: **EUROPEAN COMMISSION -- COST- Action TD 1308**

FROM: **2014**

TO: **End of 2018**

PRINCIPAL INVESTIGATOR: **MURIEL GARGAUD**

AMOUNT (approx.): **450.000€**

PROJECT TITLE: **Stabilité et variation dans les systèmes biologiques: une enquête épistémologique et théorique**

FINANCING ENTITY: **Université Paris 1 Panthéon - Sorbonne**

FROM: **01/09/2014**

TO: **End of 31/08/2016**

PRINCIPAL INVESTIGATOR: **MATTEO MOSSIO**

AMOUNT: **18.000€**

PROJECT TITLE: **Subvención Grupos de Investigación del Sistema Universitario Vasco**

FINANCING ENTITY: **GV (Basque Government). IT590-13.**

FROM: **01/01/2013**

TO: **31/12/2018**

PRINCIPAL INVESTIGATOR: **ALVARO MORENO / KEPA RUIZ-MIRAZO**

AMOUNT: **226.000€**

PROJECT TITLE: **Emergence and Evolution of Complex Chemical Systems**

(Roles: MC Member from Spain and STSM Coordinator)

FINANCING ENTITY: **EUROPEAN COMMISSION -- COST- Action CM 1304**

FROM: **2013**

TO: **End of 2017**

PRINCIPAL INVESTIGATOR: **SIJBREN OTTO**

AMOUNT (approx.): **450.000€**

PROJECT TITLE: **Autonomía y niveles de organización.**

FINANCING ENTITY: **MINECO – Spanish Government (FFI2011-25665)**

FROM: **01/01/2012**

TO: **31/12/2014**

PRINCIPAL INVESTIGATOR: **JON UMEREZ (initially: ALVARO MORENO)**

AMOUNT: **86.000€**

PROJECT TITLE: **Subvención Grupos Consolidados (Filosofía de la Biología)**

FINANCING ENTITY: **GV (Basque Government). IT505-10.**

FROM: **01/01/2010**

TO: **31/12/2012**

PRINCIPAL INVESTIGATOR: **ARANTZA ETXEBERRIA**

AMOUNT: **61.000€**

PROJECT TITLE: **La organización biológica: entre el mecanicismo y la autonomía**

FINANCING ENTITY: **MICINN – Spanish Government (FFI2008-06348-C02-01)**

FROM: **01/01/2009**

TO: **31/12/2011**

PRINCIPAL INVESTIGATOR: **KEPA RUIZ-MIRAZO**

AMOUNT: **48.400€**

PROJECT TITLE: **Systems Chemistry**

FINANCING ENTITY: **EUROPEAN COMISSION -- COST- Action CM0703**

FROM: **2008** TO: **End of 2011**

PRINCIPAL INVESTIGATOR: **GÜNTER VON KIEDROWSKI / SIJBREN OTTO**

AMOUNT (approx.): **400.000€**

PROJECT TITLE: **Aspectos filosóficos de la organización biológica y cognitiva desde la biología y la bioética de sistemas.**

FINANCING ENTITY: **Basque Government ('CONSOLIDATED GROUPS') -- IT-250-07**

FROM: **01/01/2007** TO: **31/12/2009**

PRINCIPAL INVESTIGATOR: **ALVARO MORENO**

AMOUNT: **50.000€**

PROJECT TITLE: **Información, Autonomía y Sistemas. Elementos epistemológicos y éticos para una perspectiva organicista en biología.**

FINANCING ENTITY: **MEC – Spanish Government (HUM2005-02449)**

FROM: **31/12/2005** TO: **31/12/2008**

PRINCIPAL INVESTIGATOR: **ALVARO MORENO**

AMOUNT: **45.000€**

PROJECT TITLE: **Organismo, Evolución y Cognición. Aspectos filosóficos.**

FINANCING ENTITY: **UPV/EHU (ADVANCED GROUPS SUPPPORT) 9/UPV 00003.230-15840/2004**

FROM: **2005** TO: **End of 2006**

PRINCIPAL INVESTIGATOR: **ARANTZA ETXEBERRIA**

AMOUNT: **19.000€**

PROJECT TITLE: **Stochastic simulations of proto-cellular self-assembling systems**

FINANCING ENTITY: **EUROPEAN COMISSION -- HPC-EUROPA (RII3-CT-2003-506079)**

FROM: **2005** TO: **2006**

PRINCIPAL INVESTIGATOR: **FABIO MAVELLI**

PROJECT TITLE: **Functionalized self-reproducing vesicles as precursors for early cells.**

FINANCING ENTITY: **EUROPEAN COMISSION -- COST- Chemistry Action D27**

FROM: **2003** TO: **2007**

PRINCIPAL INVESTIGATOR: **PIER LUIGI LUISI**

PROJECT TITLE: **Interactions between proteins and liposomes**

FINANCING ENTITY: **SWISS FEDERAL GOVERNMENT**

FROM: **2003** TO: **2004**

PRINCIPAL INVESTIGATOR: **PIER LUIGI LUISI**

PROJECT TITLE: ***Identidad e individuación en biología y vida artificial***

FINANCING ENTITY: **UPV/EHU -- 003.230-HA079/99**

FROM: **1999** TO: **2000**

PRINCIPAL INVESTIGATOR: **ARANTZA ETXEBERRIA**

AMOUNT: **1.000.000 pts**

PROJECT TITLE: ***Ciencias de la complejidad y simulaciones artificiales: La repercusión de la VA en algunos aspectos de la teoría de la evolución contemporánea***

FINANCING ENTITY: **DIGCYT (MEC) PB95-0502**

FROM: **1996** TO: **1999**

PRINCIPAL INVESTIGATOR: **ALVARO MORENO**

AMOUNT: **5.750.000 pts**

PROJECT TITLE: ***EMSTES Research Project in Science Teaching***

FINANCING ENTITY: **BELGIAN MINISTRY OF EDUCATION**

FROM: **1995** TO: **1996**

PRINCIPAL INVESTIGATOR: **GÉRARD FOUREZ (FUNDP – Namur)**

PUBLICATIONS

Indicate volume, first and last page (year) and Key.

Key: B= full book, BC= book chapter, EC= entry/chapter of encyclopedia, A= article, ABS= abstract, R= review, E= editor.

(*) Those publications in process and not yet published, just specify publication status. (**) Optionally specify the most important aspects of each publication to assess quality (e.g. journal impact index, journal position on lists of the corresponding fields, cites received or other repercussion indicators)

AUTHORS (in order of authorship): Lauber, N., Tichacek, O., Narayanankutty, K. De Martino, D. & Ruiz-Mirazo, K.

TITLE: Modelling spatial constraints and scaling effects of catalyst phase separation on linear pathway kinetics.

*JOURNAL/BOOK TITLE: Submitted for publication -- Arxiv version: <https://arxiv.org/abs/2302.05315>
KEY: A*

DATE OF PUBLICATION (): Under review (2023)*

*REMARKABLE ASPECTS (**):*

ISSN: .

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.

TITLE: On the evolutionary development of biological organisation from complex prebiotic chemistry.

*JOURNAL/BOOK TITLE: Forthcoming -- In M. Mossio (Ed.): Organization in Biology, Springer. (pp.:).
KEY: BC*

DATE OF PUBLICATION (): 2023*

*REMARKABLE ASPECTS (**): Springer*

ISBN:

AUTHORS (in order of authorship): Lauber, N., Tichacek, O., Bose, R., Flamm, C., Leuzzi, L., Tang, T-Y D., Ruiz-Mirazo, K. & De Martino, D.

TITLE: Statistical mechanics of biomolecular condensates via cavity methods.

JOURNAL/BOOK TITLE: iScience 26: 106300 (<https://doi.org/10.1016/j.isci.2023.106300>).

KEY: A

DATE OF PUBLICATION (): 2023*

*REMARKABLE ASPECTS (**): JCR 2021-year-IF: **6,107**. First quartile (**Q1**)*

eISSN: 2589-0042.

AUTHORS (in order of authorship): Lauber, N., Flamm, C. & Ruiz-Mirazo, K.

TITLE: 'Minimal metabolism': a key concept to investigate the origins and nature of biological systems

JOURNAL/BOOK TITLE: BioEssays 43: 2100103. (<https://doi.org/10.1002/bies.202100103>).

KEY: A

DATE OF PUBLICATION (): 2021 (August)*

*REMARKABLE ASPECTS (**): JCR 2020-year-IF: **4,345**. First quartile (**Q1**)*

ISSN: 0265-9247.

AUTHORS (in order of authorship): Amilburu, A., Moreno, A. & Ruiz-Mirazo, K.

TITLE: Definitions of life as epistemic tools that reflect and foster the advance of biological knowledge.

JOURNAL/BOOK TITLE: Synthese 198, 10565-85 - Published online (doi: [10.1007/s11229-020-02736-7](https://doi.org/10.1007/s11229-020-02736-7)).

KEY: A

DATE OF PUBLICATION (): 2021*

REMARKABLE ASPECTS (**): JCR 2019-year-IF: **1,436**. First quartile (**Q1**)
ISSN: 0039-7857

AUTHORS (in order of authorship): Ruiz-Mirazo, K.
TITLE: *Boundary versus enabling conditions for the origins of life.*

JOURNAL/BOOK TITLE: *Physics of Life Reviews* 34-35, 96-98.

KEY: R

DATE OF PUBLICATION (*): 2020

REMARKABLE ASPECTS (**): JCR 2019-year-IF: **14,789**. First quartile (**Q1**)
ISSN: 1571-0645.

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Shirt-Ediss, B., Escribano-Cabeza, M. & Moreno, A.
TITLE: *The construction of biological 'inter-identity' as the outcome of a complex process of protocell development in prebiotic evolution.*

JOURNAL/BOOK TITLE: *Frontiers in Physiology (Systems Biology)* 11, 530.

KEY: A

DATE OF PUBLICATION (*): 2020

REMARKABLE ASPECTS (**): JCR 2019-year-IF: **3,367**. First quartile (**Q1**)
ISSN: 1664-042X

AUTHORS (in order of authorship): Ruiz-Mirazo, K.
TITLE: *A plea for hypothesis-driven research in prebiotic systems chemistry.*

JOURNAL/BOOK TITLE: *Chem* 5, 1920-1922.

KEY: R

DATE OF PUBLICATION (*): 2019

REMARKABLE ASPECTS (**): JCR 2019-year-IF: **18,2**. First quartile (**Q1**)
ISSN: 2451-9294.

AUTHORS (in order of authorship): Serrano-Luginbühl, S., Ruiz-Mirazo, K., Ostaszewski, R., Gallou, F. & Walde, P.

TITLE: *Soft and dispersed interface-rich aqueous systems that promote and guide chemical reactions.*

JOURNAL/BOOK TITLE: *Nature Reviews Chemistry* 2: 306-327.

KEY: R

DATE OF PUBLICATION (*): 2018

REMARKABLE ASPECTS (**): JCR 2018-year-IF: **30,6**. First quartile (**Q1**)
ISSN: 2397-3358.

AUTHORS (in order of authorship): Barandika, G., Armentia, J. I., Portillo, E. Ruiz-Mirazo, K. & Simon, E.
TITLE: *Co-design of initiatives to promote the internationalization activities in doctoral studies.*

JOURNAL/BOOK TITLE: *EDULEARN'18 Conference Proceedings (10th International Conference on Education and New Learning Technologies)*, L. Gómez Chova et al. (Eds.), IATED Academy (pp. 5829-5834).

KEY: BC

DATE OF PUBLICATION (*): 2018

REMARKABLE ASPECTS (**):
ISBN: 9788409027095.

AUTHORS (in order of authorship): Shirt-Ediss, B., Murillo-Sánchez, and Ruiz-Mirazo, K.
TITLE: *Framing major prebiotic transitions as stages of protocell development: three challenges for origins-of-life research.*

JOURNAL/BOOK TITLE: *Beilstein Journal of Organic Chemistry* 13: 1388-1395

KEY: A

DATE OF PUBLICATION (*): 2017

REMARKABLE ASPECTS (**):

ISSN: 1860-5397.

AUTHORS (in order of authorship): Piedrafita, G., Monnard, P.-A., Mavelli, F. and Ruiz-Mirazo, K.

TITLE: *Permeability-driven selection in a semi-empirical protocell model: the roots of prebiotic systems evolution.*

JOURNAL/BOOK TITLE: *Scientific Reports* 7: 3141

KEY: A

DATE OF PUBLICATION (*): 2017

REMARKABLE ASPECTS (**): JCR 5yearIF: **5,01**. First quartile (Q1)

ISSN: 2045-2322.

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Briones, C. and de la Escosura, A.

TITLE: *Chemical roots of biological evolution: the origins of life as a process of development of autonomous functional systems.*

JOURNAL/BOOK TITLE: *Open Biology* 7: 170050

KEY: A

DATE OF PUBLICATION (*): 2017

REMARKABLE ASPECTS (**): JCR 5yearIF: **5,3**. First/second quartile (Q1/Q2)

ISSN: 2046-2441.

AUTHORS (in order of authorship): Ruiz-Mirazo, K.

TITLE: *Entre las moléculas y la vida: dos metáforas para indagar sobre la emergencia de la organización biológica. [From molecules to life: two metaphors to inquire about the emergence of biol. organization]*

JOURNAL/BOOK TITLE: In: *Nodos*. G. A Schwartz & V. E. Bermúdez (Eds.), Next Door Publishers (pp. 213-217).

KEY: BC

DATE OF PUBLICATION (*): 2017

REMARKABLE ASPECTS (**):

ISBN: 978-84-946669-7-1

AUTHORS (in order of authorship): Acosta-Andrade, C., Artetxe, I., Lete, M.G., Monasterio, B.G., Ruiz-Mirazo, K., Goñi, F. M. and Sánchez-Jiménez, F.

TITLE: *Polyamine-RNA-membrane interactions: from the past to the future in biology.*

JOURNAL/BOOK TITLE: *Colloids and Surfaces B: Biointerfaces* 155: 173-181

KEY: A

DATE OF PUBLICATION (*): 2017

REMARKABLE ASPECTS (**): JCR 5yearIF: **4,4**. First quartile (Q1)

ISSN: 0927-7765.

AUTHORS (in order of authorship): Murillo-Sánchez, S., and Ruiz-Mirazo, K.

TITLE: *La biología sintética como desafío para comprender la autonomía de lo vivo. [Synthetic biology as a challenge to understand biological autonomy]*

JOURNAL/BOOK TITLE: *Isegoría* 55: 545-568

KEY: A

DATE OF PUBLICATION (*): 2016

REMARKABLE ASPECTS (**):

AUTHORS (in order of authorship): Murillo-Sánchez, S., Beauflis, D., González-Mañas, J.M., Pascal, R. and Ruiz-Mirazo, K.

TITLE: Fatty acids' double role in the prebiotic formation of a hydrophobic dipeptide.

JOURNAL/BOOK TITLE: Chemical Science 7: 3406-3414

KEY: A

DATE OF PUBLICATION ():* 2016

*REMARKABLE ASPECTS (**):* JCR 5yearIF: **9,2**. First quartile (**Q1**)

ISSN: 2041-6520.

AUTHORS (in order of authorship): Bich, L., Mossio, M., Ruiz-Mirazo, K. and Moreno, A.

TITLE: Biological regulation: controlling the system from within.

JOURNAL/BOOK TITLE: Biology & Philosophy 31: 237-265

KEY: A

DATE OF PUBLICATION ():* 2016 (available online in 2015 -- DOI: 10. 1007/s10539-015-9497-8)

*REMARKABLE ASPECTS (**):* JCR 5yearIF: **1,445**. First quartile (**Q1**)

ISSN: 0169-3867.

AUTHORS (in order of authorship): Ibarguren, M., Bomans, P.H.H., Ruiz-Mirazo, K., Frederik, P.M., Alonso, A. and Goñi, F.M.

TITLE: Thermally-induced aggregation and fusion of protein-free lipid vesicles.

JOURNAL/BOOK TITLE: Colloids and Surfaces B: Biointerfaces 136: 545-552.

KEY: A

DATE OF PUBLICATION ():* 2015

*REMARKABLE ASPECTS (**):* JCR 5yearIF: **4,4**. First quartile (**Q1**)

ISSN: 0927-7765.

AUTHORS (in order of authorship): Ruiz-Mirazo, K. and Moreno, A.

TITLE: Reflexiones sobre el origen de la vida: algo más que un problema evolutivo.

[Reflections on the origins of life: more than an evolutionary problem]

JOURNAL/BOOK TITLE: *Mètode* 87: 55-63

KEY: A

DATE OF PUBLICATION ():* 2015 [2016 for the English version, in *Mètode Science Studies Journal*]

*MOST OUTSTANDING ASPECTS (**):*

ISSN: 1133-3987.

AUTHORS (in order of authorship): de la Escosura, A., Briones, C., and Ruiz-Mirazo, K.

TITLE: The systems perspective at the crossroads between chemistry and biology.

JOURNAL/BOOK TITLE: *Journal of Theoretical Biology* 381: 11-22

(DOI: 10.1016/j.jtbi.2015.04.036i)

KEY: A

DATE OF PUBLICATION ():* 2015

*REMARKABLE ASPECTS (**):* JCR 5yearIF: **2,394**.

ISSN: 0022-5193.

AUTHORS (in order of authorship): Shirt-Ediss, B., Solé, R.V., and Ruiz-Mirazo, K.

TITLE: Emergent chemical behavior in variable-volume protocells.

JOURNAL/BOOK TITLE: *Life* 5(1): 181-211 (DOI: 10.3390/life5010181)

KEY: A

DATE OF PUBLICATION ():* 2015

*REMARKABLE ASPECTS (**):*

AUTHORS (in order of authorship): Balleza, D., García-Arribas, A., Sot, J., Ruiz-Mirazo, K. and Goñi, F.
TITLE: Ether- versus ester-linked phospholipid bilayers containing either linear or branched apolar chains.

JOURNAL/BOOK TITLE: Biophysical Journal 107: 1364-1374. KEY: A
DATE OF PUBLICATION (): 2014*
*REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: 4,137 First quartile (Q1)*

AUTHORS (in order of authorship): Shirt-Ediss, B., Ruiz-Mirazo, K., Mavelli, F. and Solé, R. V.
TITLE: Modelling lipid competition dynamics in heterogeneous protocell populations.

JOURNAL/BOOK TITLE: Scientific Reports 4: 5675. KEY: A
DATE OF PUBLICATION (): 2014 (DOI: 10.1038/srep05675)*
*REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: 5,078 First quartile (Q1)*

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Briones, C. and de la Escosura, A.
TITLE: Prebiotic 'Systems Chemistry': New Perspectives for the Origins of Life.

JOURNAL/BOOK TITLE: Chemical Reviews 114: 285-366. KEY: R
DATE OF PUBLICATION (): 2014 -- Available online in 2013 (DOI: 10.1021/cr2004844)*
*REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: 42,054 First quartile (Q1)*

AUTHORS (in order of authorship): Arnellos, A., Moreno, A. and Ruiz-Mirazo, K.
TITLE: Organizational requirements for multicellular autonomy: insights from a comparative case study.

JOURNAL/BOOK TITLE: Biology and Philosophy 29: 851-884. KEY: A
DATE OF PUBLICATION (): 2014 -- Published online in June 2013: DOI 10.1007/s10539-013-9387-x*
*REMARKABLE ASPECTS (**): ISI WoK -- JCR 5yearIF: 1,445 First quartile (Q1)*

AUTHORS (in order of authorship): Shirt-Ediss, B., Solé, R. and Ruiz-Mirazo, K.
TITLE: Steady state analysis of a vesicle bioreactor with mechanosensitive channels.

JOURNAL/BOOK TITLE: In: ECAL 2013 Proceedings -- Advances in Artificial Life Liò, P., et al. (Eds.), MIT Press (pp. 1162-1169). KEY: BC

DATE OF PUBLICATION (): 2013*
*REMARKABLE ASPECTS (**): MIT Press*
ISBN: 9780262317092

AUTHORS (in order of authorship): Ruiz-Mirazo, K. and Moreno, A.
TITLE: Synthetic Biology: challenging life in order to grasp, use or extend it.

JOURNAL/BOOK TITLE: Biological Theory 8: 376-382 KEY: A
DATE OF PUBLICATION (): 2013*
*MOST OUTSTANDING ASPECTS (**): not indexed yet.*

AUTHORS (in order of authorship): Ruiz-Mirazo, K.
TITLE: 'Self-organization'

JOURNAL/BOOK TITLE: In Dubitzky, W. et al (Eds.) "Encyclopedia of Systems Biology". Springer, Heidelberg (pp. 1915-1919). KEY: EC
DATE OF PUBLICATION (): 2013*
*REMARKABLE ASPECTS (**): SPRINGER.*

ISBN: 978-1-4419-9862-0.

AUTHORS (in order of authorship): Ruiz-Mirazo, K.

TITLE: Definir vida: un ejercicio constructivo. (Presentación del dossier 'Qué es la vida?')

JOURNAL/BOOK TITLE: Revista de la Sociedad Española de Bioquímica y Biología Molecular (SEBBM)
Número 175, Marzo de 2013.

KEY: A

DATE OF PUBLICATION (*): 2013

REMARKABLE ASPECTS (**): Popularization article

ISBN: 1696-473X.

AUTHORS (in order of authorship): Mavelli, F. and Ruiz-Mirazo, K.

TITLE: Theoretical conditions for the stationary reproduction of model protocells.

JOURNAL/BOOK TITLE: Integrative Biology 5: 324-341.

KEY: A

DATE OF PUBLICATION (*): 2013 (DOI: 10.1039/c2ib20222k)

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **4,509**

AUTHORS (in order of authorship): Piedrafita, G., Ruiz-Mirazo, K., Monnard, P.-A., Cornish-Bowden, A. & Montero, F.

TITLE: Viability conditions for a compartmentalized proto-metabolic system: a semi-empirical approach.

JOURNAL/BOOK TITLE: PLoS ONE 7(6): e39480

KEY: A

DATE OF PUBLICATION (*): 2012 Available online (doi:10.1371/journal.pone.0039480)

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **4,537** First quartile (Q1)

AUTHORS (in order of authorship): Ruiz-Mirazo, K. and Moreno, A.

TITLE: Biología Sintética: enfrentándose a la vida para comprenderla, utilizarla o extenderla.

JOURNAL/BOOK TITLE: Pasajes 38: 28-37.

KEY: A

DATE OF PUBLICATION (*): 2012

REMARKABLE ASPECTS (**): not indexed.

AUTHORS (in order of authorship): Rendón, A., Valle, M., Montes, R., Goñi, F.M. and Ruiz-Mirazo, K.
TITLE: Model systems of precursor cellular membranes: long chain alcohols stabilize spontaneously formed oleic acid vesicles.

JOURNAL/BOOK TITLE: Biophysical Journal 102: 278-286.

KEY: A

DATE OF PUBLICATION (*): 2012

MOST OUTSTANDING ASPECTS (**): ISI WoK – JCR 5yearIF: **4,137** First quartile (Q1)

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.

TITLE: Autonomy in evolution: from minimal to complex life.

JOURNAL/BOOK TITLE: Synthese 185 (1):21-52

KEY: A

DATE OF PUBLICATION (*): 2012 Available online (DOI 10.1007/s11229-011-9874-z)

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **0,782**

AUTHORS (in order of authorship): Piedrafita, G., Mavelli, F., Morán, F. & Ruiz-Mirazo, K.

TITLE: On the transition from prebiotic to proto-biological membranes: from 'self-assembly' to 'self-production'.

JOURNAL/BOOK TITLE: In G. Kampis et al. (Eds): *ECAL 2009 Proceedings. Selected Papers -- Part I*
Springer LNCS 5777 (Lecture Notes in Computer Science Series), pp. 256-264. KEY: BC
DATE OF PUBLICATION (*): 2011
REMARKABLE ASPECTS (**): SPRINGER
ISBN: 978-3-642-21282-6

AUTHORS (in order of authorship): Moreno, A., Ruiz-Mirazo, K. & Barandiaran, X.
TITLE: *The impact of the paradigm of complexity on the foundational frameworks of biology and cognitive science.*

JOURNAL/BOOK TITLE: In C. Hooker (ed): "Complex Systems." Vol X of the D. Gavia, P. Thagard & J. Woods (eds) *Handbook of Philosophy of Science.* Elsevier.

KEY: BC

DATE OF PUBLICATION (*): 2011
REMARKABLE ASPECTS (**): ELSEVIER -- www.johnwoods.ca/HPS
ISBN: 978-0-444-52076-0

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.
TITLE: *New century biology could do with a universal definition of life.*

JOURNAL/BOOK TITLE: In G. Terzis & R. Arp (eds.): *Information and Living Systems: Essays in Philosophy of Biology*, MIT Press. (pp.: 3-23). KEY: BC

DATE OF PUBLICATION (*): 2011
REMARKABLE ASPECTS (**): MIT Press
ISBN: 978-0-262-20174-2

AUTHORS (in order of authorship): Moreno, A. & Ruiz-Mirazo, K.
TITLE: *The informational nature of biological causality.*

JOURNAL/BOOK TITLE: In G. Terzis & R. Arp (eds.): *Information and Living Systems: Essays in Philosophy of Biology*, MIT Press. (pp.: 157-175). KEY: BC

DATE OF PUBLICATION (*): 2011
REMARKABLE ASPECTS (**): MIT Press
ISBN: 978-0-262-20174-2

AUTHORS (in order of authorship): Ruiz-Mirazo, K. and Moreno, A.
TITLE: 'Life'

JOURNAL/BOOK TITLE: In Gargaud M. et al (Eds.) "Encyclopedia of Astrobiology". Vol 2. Springer, Heidelberg. (pp. 919-921)

KEY: EC

DATE OF PUBLICATION (*): 2011
REMARKABLE ASPECTS (**): SPRINGER.
ISBN: 9783642112713 -- 3642112714

AUTHORS (in order of authorship): Ruiz-Mirazo, K.
TITLE: 'Protocell'

JOURNAL/BOOK TITLE: In Gargaud M. et al (Eds.) "Encyclopedia of Astrobiology". Vol 3. Springer, Heidelberg. (pp. 1353-1354)

KEY: EC

DATE OF PUBLICATION (*): 2011
REMARKABLE ASPECTS (**): SPRINGER.
ISBN: 9783642112713 -- 3642112714

AUTHORS (in order of authorship): Ruiz-Mirazo, K.; Piedrafita, G.; Ciriaco, F. & Mavelli, F.

TITLE: Stochastic simulations of mixed-lipid compartments: from self-assembling vesicles to self-producing protocells.

JOURNAL/BOOK TITLE: In Arabnia H. R. (Ed.) "Software Tools and Algorithms for Biological Systems" (Book series: Advances in Experimental Medicine & Biology, AEMB). Ch. 70 Springer (pp. 689-696)

KEY: BC

DATE OF PUBLICATION (): 2011.*

*REMARKABLE ASPECTS (**): SPRINGER*

ISBN: 978-1-4419-7045-9

AUTHORS (in order of authorship): Luisi, P. L. & Ruiz-Mirazo K.

TITLE: Open questions on the origins of life: Introduction to the special issue.

JOURNAL/BOOK TITLE: Origins of Life and Evolution of the Biosphere 40(4-5), 353-355 *KEY: A*

DATE OF PUBLICATION (): 2010*

*REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: 2,028*

AUTHORS (in order of authorship): Ruiz-Mirazo K. & Luisi, P. L.

TITLE: Open questions on the origins of life: Book of Abstracts.

JOURNAL/BOOK TITLE: Origins of Life and Evolution of the Biosphere 40(4-5).

KEY: E

DATE OF PUBLICATION (): 2010*

*REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: 2,028*

AUTHORS (in order of authorship): Piedrafita, G., Olasagasti, F., Ruiz-Mirazo, K., Peretó, J., Moreno, A., Montero, F. & Morán, F.

TITLE: Conceptual bases for the emergence of early protocells.

JOURNAL/BOOK TITLE: Origins of Life and Evolution of the Biosphere 40(4-5), 445-449. *KEY: ABS*

DATE OF PUBLICATION (): 2010*

*REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: 2,028*

AUTHORS (in order of authorship): Ruiz-Mirazo K.

TITLE: A systems view to define the boundaries of the problem of the origins of life.

JOURNAL/BOOK TITLE: Origins of Life and Evolution of the Biosphere 40(4-5), 495-496. *KEY: ABS*

DATE OF PUBLICATION (): 2010*

*REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: 2,028*

AUTHORS (in order of authorship): Saborido, C., Mossio, M. & Ruiz-Mirazo, K.

TITLE: In search for conceptual bridges: A review of 'Functions in Biological and Artificial Worlds' (Edited by Ulrich Krohs and Peter Kroes).

JOURNAL/BOOK TITLE: Artificial Life 16: 337-340.

KEY: R

DATE OF PUBLICATION (): Nov. 2010*

*REMARKABLE ASPECTS (**): ISI WoK -- JCR 5yearIF: 2,556 First quartile (Q1)*

AUTHORS (in order of authorship): Mavelli, F. & Ruiz-Mirazo, K.

TITLE: ENVIRONMENT: a computational platform to stochastically simulate reacting and self-reproducing lipid compartments

JOURNAL/BOOK TITLE: Physical Biology 7(3) 036002 *doi: 10.1088/1478-3975/7/3/036002*

KEY: A

DATE OF PUBLICATION (): 2010*

REMARKABLE ASPECTS (**):ISI WoK – JCR 5yearIF: **3,480**

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Peretó, J. & Moreno, A.
TITLE: *Defining life or bringing biology to life.*

JOURNAL/BOOK TITLE: *Origins of Life and Evolution of the Biosphere* 40: 203-213 KEY: A
DATE OF PUBLICATION (*): 2010
REMARKABLE ASPECTS (**):ISI WoK – JCR 5yearIF: **2,028**

AUTHORS (in order of authorship): Shirt-Ediss, B., Mavelli, F. & Ruiz-Mirazo, K.
TITLE: *To Burst or Not To Burst: Osmotic Regulation in a Protocell Model Through Precursor Mechano-Sensitive Channels.*

JOURNAL/BOOK TITLE: *In Fellermann et. al. (eds.) Artificial Life XII: Proceedings of the Twelfth International Conf. on the Synthesis and Simulation of Living Systems*, pp.156-157. KEY: ABS
DATE OF PUBLICATION (*): 2010
REMARKABLE ASPECTS (**): MIT Press, Cambridge, MA
ISBN-10: 0-262-29075-8 --- ISBN-13: 978-0-262-29075-3

AUTHORS (in order of authorship): Piedrafita, G., Shirt-Ediss, B., Mavelli, F., Monnard, P.-A. & Ruiz-Mirazo, K.
TITLE: *In vitro and in silico complementary studies on the physical properties of prebiotic compartments.*

JOURNAL/BOOK TITLE: *In Fellermann et. al. (eds.) Artificial Life XII: Proceedings of the Twelfth International Conf. on the Synthesis and Simulation of Living Systems*, p.162. KEY: ABS
DATE OF PUBLICATION (*): 2010
REMARKABLE ASPECTS (**): MIT Press, Cambridge, MA
ISBN-10: 0-262-29075-8 --- ISBN-13: 978-0-262-29075-3

AUTHORS (in order of authorship): Moreno, A. & Ruiz-Mirazo, K.
TITLE: *The problem of the emergence of functional diversity in prebiotic evolution.*

JOURNAL/BOOK TITLE: *Biology and Philosophy* 24: 585-605. KEY: A
DATE OF PUBLICATION (*): 2009
REMARKABLE ASPECTS (**):ISI WoK -- JCR 5yearIF: **1,445** First quartile (Q1)

AUTHORS (in order of authorship): Etxeberria, A. & Ruiz-Mirazo, K.
TITLE: *The challenging biology of transients.*

JOURNAL/BOOK TITLE: *EMBO Reports* 10, S33-S36. KEY: A
DATE OF PUBLICATION (*): 2009
REMARKABLE ASPECTS (**):ISI WoK – JCR 5yearIF: **7,519** First quartile (Q1)

AUTHORS (in order of authorship): Ruiz-Mirazo, K.
TITLE: *Un nuovo inizio.*

JOURNAL/BOOK TITLE: *Sapere* (Ottobre 2009): anno 75 (5): 28-33.
<http://www.galileonet.it/sapere/editoriale/32/riconquistare-la-scuola> KEY: A
DATE OF PUBLICATION (*): 2009
REMARKABLE ASPECTS (**): *Italian Journal for Popularization of Science*

AUTHORS (in order of authorship): Ruiz-Mirazo K., Lerario, M. & Mavelli, F.
TITLE: *Prebiotically plausible functional compartments: a simulation model to study lipid-peptide protocell dynamics.*

JOURNAL/BOOK TITLE: *Origins of Life and Evolution of the Biosphere* 39: 326-327, (Abstract Proceedings of ISSOL'08). KEY: ABS
DATE OF PUBLICATION (*): 2009
REMARKABLE ASPECTS (**): ISI WoK -- JCR 5yearIF: **2,028**

AUTHORS (in order of authorship): Barandiaran, X. & Ruiz-Mirazo, K.
TITLE: *Modelling autonomy: simulating the essence of life and cognition. (Editorial Introduction to the Special Issue).*

JOURNAL/BOOK TITLE: *BioSystems* 91(2): 295-304. KEY: A
DATE OF PUBLICATION (*): 2008
REMARKABLE ASPECTS (**): ISI WoK -- JCR 5yearIF: **1,653**

AUTHORS (in order of authorship): Barandiaran, X. & Ruiz-Mirazo, K.
TITLE: *Modelling autonomy.*

JOURNAL/BOOK TITLE: *BioSystems* 91(2) KEY: E
DATE OF PUBLICATION (*): 2008
REMARKABLE ASPECTS (**): ISI WoK -- JCR 5yearIF: **1,653**

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Mavelli, F.
TITLE: *On the way towards 'basic autonomous agents': stochastic simulations of minimal lipid-peptide cells.*

JOURNAL/BOOK TITLE: *BioSystems* 91(2): 374-387. KEY: A
DATE OF PUBLICATION (*): 2008
REMARKABLE ASPECTS (**): ISI WoK -- JCR 5yearIF: **1,653**

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Umerez, J. & Moreno, A.
TITLE: *Enabling conditions for 'open-ended evolution'.*

JOURNAL/BOOK TITLE: *Biology and Philosophy* 23(1): 67-85. KEY: A
DATE OF PUBLICATION (*): 2008
REMARKABLE ASPECTS (**): ISI WoK -- JCR 5yearIF: **1,445** First quartile (Q1)

AUTHORS (in order of authorship): Mavelli, F., Lerario, M. & Ruiz-Mirazo, K.
TITLE: *'ENVIRONMENT': A Stochastic Simulation Platform to Study Protocell Dynamics.*

JOURNAL/BOOK TITLE: In H. R. Arabnia et al. (Eds.): *Proceedings BIOCOMP 2008 (International Conference on Bioinformatics & Computational Biology)* CSREA Press, pp. 934-941. KEY: BC

DATE OF PUBLICATION (*): 2008
REMARKABLE ASPECTS (**):
ISBN:1-60132-053-1

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Umerez, J. & Moreno, A.
TITLE: *Organizational requirements for open-ended evolution.*

JOURNAL/BOOK TITLE: In S. Bullock, J. Noble, R. A. Watson, and M. A. Bedau (Eds.): *Proceedings of Alife XI, Winchester, UK, MIT Press, Cambridge, MA* (p. 58) KEY: ABS

DATE OF PUBLICATION (*): 2008
REMARKABLE ASPECTS (**):

AUTHORS (in order of authorship): Mavelli, F. & Ruiz-Mirazo, K.
TITLE: Stochastic simulations of minimal self-(re-)producing cellular systems.

JOURNAL/BOOK TITLE: *Phil Trans Royal Soc London B* 362 (1486): 1789-1802. KEY: A
DATE OF PUBLICATION (*): 2007
REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **6,584** First quartile (Q1)

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Mavelli, F.
TITLE: Simulation model for functionalized vesicles: lipid-peptide integration in minimal protocells.

JOURNAL/BOOK TITLE: In Almeida e Costa et al. (eds): *Advances in Artificial Life (Proceedings of ECAL 2007)*, pp. 32-41. Springer, Berlin. KEY: BC
DATE OF PUBLICATION (*): 2007
REMARKABLE ASPECTS (**): SPRINGER -- ISBN 978-3-540-74912-7

AUTHORS (in order of authorship): Mavelli, F. & Ruiz-Mirazo, K.
TITLE: Stochastic simulation of fatty-acid protocell models.

JOURNAL/BOOK TITLE: In Sergey M. Bezkurov (eds.): *Noise and Fluctuations in Biological, Biophysical, and Biomedical Systems*. (SPIE Proceedings vol. 6602, pp. 1B1-1B10).. ISBN:9780819467393. Bellingham, Washington. KEY: BC
DATE OF PUBLICATION (*): 2007
REMARKABLE ASPECTS (**):

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Mavelli, F.
TITLE: Modelling minimal lipid-peptide cells.

JOURNAL/BOOK TITLE: *Origins of Life and Evolution of the Biosphere* 37: 433–437. KEY: ABS
DATE OF PUBLICATION (*): 2007
REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **2,028**

AUTHORS (in order of authorship): Mavelli, F. & Ruiz-Mirazo, K.
TITLE: Bridging the gap between *in silico* and *in vitro* approaches to minimal cells.

JOURNAL/BOOK TITLE: *Origins of Life and Evolution of the Biosphere* 37: 455–458. KEY: ABS
DATE OF PUBLICATION (*): 2007
REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **2,028**

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.
TITLE: On the origins of information and its relevance for biological complexity.

JOURNAL/BOOK TITLE: *Biological Theory* 1(3): 227-229. KEY: A
DATE OF PUBLICATION (*): 2006
REMARKABLE ASPECTS (**): not indexed yet

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Stano, P. & Luisi, P.L.
TITLE: Lysozyme effect on oleic acid/oleate vesicles.

JOURNAL/BOOK TITLE: *Journal of Liposome Research* 16:143–154. KEY: A
DATE OF PUBLICATION (*): 2006
REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **1,944**

AUTHORS (in order of authorship): Moreno, A. & Ruiz-Mirazo, K.

TITLE: *The long-term maintenance and open-ended growth of complexity in nature: information as a decoupling mechanism in the origins of life.*

JOURNAL/BOOK TITLE: In: Capra F, Sotolongo P, Juarrero A. & van Uden J. (Eds): *Rethinking Complexity* ISCE Publisher. (pp. 55-72). KEY: BC

DATE OF PUBLICATION (*): 2006

REMARKABLE ASPECTS (**): ISBN: 0-9766814-6-3

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Mavelli, F.

TITLE: *Stochastic Simulations of proto-cellular self-assembling systems.*

JOURNAL/BOOK TITLE: In: *Science and Supercomputing in Europe: Report 2006 (Bologna-Cineca)*, pp.170-179. ISBN: 978-88-86037-19-8. KEY: BC

DATE OF PUBLICATION (*):2006

REMARKABLE ASPECTS (**):

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.

TITLE: *¿Puede la vida ser definida? (Can life be defined?)*

JOURNAL/BOOK TITLE: In: Martinez Manrique, F. & Paris-Viñé, L. M. (eds) *Actas del V Congreso de la Sociedad de Lógica, Metodología y Filosofía de la Ciencia en España*. Sider, SC (Granada) pp. 311-313. KEY: BC

DATE OF PUBLICATION (*):2006

REMARKABLE ASPECTS (**): ISBN-13: 978-84-9349419-3

AUTHORS (in order of authorship): Ruiz-Mirazo, K.

TITLE: *Working towards the 'minimal cell': a bottom-up proposal.*

JOURNAL/BOOK TITLE: *Origins of Life and Evolution of the Biosphere* 36, pp. 216-218. KEY: ABS

DATE OF PUBLICATION (*): 2005

REMARKABLE ASPECTS (**):ISI WoK – JCR 5yearIF: **2,028**

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.

TITLE: *Basic autonomy as a fundamental step in the synthesis of life.*

JOURNAL/BOOK TITLE: *Artificial Life*, 10(3): 235-259. KEY: A

DATE OF PUBLICATION (*): 2004

REMARKABLE ASPECTS (**):ISI WoK -- JCR 5yearIF: **2,556** First quartile (Q1)

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Peretó, J. & Moreno, A.

TITLE: *A universal definition of life: autonomy and open-ended evolution.*

JOURNAL/BOOK TITLE: *Origins of Life and Evolution of the Biosphere* 34: 323-346. KEY: A

DATE OF PUBLICATION (*): 2004

REMARKABLE ASPECTS (**):ISI WoK – JCR 5yearIF: **2,028***** **This article was selected for the compilation book: *The Nature of Life*, M. Bedau & C. Cleland (eds.), Cambridge University Press, 2010.**

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Peretó J. & Moreno, A.

TITLE: *Proposal for a universal definition of life.*

JOURNAL/BOOK TITLE: *Origins of Life and Evolution of the Biosphere (Abstracts of ISSOL'02)* 33 (3), pp. 282-283. KEY: ABS

DATE OF PUBLICATION (*): 2003

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **2,028**

AUTHORS (in order of authorship): Ruiz-Mirazo, K.

TITLE: *Biziaren sorrera berriro sortzen?* (Title translation, from Basque: Re-originating the origins of life?)

JOURNAL/BOOK TITLE: *Elhuyar*, 191, pp. 22-25. KEY: A

DATE OF PUBLICATION (*): 2003

REMARKABLE ASPECTS (**): *Basque Journal for Popularization of Science*

AUTHORS (in order of authorship): Moreno, A. & Ruiz-Mirazo, K.

TITLE: *Key issues regarding the origin, nature and evolution of complexity in nature: information as a central concept to understand biological organization.*

JOURNAL/BOOK TITLE: *Emergence* 4.1/4.2: 63-76. KEY: A

DATE OF PUBLICATION (*): 2002

REMARKABLE ASPECTS (**): not indexed

AUTHORS (in order of authorship): Ruiz-Mirazo, K.

TITLE: *Condiciones físicas para la aparición de sistemas autónomos con capacidades evolutivas abiertas.* (Physical conditions for the appearance of autonomous systems with open-ended evolutionary capacities).

JOURNAL/BOOK TITLE: *Tesis Doctoral. Universidad del País Vasco UPV-EHU.* KEY: Ph.D

DATE OF PUBLICATION (*): 2001

REMARKABLE ASPECTS (**): *PhD Dissertation*

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.

TITLE: *Searching for the roots of autonomy: the natural and artificial paradigms revisited.*

JOURNAL/BOOK TITLE: *CC-AI (Communication and Cognition – Artificial Intelligence)* 17 (3-4): 209-228.

KEY: A

DATE OF PUBLICATION (*): 2000

REMARKABLE ASPECTS (**): not indexed

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Etxeberria, A., Moreno, A. & Ibáñez, J.

TITLE: *Organisms and their place in biology.*

JOURNAL/BOOK TITLE: *Theory in Biosciences*, 119: 43-67. KEY: A

DATE OF PUBLICATION (*): 2000

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **1,481**

AUTHORS (in order of authorship): Ruiz-Mirazo, K.

TITLE: *Raíces del concepto de autonomía en biología: una crítica al concepto de autopoiesis.* (Conceptual roots of autonomy in biology: a criticism on the concept of autopoiesis)

JOURNAL/BOOK TITLE: *In Mary Sol de Mora, et al. (eds.), Actas del III Congreso de la Sociedad de Lógica, Metodología y Filosofía de la Ciencia en España, Publicaciones del Departamento de Filosofía de la UPV-EHU, San Sebastián -- Donostia, pp. 609-617.* KEY: BC

DATE OF PUBLICATION (*): 2000

REMARKABLE ASPECTS (**):

AUTHORS (in order of authorship): Moreno, A. & Ruiz-Mirazo, K.
TITLE: Metabolism and the problem of its universalization.

JOURNAL/BOOK TITLE: BioSystems 49 (1): 45-61.

KEY: A

DATE OF PUBLICATION ():* 1999

*REMARKABLE ASPECTS (**):* ISI WoK – JCR 5yearIF: **1,653**

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Moreno, A., Morán, F., Peretó, J. & Merelo, J.J.
TITLE: Designing a simulation model of a self-maintaining cellular system.

JOURNAL/BOOK TITLE: In: Floreano, D., Nicoud, J-D Nicoud & Mondada, F. (eds.), *Advances in Artificial Life, Proceedings of the 5th European Conference ECAL'99, Berlin, Springer-Verlag*, pp. 379-389.

KEY: BC

DATE OF PUBLICATION ():* 1999

*REMARKABLE ASPECTS (**):*

ISBN:3-540-66452-1

AUTHORS (in order of authorship): Ruiz-Mirazo, K. & Moreno, A.

TITLE: Autonomy and emergence: how systems become agents through the generation of functional constraints.

JOURNAL/BOOK TITLE: Acta Polytechnica Scandinavica Ma91: 273-282.

KEY: A

DATE OF PUBLICATION ():* 1998

*REMARKABLE ASPECTS (**):* not indexed

AUTHORS (in order of authorship): Ruiz-Mirazo, K., Moreno, A. & Morán, F.

TITLE: Merging the energetic and the relational-constructive logic of life.

JOURNAL/BOOK TITLE: In: Adami, C., Belew, R., Kitano, H. & Taylor, C. (eds.), *Proceedings of The Sixth International Conference on Artificial Life (ALIFE VI), Cambridge, MA: MIT Bradford Books*, pp. 448-451.

KEY: BC

DATE OF PUBLICATION ():* 1998

*REMARKABLE ASPECTS (**):* MIT PRESS -- ISBN:0-262-51099-5

AUTHORS (in order of authorship): Ruiz-Mirazo, K.

TITLE: World-views while introducing quantum mechanics.

JOURNAL/BOOK TITLE: UPV/EHU and Notre Dame de la Paix (Namur – Belgium) Publication Services

KEY: MsD

DATE OF PUBLICATION ():* 1995

*REMARKABLE ASPECTS (**):* Masters Dissertation

MOST OUTSTANDING PUBLICATIONS

(Select up to 10 publications that you consider to be the most outstanding ones of your career.
Include for each of them a brief summary with its most remarkable ideas/objectives/results)

AUTHORS (in order of authorship): **Lauber, N., Flamm, C. & Ruiz-Mirazo, K.**

TITLE: 'Minimal metabolism': a key concept to investigate the origins and nature of biological systems

JOURNAL/BOOK TITLE: **BioEssays 43: 2100103.**

KEY: A

DATE OF PUBLICATION (*): **2021**

REMARKABLE ASPECTS (**): JCR 2020-year-IF: **4,345**. First quartile (**Q1**)

NUMBER OF CITATIONS: from ISI WoK: **5** (9 in Google Scholar)

ISSN: 0265-9247.

SUMMARY (max. 150 words): This article proposes a novel theoretical characterization of 'minimal metabolism', which is more elementary than the metabolism of a 'minimal biological cell', offering it as conceptual construct to design research pathways in prebiotic chemistry that are more adequate and enlightening than the investigations carried out to date. Thus, apart from reviewing the recent advances in the field, we here provide clear criteria for researchers to distinguish between a reaction network and a 'basic metabolism' (without genetic machinery yet) that could be an intermediate step in abiogenesis.

AUTHORS (in order of authorship): **Amilburu, A., Moreno, A. & Ruiz-Mirazo, K.**

TITLE: Definitions of life as epistemic tools that reflect and foster the advance of biological knowledge.

JOURNAL/BOOK TITLE: **Synthese 198, 10565-85.**

KEY: A

DATE OF PUBLICATION (*): **2021**

REMARKABLE ASPECTS (**): JCR 2019-year-IF: **1,436**. First quartile (**Q1**)

NUMBER OF CITATIONS: from ISI WoK: **6** (6 in Google Scholar)

ISSN: 0039-7857

SUMMARY (max. 150 words): After proposing and defending a concrete definition of life, over the years, (the definition that I elaborated during my PhD, based on the fundamental ideas of 'autonomy' and 'open-ended evolution' – see 2004 publication, below), here we establish our position in the 'meta-question' about definitions: i.e., in the philosophical debate on whether they contribute to the development of a science (in this case, of biology). Therefore, in this paper we take a more encompassing philosophy-of-science perspective, to be able to respond to the abundant sceptical voices that have put in question the epistemic value of definitions of life for biology.

AUTHORS (in order of authorship): **Ruiz-Mirazo, K., Shirt-Ediss, B., Escribano-Cabeza, M. & Moreno, A.**

TITLE: The construction of biological 'inter-identity' as the outcome of a complex process of protocell development in prebiotic evolution.

JOURNAL/BOOK TITLE: **Frontiers in Physiology (Systems Biology) 11, 530.**

KEY: A

DATE OF PUBLICATION (*): **2020**

REMARKABLE ASPECTS (**): JCR 2019-year-IF: **3,367**. First quartile (**Q1**)

NUMBER OF CITATIONS: from ISI WoK: **2** (4 in Google Scholar)

ISSN: 1664-042X

SUMMARY (max. 150 words): Possibly our most elaborate theoretical account of the complete process of abiogenesis is offered in this article, making use of the complex (and heavily-loaded) idea of 'identity'. As

a result of the detailed analysis we carry out here, the need to expand further such an idea, when it is applied to the biological sphere, becomes manifest. In fact, there are so many fundamental aspects of the identity of a protocell that come from its interactive dynamics (with the environment or with other protocells in the population) that, by the end of the process of origins of life, it is difficult to speak about identities, in singular, anymore. Rather, we argue for a change of perspective that conceives the identity of the resulting entities (i.e., living cells), more comprehensively, as a collectively and historically constructed 'inter-identity'.

AUTHORS (in order of authorship): **Serrano-Luginbühl, S., Ruiz-Mirazo, K., Ostaszewski, R., Gallou, F. & Walde, P.**

TITLE: Soft and dispersed interface-rich aqueous systems that promote and guide chemical reactions.

JOURNAL/BOOK TITLE: **Nature Reviews Chemistry 2: 306-327.**

KEY: R

DATE OF PUBLICATION (*): 2018

REMARKABLE ASPECTS ():** JCR 2018-year-IF: **30,6**. First quartile (**Q1**)

NUMBER OF CITATIONS: from ISI WoK: **67** (84 in Google Scholar)

ISSN: 2397-3358.

SUMMARY (max. 150 words): This review paper gives a whole new perspective about the potential of heterogenous (organic, interface-rich) aqueous media to enhance chemical reactions, with very important implications also for the field of origins of life.

AUTHORS (in order of authorship): **Piedrafita, G., Monnard, P.-A., Mavelli, F. & Ruiz-Mirazo, K.**

TITLE: Permeability-driven selection in a semi-empirical protocell model: the roots of prebiotic systems evolution.

JOURNAL/BOOK TITLE: **Scientific Reports 7: 3141**

KEY: A

DATE OF PUBLICATION (*): 2017

REMARKABLE ASPECTS ():** JCR 5yearIF: **5,01**. First quartile (**Q1**)

NUMBER OF CITATIONS: from ISI WoK: **17** (28 in Google Scholar)

ISSN: 2045-2322.

SUMMARY (max. 150 words): This is one of the best and most recent articles representing our line of work in 'protocell modelling', combining both theoretical and experimental methodologies (in vitro – in silico), with high standards both in terms of the quality of our research outcomes and the type of journal where those results were eventually published.

AUTHORS (in order of authorship): **Murillo-Sánchez, S., Beaufils, D., González-Mañas, J.M., Pascal, R. and Ruiz-Mirazo, K.**

TITLE: Fatty acids' double role in the prebiotic formation of a hydrophobic dipeptide.

JOURNAL/BOOK TITLE: **Chemical Science 7: 3406-3414**

KEY: A

DATE OF PUBLICATION (*): 2016

REMARKABLE ASPECTS ():** JCR 5yearIF: **9,2**. First quartile (**Q1**)

NUMBER OF CITATIONS: from ISI WoK: **37** (50 in Google Scholar)

ISSN: 2041-6520.

SUMMARY (max. 150 words): This is the best experimental article I have published to date, demonstrating the relevance that fatty acid vesicles could have, in prebiotic conditions, to enhance chemical reactions that would be happening in their close environment.

AUTHORS (in order of authorship): **Ruiz-Mirazo, K., Briones, C. and de la Escosura, A.**

TITLE: Prebiotic 'Systems Chemistry': New Perspectives for the Origins of Life.

JOURNAL/BOOK TITLE: **Chemical Reviews 114: 285-366.**

KEY: R

DATE OF PUBLICATION (*): **2014**

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **42,054** First quartile (Q1)

NUMBER OF CITATIONS from ISI WoK: **548** (748 in Google Scholar)

ISSN: 2041-6520.

SUMMARY (max. 150 words): This review article has become a key reference, worldwide, in the emergent field of research on 'systems chemistry', as the new and best platform to approach the problem of origins of life. It is a perfect example of how ideas discussed and developed in the domain of philosophy of biology or theoretical biology can be transferred to the scientific arena, leading to a shift of focus in concrete research practices.

AUTHORS (in order of authorship): **Ruiz-Mirazo, K., Umerez, J. & Moreno, A.**

TITLE: *Enabling conditions for 'open-ended evolution'.*

JOURNAL/BOOK TITLE: **Biology & Philosophy 23(1): 67-85.**

KEY: A

DATE OF PUBLICATION: **2008**

REMARKABLE ASPECTS: ISI WoK – JCR 5yearIF: **1,445** First quartile (Q1)

NUMBER OF CITATIONS from ISI WoK : **44** (90 in Google Scholar)

SUMMARY (max. 150 words): In this article we give our most detailed and elaborate account of the idea of 'open-ended evolution', also acknowledging and criticizing previous views, and we investigate under which general material and organizational conditions could it be implemented in its minimal sense. Further work on these lines, including a stronger effort of formalization of the concept, are under way.

AUTHORS (in order of authorship): **Ruiz-Mirazo, K. & Moreno, A.**

TITLE: *Basic autonomy as a fundamental step in the synthesis of life.*

JOURNAL/BOOK TITLE: **Artificial Life, 10(3): 235-259.**

KEY: A

DATE OF PUBLICATION (*): **2004**

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **2,556** First quartile (Q1)

NUMBER OF CITATIONS from ISI WoK: **120** (276 in Google Scholar)

SUMMARY (max. 150 words): The concept of 'basic autonomy' is here presented and supported as one of the main constructs necessary to understand the transition between complex self-organizing processes (in physics and chemistry) and proper biological systems. Later work (from us or from other members of our research group) clearly builds upon this.

AUTHORS (in order of authorship): **Ruiz-Mirazo, K., Peretó, J. & Moreno, A.**

TITLE: *A universal definition of life: autonomy and open-ended evolution.*

JOURNAL/BOOK TITLE: **Origins of Life and Evolution of Biospheres 34: 323-346.** KEY: A

DATE OF PUBLICATION (*): **2004**

REMARKABLE ASPECTS (**): ISI WoK – JCR 5yearIF: **2,028**

NUMBER OF CITATIONS from ISI WoK: **186** (406 in Google Scholar)

ADDITIONAL NOTE: **This article was selected for the anthology or compilation book:**

***The Nature of Life*, M. Bedau & C. Cleland (eds.), Cambridge University Press, 2010.**

SUMMARY (max. 150 words): Focused on the problem of defining life (and its tight connection with the problem of origins), this is the best summary of most of my PhD work. Our more recent articles on the subject (like the ones we just published –or are publishing– in 2010) consist in developments of what we proposed here.

**PARTICIPATION IN RESEARCH CONTRACTS OF SPECIAL RELEVANCE WITH COMPANIES
AND/OR PRIVATE OR PUBLIC FUNDING BODIES**

CONTRACT TITLE:

FINANCIAL ENTITIES:

LENGHT FROM:

TO:

PRINCIPAL INVESTIGATOR:

TECHNOLOGY TRANSFERENCE ACTIVITIES

Specify activity performed, time dedication and participation mode, territorial scope, validity and budget; and any other relevant contribution regarding: Results of technology transference activities, introduction of product improvements on the market or processes in progress. Participation in generation of spin-off companies based on technological innovations, development of competences / technological skills; start-up of new techniques or procedures, large installation or complex equipment maintenance, execution of technological services: homologation, calibration, analysis or others.

PATENTS AND UTILITY MODELS

INVENTORS (in order of authorship):

TITLE:

APPLICATION FORM No:

PRIORITY COUNTRY:

PRIORITY DATE:

HOLDER ENTITY:

OTHER COUNTRIES WHICH THE PATENT HAS BEEN EXTENDED TO:

COMPANIES THAT ARE LICENSING IT:

STAYS IN INTERNATIONALLY RECOGNIZED CENTRES

KEY: D=Ph.D student, P=postdoctoral, IR=invited researcher G=guest, S=staff, O=others (specify)

CENTRE: D. PHILOSOPHY – UNIVERSITY OF CALGARY
PLACE: CALGARY COUNTRY: CANADA YEAR: 2022-23 LENGHT: 9 MONTHS
TOPIC: RESEARCH SABBATICAL -- HOSTED BY MARC ERESHEFSKY **KEY: IR**

CENTRE: FLAD (COMPUTATIONAL BIOLOGY) – INSTITUTO GULBENKIAN DE CIENCIA
PLACE: OEIRAS (LISBOA) COUNTRY: PORTUGAL YEAR: 2011 LENGHT: 11 WEEKS
TOPIC: SYSTEMS BIOLOGY AND SYSTEMS CHEMISTRY – ELABORATION OF ESSAY AND COLLABORATION WITH LUIS ROCHA **KEY: IR**

CENTRE: DEPARTMENT OF CHEMISTRY – UNIVERSITY OF BARI
PLACE: BARI COUNTRY: ITALY YEAR: 2005 LENGHT: 2 MONTHS
TOPIC: DEVELOPMENT OF A STOCHASTIC SIMULATION MODEL FOR MINIMAL CELLULAR SYSTEMS (COLLABORATION WITH FABIO MAVELLI – HPC EUROPA PROGRAM) **KEY: P**

CENTRE: DEPARTMENT OF BIOLOGY – UNIVERSITY ROMA TRE
PLACE: ROME COUNTRY: ITALY YEAR: 2004-2005 LENGHT: 14 MONTHS
TOPIC: THEORETICAL AND EXPERIMENTAL RESEARCH ON MINIMAL CELLULAR SYSTEM (COLLABORATION WITH PROF. LUISI AND HIS GROUP) **KEY: P**

CENTRE: INSTITUTE FOR POLYMERS – ETH-ZURICH
PLACE: ZURICH COUNTRY: SWITZERLAND YEAR: 2003 LENGHT: 7 MONTHS
TOPIC: THEORETICAL AND EXPERIMENTAL RESEARCH ON MINIMAL CELLULAR SYSTEM (COLLABORATION WITH PROF. P. L. LUISI AND HIS GROUP) **KEY: P**

CENTRE: CENTRE FOR ASTROBIOLOGY (CAB) -- CSIC/INTA
PLACE: MADRID COUNTRY: SPAIN YEAR: 2002 LENGHT: 6 MONTHS
TOPIC: RESEARCH ON ASTROBIOLOGY AND ITS LINK WITH THE PROBLEM OF THE DEFINITION AND ORIGINS OF LIFE. **KEY: P**

CENTRE: D. PHILOSOPHY – UNIVERSITY OF NEWCASTLE (AUSTRALIA)
PLACE: NEWCASTLE COUNTRY: AUSTRALIA YEAR: 1999 LENGHT: 2 MONTHS
TOPIC: PHILOSOPHICAL INVESTIGATIONS ON COMPLEXITY AND DYNAMICS SYSTEMS (COLLABORATION WITH PROF. C.A. HOOKER AND HIS RESEARCH GROUP) **KEY: D**

CENTRE: SANTA FE INSTITUTE (COMPLEX SYSTEMS)
PLACE: SANTA FE COUNTRY: USA YEAR: 1998 LENGHT: 1 MONTH
TOPIC: SUMMER SCHOOL ON COMPLEX SYSTEMS **KEY: D**

CENTRE: D. SCIENCES, PHILOSOPHIES AND SOCIETIES (FACULTÉ DE SCIENCES – FUNDP)
PLACE: NAMUR COUNTRY: BELGIUM YEAR: 1995 LENGHT: 7 MONTHS
TOPIC: EUROPEAN MASTERS ON 'SOCIETY, SCIENCE AND TECHNOLOGY';
SPECIALIZATION: SCIENCE TEACHING **KEY: O (ERASMUS POST-GRAD. STUDENT)**

CONTRIBUTIONS TO CONFERENCES

KEY: P=Poster; OC = Oral Communication (20-30 min.); L=Lecture (45-60min.); KL= Keynote Lecture (or plenary talk); IL=Invited Lecture (travel expenses covered by the organization); O=others (specify)

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: 'Minimal metabolism' as a key concept to develop prebiotic systems chemistry.

TYPE OF PRESENTATION: **KL** (Main contribution to the session on 'Lipids, compartments and early metabolism')

CONFERENCE: XIX International Conference on the Origin of Life (ISSOL).

PUBLICATION: No

MEETING PLACE: Online.

DATES: 18-22 Oct., 2021

AUTHORS (*main presenter*): B. Shirt-Ediss, A. Moreno & K. Ruiz-Mirazo

TITLE: The construction of biological 'inter-identity' as the outcome of a complex process of prebiotic evolutionary development.

TYPE OF PRESENTATION: **OC**

CONFERENCE: IX SLMFCE Meeting – IX Congreso de la Sociedad Española de Lógica, Metodología y Filosofía de la Ciencia.

PUBLICATION: Yes

MEETING PLACE: UNED, Madrid, España.

DATES: 13-16 Nov., 2018

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: The teleological debate at the interface between chemistry and biology.

TYPE OF PRESENTATION: **OC**

CONFERENCE: ISHPPSB 2017 – Meeting of the International Society for History, Philosophy and Social Studies of Biology.

PUBLICATION: No

MEETING PLACE: Sao Paulo, Brazil.

DATES: 16-21 July, 2017

AUTHORS (*main presenter*): G. Piedrafita, P.-A. Monnard, F. Mavelli & K. Ruiz-Mirazo

TITLE: Permeability-driven selection in a semi-empirical protocell model: the roots of prebiotic 'systems' evolution.

TYPE OF PRESENTATION: **P (award – 'poster prize')**

CONFERENCE: ORIGINS 2017 (Conference of the Intl. Society for Studies on the Origins of Life)

PUBLICATION: Yes

MEETING PLACE: San Diego, USA.

DATES: 16-21 July, 2017

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: Permeability-driven selection in a semi-empirical protocell model: the roots of prebiotic systems evolution.

TYPE OF PRESENTATION: **IL**

CONFERENCE: SysChem2017 (CM 1304 COST Action Meeting)

PUBLICATION: Yes

MEETING PLACE: Sopron, Hungary.
DATES: 11-15 September, 2017

AUTHORS (*main presenter*): K. Ruiz-Mirazo
TITLE: *Major transitions in prebiotic evolution: protocell systems in vitro and in silico.*
TYPE OF PRESENTATION: **IL**
CONFERENCE: WIVACE 2015 – Meeting of the Italian Society for Artificial Life.
PUBLICATION: No

MEETING PLACE: Bari, Italy.
DATES: 23-24 September, 2015

AUTHORS (*main presenter*): K. Ruiz-Mirazo
TITLE: *Protocell autonomy: constructing boundaries to organize basic biological processes and interactions.*
TYPE OF PRESENTATION: **OC**
CONFERENCE: ISHPPSB 2015 – Meeting of the International Society for History, Philosophy and Social Studies of Biology.
PUBLICATION: No

MEETING PLACE: Montreal, Canada.
DATES: 5-10 July, 2015

AUTHORS (*main presenter*): B. Shirt-Ediss, R. Solé & K. Ruiz-Mirazo
TITLE: *A new view of protocell metabolism.*
TYPE OF PRESENTATION: **OC**
CONFERENCE: ECAL 2015 -- 13th European Conference on Artificial Life.
PUBLICATION: No

MEETING PLACE: York, UK.
DATES: 20-24 July., 2015

AUTHORS (*main presenter*): K. Ruiz-Mirazo
TITLE: *Open questions and challenges in current research on the origins of life.*
TYPE OF PRESENTATION: **IL**
CONFERENCE: Rencontres de la Société Française d'Exobiologie (3eme Colloque National).
PUBLICATION: No

MEETING PLACE: La Baule, France.
DATES: 6-9 Oct., 2014

AUTHORS (*main presenter*): S. Murillo Sánchez, D. Beaufils, R. Pascal & K. Ruiz-Mirazo
TITLE: *Vers une integration systémique des chimies des peptides et des agrégats de lipides.*
TYPE OF PRESENTATION: **OC**
CONFERENCE: Rencontres de la Société Française d'Exobiologie (3eme Colloque National).
PUBLICATION: No

MEETING PLACE: La Baule, France.
DATES: 6-9 Oct., 2014

AUTHORS (*main presenter*): K. Ruiz-Mirazo, C. Briones & A. de la Escosura
TITLE: *Opening the scope of origins of life research: the challenge of 'prebiotic systems chemistry'.*
TYPE OF PRESENTATION: **OC**
CONFERENCE: ORIGINS 2014 (International Conference of ISSOL and BioAstronomy)
PUBLICATION: No

MEETING PLACE: Nara, Japan

DATES: 6-11 July. 2014

AUTHORS (main presenter): K. Ruiz-Mirazo, F. Mavelli, B. Shirt-Ediss & R. Solé

TITLE: Theoretical modeling of protocell competition, growth and reproduction dynamics.

TYPE OF PRESENTATION: **OC**

CONFERENCE: ORIGINS 2014 (International Conference of ISSOL and BioAstronomy)

PUBLICATION: No

MEETING PLACE: Nara, Japan

DATES: 6-11 July. 2014

AUTHORS (main presenter): B. Shirt-Ediss, R. Solé & K. Ruiz-Mirazo

TITLE: Steady state analysis of a vesicle bioreactor with mechanosensitive channels.

TYPE OF PRESENTATION: **OC**

CONFERENCE: ECAL 2013 (12th European Conference on Artificial Life)

PUBLICATION: Yes (article as book chapter)

MEETING PLACE: Taormina, Italy

DATES: 2-6 Sept. 2013

AUTHORS (main presenter): S. Murillo Sánchez & K. Ruiz-Mirazo

TITLE: On the origins of autonomy: protocells as the first forms of functional integration.

TYPE OF PRESENTATION: **OC**

CONFERENCE: ISHPPSB 2013 (Meeting of the International Society for History, Philosophy and Social Studies of Biology)

PUBLICATION: No

MEETING PLACE: Montpellier, France

DATES: 7-12 July 2013

AUTHORS (main presenter): S. Murillo Sánchez & K. Ruiz-Mirazo

TITLE: On the origin of self-constructing functional protocells: the lipid-peptide model.

TYPE OF PRESENTATION: **OC**

CONFERENCE: I Congreso de la AIFIBI (Asociación Ibero-Americana de Filosofía de la Biología)

PUBLICATION: No

MEETING PLACE: Valencia, Spain

DATES: 28-30 Nov. 2012

AUTHORS (main presenter): A. Arnellos, K. Ruiz-Mirazo & A. Moreno

TITLE: Autonomy as a property that defines individual organisms among multi-cellular communities

TYPE OF PRESENTATION: **OC**

CONFERENCE: I Congreso de la AIFIBI (Asociación Ibero-Americana de Filosofía de la Biología)

PUBLICATION: No

MEETING PLACE: Valencia, Spain

DATES: 28-30 Nov. 2012

AUTHORS (main presenter): K. Ruiz-Mirazo, FM Goñi, J. Sot, A. Rendón, D. Balleza

TITLE: Self-assembly, stability and permeability of precursor cellular membranes.

TYPE OF PRESENTATION: **OC**

CONFERENCE: ICPOC'21 (21st International Conference on Physical Organic Chemistry)

PUBLICATION: No

MEETING PLACE: Durham, UK.

DATES: 9-13 Sept. 2012

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Protocell autonomy: linking processes through self-made boundaries.*

TYPE OF PRESENTATION: **IL**

CONFERENCE: *Conference on Bioscience and Society*

PUBLICATION: No

MEETING PLACE: Ljubljana, Slovenia.

DATES: 6-7 Oct. 2011

AUTHORS (main presenter): B. Shirt-Ediss, R. Solé, F. Mavelli & K. Ruiz-Mirazo

TITLE: *On the chemical relevance of compartment 'self-production'*

TYPE OF PRESENTATION: **OC**

CONFERENCE: *ECAL 2011 Conference -- Workshop on Artificial Autonomy*

PUBLICATION: No

MEETING PLACE: Paris, France

DATES: 8-12 August 2011

AUTHORS (main presenter): F. Mavelli & K. Ruiz-Mirazo

TITLE: *Stationary reproduction in model protocells*

TYPE OF PRESENTATION: **P**

CONFERENCE: *Origins 2011 -- International Conference of ISSOL and BioAstronomy*

PUBLICATION: No

MEETING PLACE: Montpellier, France

DATES: 3-8 July 2011

AUTHORS (main presenter): D. Balleza, J. Sot, K. Ruiz-Mirazo & FM Goñi

TITLE: *An experimental study on the 'lipid divide': phase behaviour of mixtures of n-acyl and polyprenyl lipids.*

TYPE OF PRESENTATION: **P**

CONFERENCE: *Origins 2011 -- International Conference of ISSOL and BioAstronomy*

PUBLICATION: No

MEETING PLACE: Montpellier, France

DATES: 3-8 July 2011

AUTHORS (main presenter): A. de la Escosura, C. Briones & K. Ruiz-Mirazo

TITLE: *A 'systems chemistry' perspective on the origins of life.*

TYPE OF PRESENTATION: **P**

CONFERENCE: *Origins 2011 -- International Conference of ISSOL and BioAstronomy*

PUBLICATION: No

MEETING PLACE: Montpellier, France

DATES: 3-8 July 2011

AUTHORS (main presenter): K. Ruiz-Mirazo & F. Mavelli

TITLE: *Stationary self-reproduction and osmotic regulation in model proto-cells: an extended stochastic kinetics approach*

TYPE OF PRESENTATION: **P**
CONFERENCE: 11th International Conference on Systems Biology (ICSB 2010)
PUBLICATION: Yes (Abstract)

MEETING PLACE: EICC, Edinburgh, UK.
DATES: 10-16 Oct. 2010

AUTHORS (main presenter): Ben Shirt-Ediss, F. Mavelli & K. Ruiz-Mirazo
TITLE: To Burst or Not To Burst: Osmotic Regulation in a Proto-cell Model Through Precursor Mechano-Sensitive Channels
TYPE OF PRESENTATION: **OC**
CONFERENCE: ALife XII
PUBLICATION: Yes (Abstract)

MEETING PLACE: Southern Denmark University, Odense, Denmark.
DATES: 19-23 August 2010

AUTHORS (main presenter): G. Piedrafita, Ben Shirt-Ediss, F. Mavelli & K. Ruiz-Mirazo
TITLE: 'In vitro' and 'in silico' complementary studies on the physical properties of prebiotic compartments.
TYPE OF PRESENTATION: **P**
CONFERENCE: ALife XII
PUBLICATION: Yes (Abstract)

MEETING PLACE: Southern Denmark University, Odense, Denmark.
DATES: 19-23 August 2010

AUTHORS (main presenter): K. Ruiz-Mirazo, G. Piedrafita, F. Ciriaco & F. Mavelli
TITLE: Stochastic simulations of mixed-lipid compartments: from self-assembling vesicles to self-producing protocells
TYPE OF PRESENTATION: **OC**
CONFERENCE: BIOCOMP'10
PUBLICATION: Yes (Paper)

MEETING PLACE: Las Vegas, Nevada, USA,
DATES: 12-15 July 2010.

AUTHORS (main presenter): G. Piedrafita, F. Mavelli, F. Morán & K. Ruiz-Mirazo
TITLE: On the transition from prebiotic to proto-biological membranes: from 'self-assembly' to 'self-production'.
TYPE OF PRESENTATION: **OC**
CONFERENCE: ECAL 2009: Darwin meets von Neumann
PUBLICATION: Yes (Paper)

MEETING PLACE: Budapest, Hungary.
DATES: 13-16 Sept. 2009.

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: From vesicles to protocells: early transitions in the origins of life.
TYPE OF PRESENTATION: **IL**
CONFERENCE: ILASOL 2008
PUBLICATION: No

MEETING PLACE: Weizmann Institute, Rehovot, Israel.

DATES: 28 de Dic. 2008.

AUTHORS (main presenter): K. Ruiz-Mirazo & F. Mavelli

TITLE: *Prebiotically plausible functional compartments: a simulation model to study lipid-peptide protocell dynamics.*

TYPE OF PRESENTATION: **P**

CONFERENCE: ISSOL'08 (International Society for the Study of the Origin of Life)

PUBLICATION: Yes (Abstract)

MEETING PLACE: Florence, Italy.

DATES: 24-29 August 2008.

AUTHORS (main presenter): K. Ruiz-Mirazo, J. Umerez & A. Moreno

TITLE: *Organizational requirements for open-ended evolution.*

TYPE OF PRESENTATION: **OC**

CONFERENCE: ALifeXI

PUBLICATION: Yes (Abstract)

MEETING PLACE: Winchester, UK.

DATES: 5-8 August 2008.

AUTHORS (main presenter): A. Rendón, K. Ruiz-Mirazo & F.M. Goñi

TITLE: *Experimental studies on the formation and stability of oleic acid vesicles*

TYPE OF PRESENTATION: **P**

CONFERENCE: Portuguese-Spanish Biophysics Congress (SEPBS)

PUBLICATION: No

MEETING PLACE: Lisboa, Portugal.

DATES: 10-13 July, 2008.

AUTHORS (main presenter): K. Ruiz-Mirazo, A. Moreno, J. Peretó & F. Mavelli

TITLE: *Searching for minimal metabolisms: on the origins of regulatory control in protocell chemistry*

TYPE OF PRESENTATION: **P**

CONFERENCE: European Conference on Synthetic Biology

PUBLICATION: No

MEETING PLACE: Sant Feliu de Guixols, Spain

DATES: 24-29 Noviembre, 2007.

AUTHORS (main presenter): K. Ruiz-Mirazo & F. Mavelli

TITLE: *Simulation Model for Functionalized Vesicles: Lipid-Peptide Integration in Minimal Protocells*

TYPE OF PRESENTATION: **OC**

CONFERENCE: European Conference on Artificial Life (ECAL) 2007

PUBLICATION: Yes (Paper)

MEETING PLACE: Lisboa, Portugal.

DATES: 10-14 Septiembre, 2007.

AUTHORS (main presenter): F. Mavelli & K. Ruiz-Mirazo

TITLE: *Stochastic simulations of protocell models*

TYPE OF PRESENTATION: **OC**

CONFERENCE: SPIE 2007 – Noise and Fluctuations in Biological, Biophysical and Biomedical Systems

PUBLICATION: Yes (Paper)

MEETING PLACE: Florence, Italy.
DATES: 20-24 May 2007.

AUTHORS (main presenter): K. Ruiz-Mirazo & A. Moreno
TITLE: ¿Puede la vida ser definida?
TYPE OF PRESENTATION: **OC**
CONFERENCE: V Congreso SLMFCE (Sociedad del Lógica, Metodología y Filosofía de la Ciencia en España)
PUBLICATION: Yes (Short Paper)

MEETING PLACE: Granada, Spain.
DATES: 30 Nov. – 3 Dec. 2006.

AUTHORS (main presenter): A. Rendón, K. Ruiz-Mirazo & F.M. Goñi
TITLE: Efecto de alcoholes y alcanos sobre el autoensamblamiento y estabilidad de vesículas de ácido oleico
TYPE OF PRESENTATION: **P**
CONFERENCE: XXVI Congreso de la Sociedad Mexicana de Bioquímica
PUBLICATION: No

MEETING PLACE: Guanajuato, Mexico.
DATES: 12-17 Nov. 2006.

AUTHORS (main presenter): A. Moreno & K. Ruiz-Mirazo
TITLE: On the relevance of the concept of autonomy for the origins of life research program.
TYPE OF PRESENTATION: **L**
CONFERENCE: VIth HOPOS (International Society for the History and Philosophy of Science)
PUBLICATION: No

MEETING PLACE: Paris, France.
DATES: 14-18 June 2006.

AUTHORS (main presenter): K. Ruiz-Mirazo & F. Mavelli
TITLE: Working towards basic autonomy: a simulation model to study minimal self-producing cells.
TYPE OF PRESENTATION: **L**
CONFERENCE: AlifeX (Artificial Autonomy workshop)
PUBLICATION: No

MEETING PLACE: Bloomington, USA.
DATES: 3-7 June 2006.

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: Working towards the 'minimal cell': a bottom-up proposal.
TYPE OF PRESENTATION: **OC (Invited)**
CONFERENCE: ISSOL'05 (International Society for the Study of the Origin of Life)
PUBLICATION: Yes (Short Paper)

MEETING PLACE: Beijing, China.
DATES: 19–24 June 2005.

AUTHORS (main presenter): K. Ruiz-Mirazo & A. Moreno
TITLE: (Basic) autonomy: a fundamental concept to understand the origins and nature of living systems.
TYPE OF PRESENTATION: **L**

CONFERENCE: ISHPSSB'03 (*International Society for the History, Philosophy and Social Studies of Biology*)

PUBLICATION: No

MEETING PLACE: Viena, Austria.

DATES: 16-20 July 2003.

AUTHORS (*main presenter*): K. Ruiz-Mirazo, J. Peretó & A. Moreno.

TITLE: *Proposal for a universal definition of life.*

TYPE OF PRESENTATION: **OC**

CONFERENCE: ISSOL'02 (*International Society for the Study of the Origin of Life*)

PUBLICATION: Yes (*abstract*)

MEETING PLACE: Oaxaca, México.

DATES: 30 June – 5 July 2002.

AUTHORS (*main presenter*): K. Ruiz-Mirazo.

TITLE: *Las raíces del concepto de autonomía en biología: una crítica a la idea de autopoiesis*

TYPE OF PRESENTATION: **OC**

CONFERENCE: III Congreso SLMFCE (*Sociedad del Lógica, Metodología y Filosofía de la Ciencia en España*)

PUBLICATION: Yes (*Short Paper*)

MEETING PLACE: San Sebastián-Donostia, Spain.

DATES: 26-29 April 2000.

AUTHORS (*main presenter*): K. Ruiz-Mirazo, A. Moreno, J. Peretó, F. Morán, & J.J. Merelo.

TITLE: *Designing a simulation model of a self-maintaining cellular system*

TYPE OF PRESENTATION: **OC**

CONFERENCE: ECAL '99 (*5th International European Conference on Artificial Life*)

PUBLICATION: Yes (*Paper*)

MEETING PLACE: Lausanne, Switzerland.

DATES: 13-17 Sept. 1999.

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *A conceptual approach to the idea of organism*

TYPE OF PRESENTATION: **OC**

CONFERENCE: ISHPSSB'99 (*International Society for the History, Philosophy and Social Studies of Biology*)

PUBLICATION: Yes (*Paper*)

MEETING PLACE: Oaxaca, Mexico.

DATES: 7-11 July 1999.

AUTHORS (*main presenter*): K. Ruiz-Mirazo & A. Moreno

TITLE: *Autonomy and emergence: how systems become agents through the generation of functional constraints.*

TYPE OF PRESENTATION: **OC**

CONFERENCE: *Third International Conference on 'Emergence, Complexity, Hierarchies and Organization' (ECHO III)*

PUBLICATION: Yes (*Paper*)

MEETING PLACE: Helsinki, Finland.

DATES: 3-7 August 1998.

AUTHORS (*main presenter*): K. Ruiz-Mirazo, A. Moreno & F. Morán
TITLE: *Merging the energetic and the relational-constructive logic of life*
TYPE OF PRESENTATION: **P**
CONFERENCE: ALIFE VI (*International Conference on Artificial Life*)
PUBLICATION: Yes (*Paper*)
MEETING PLACE: Los Angeles, USA.
DATES: 26-29 June 1998.

CONTRIBUTIONS TO WORKSHOPS/COURSES/SYMPOSIA

KEY: P=Poster; OC = Oral Communication (20-30 min.); L=Lecture (45-60min.); KL= Keynote Lecture (or plenary talk);
IL=Invited Lecture (travel expenses covered by the organization); O=others (specify)

AUTHORS (*main presenter*): K. Ruiz-Mirazo
TITLE: *Modelling the origins of biological complexity: protocells 'in vitro', 'in silico' and 'in charta'*.
TYPE OF PRESENTATION: **L**
WORKSHOP/COURSE: *Workshop on Dynamic Modelling and Statistical Inference in the Life Sciences: Philosophical and Practical Perspectives*
PUBLICATION: No.

MEETING PLACE: BCAM (Basque Centre for Applied Mathematics) & BFI (Biofisika Institute), Bilbao, Spain.
DATES: November 22-24, 2022.

AUTHORS (*main presenter*): K. Ruiz-Mirazo
TITLE: *Protocell: what is in a name?*
TYPE OF PRESENTATION: **L**
WORKSHOP/COURSE: *Synthetic Integrative Biology Master Course: 'Mini-Symposium' on the Origins of Life*
PUBLICATION: No.

MEETING PLACE: Coordinated by CIB, Madrid (Organization: UIMP & CSIC) – online connection.
DATES: October 4, 2022. (October 7, 2021 – as well)

AUTHORS (*main presenter*): K. Ruiz-Mirazo
TITLE: *La transformación del problema del origen de la vida a comienzos del s. XXI: el enfoque de 'sistemas'*
TYPE OF PRESENTATION: **L**
WORKSHOP/COURSE: *Astrobiología para tod@s*
PUBLICATION: No.

MEETING PLACE: Coordinated by SOMA (Sociedad Mexicana de Astrobiología) & CONACYT – online connection. (<https://www.youtube.com/watch?v=wKkiFnAnr qw&t=2144s>)
DATES: Sept. 15, 2022.

AUTHORS (*main presenter*): K. Ruiz-Mirazo & A. Moreno
TITLE: *Autonomy beyond the individual: 'dynamic decoupling' mechanisms as enabling constraints for the evolutionary development of minimal biological organization*
TYPE OF PRESENTATION: **L**
WORKSHOP/COURSE: *Workshop 'Outonomy'*
PUBLICATION: Yes. *Forthcoming*

MEETING PLACE: University of the Basque Country -- Donostia, Spain.

DATES: June 22-24, 2022.

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *On the origins of life: exploring the systems bridge from chemistry to biology.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Astrobiology School (Rencontres Exobiologiques pour Doctorants 2022)*

PUBLICATION: No.

MEETING PLACE: Le Teich, France. (*Société Française d'Exobiologie -- RED'22*)

DATES: March 14-18, 2022.

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Compartmentalized aqueous chemistries: modelling the origins of metabolism.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *Summer School in Protocell Models: Coacervates and Vesicles (Virtual Event)*

PUBLICATION: No.

MEETING PLACE: *Hosted and Coordinated from the MPI-CBG at Dresden, Germany – online connection.*

DATES: July 5-8, 2021.

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *On the bottom-up construction of protocells and its limitations: some recent in vitro and in silico models.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *'Constructing a Synthetic Cell' -- VI Escuela de Biología Molecular y Celular Integrativa: Fronteras en Biología Sintética III*

PUBLICATION: No.

MEETING PLACE: *Palacio de la Magdalena, Santander, Spain.*

DATES: August 26-30, 2019.

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Working "at the science/philosophy edge": is there any better way to advance the frontiers of knowledge?*

TYPE OF PRESENTATION: **OC**

WORKSHOP/COURSE: *'Fifty Years of Complexity – Eighty Shades of Stuart Kauffman'*

PUBLICATION: No.

MEETING PLACE: *Santa Fe Institute (SFI), New Mexico, USA.*

DATES: August 21-22, 2019.

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Biogenesis as a long and complex process of evolutionary protocellular development.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *'FMSOEL 2019' (French-Mexican Advanced School on the Origin and Evolution of Life).*

PUBLICATION: No.

MEETING PLACE: *Jardin des Plantes (Amphitheatre Rouelle), Paris, France.*

DATES: July 1-5, 2019.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Sobre la vida y sus orígenes: una perspectiva 'filo-bio-física'

*TYPE OF PRESENTATION: **L***

WORKSHOP/COURSE: 'Semana de las Biociencias' -- 50 Aniversario de la Facultad de Ciencia y Tecnología (UPV/EHU).

PUBLICATION: No.

MEETING PLACE: Bizkaia Aretoa, Bilbao, Basque Country.

DATES: 6 Mayo 2019.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: ¿Qué es la ciencia?

*TYPE OF PRESENTATION: **IL***

WORKSHOP/COURSE: Curso de Formación Doctoral Transversal: 'Por qué merece la pena saber algo de filosofía de la ciencia'.

PUBLICATION: No.

MEETING PLACE: Escuela de Doctorado de la Universidad de Cantabria (UC), Santander, Spain.

DATES: 8-10 Abril, 2019.

AUTHORS (main presenter): Alvaro Moreno & K. Ruiz-Mirazo

TITLE: Philosophical problems about the origins of life (On the role of philosophy in the 'origins-of-life' research field).

*TYPE OF PRESENTATION: **IL***

WORKSHOP/COURSE: Fifth EASPLS (European Advanced Seminar in the Philosophy of the Life Sciences): 'Interdisciplinarity in the Life Sciences and Their Philosophy'.

PUBLICATION: No.

MEETING PLACE: Konrad Lorenz Institute (KLI), Klosterneuburg (Vienna), Austria.

DATES: 10-14 Sept, 2018.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Information as a principle of organization for biology: reinterpreting the concept to understand the complexity of living systems and their evolutionary potential.

*TYPE OF PRESENTATION: **IL***

WORKSHOP/COURSE: Beilstein Symposium 2018: 'Information and Noise: Chemistry, Biology and Evolution Creating Complex Systems'.

PUBLICATION: No.

MEETING PLACE: Rüdesheim, Germany.

DATES: 5-7 June, 2018.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Emergence and evolutionary development of protocells.

*TYPE OF PRESENTATION: **IL***

WORKSHOP/COURSE: International Workshop -- 'Life on Earth and Beyond: emergence, survivability and impact on the environment'.

PUBLICATION: No.

MEETING PLACE: Bertinoro, Italy.

DATES: 19-24 March, 2018.

AUTHORS (main presenter): K. Ruiz-Mirazo & Eva Portillo

TITLE: Fostering entrepreneurship among PhD students: a report on the 2017 UPPA-UPV/EHU Cross-Border "Doctorials" in Arantzazu (Basque Country).

TYPE OF PRESENTATION: **OC**

WORKSHOP/COURSE: 11th EUA-CDE Workshop -- 'The impact and outcomes of doctoral education reform in Europe'.

PUBLICATION: No.

MEETING PLACE: Valletta, Malta.

DATES: 18-19 Enero 2018.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: El origen de la vida o cómo la materia se organiza para dar lugar a los seres vivos.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: Mestizajes 2017 (3^a edición).

PUBLICATION: No.

MEETING PLACE: Donostia International Physics Centre (DIPC), San Sebastián – Donostia, Spain.

DATES: 23-25 Oct., 2017.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Searching for the principles of biological organization through a 'systems chemistry' approach

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: International Workshop – 'Organization as a theoretical principle for biology'.

PUBLICATION: No.

MEETING PLACE: Paris (IHPST Centre), France.

DATES: 27-29 Sept., 2017.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Vida y computación: ¿forzando un idilio imposible?

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: Escuela de verano en 'vida, cognición e interacción'.

PUBLICATION: No.

MEETING PLACE: Centro eTopía de arte y tecnología, Zaragoza, Spain.

DATES: 3-14 July, 2017.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: The origins of metabolic systems from compartmentalized and heterogeneous chemistries: a simplified but non-reductionist approach.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: KLI Symposium on 'Chemical and Biological Organization'.

PUBLICATION: No.

MEETING PLACE: Klosterneuburg (Vienna), Austria.

DATES: 19 May, 2017.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: On the chemical roots of biological 'inter-identity'.

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: 2nd 'Bordeaux-San Sebastian Workshop on Philosophy of Biology'.

PUBLICATION: No.

MEETING PLACE: Université de Bordeaux (Pey Berland Salon d'honneur), Bordeaux, France.

DATES: 10 - 11 April, 2017.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *No vesicle, no life: chemistry without dynamic compartments will never turn biological.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Workshop on 'Integration of metabolic and compartmentalization subsystems' (WG3 -- COST-Action CM1304).*

PUBLICATION: No.

MEETING PLACE: *Warsaw, Poland.*

DATES: *30 March - 1 April, 2017.*

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Grasping the core of biological complexity: autonomy and open-ended evolution.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Emergence and Evolution of Biological Complexity Meeting.*

PUBLICATION: No.

MEETING PLACE: *NCBS, Bangalore, India.*

DATES: *4-6 Feb, 2017.*

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Prebiotic systems evolution as a process of protocell development.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *5th ELSI International Symposium: 'Expanding views on the emergence of the biosphere'.*

PUBLICATION: No.

MEETING PLACE: *Tokyo, Japan.*

DATES: *11 – 13 Jan., 2017*

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE (I): *Shall we ever understand biological complexity?*

TITLE (II): *No option but to simplify: recent insights from systems chemistry, synthetic biology and origins of life.*

TYPE OF PRESENTATION: **IL (double session)**

WORKSHOP/COURSE: *Workshop in Biomedicine 2016.*

PUBLICATION: No.

MEETING PLACE: *Santander, Spain.*

DATES: *3-14 Oct. 2016*

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Life as a complex chemical game.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *International Workshop -- 'Evolution of Chemical Complexity: From simple interstellar molecules to biopolymers' (COST Action CM1304 & TD1308 joint meeting).*

PUBLICATION: No.

MEETING PLACE: *Liblice, Czech Republic.*

DATES: *14-15 Sept. 2016*

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Stability and variation in prebiotic systems chemistry.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *International Workshop – 'Stability and variation in biological systems'.*

PUBLICATION: No.

MEETING PLACE: Donostia-San Sebastián, Spain.

DATES: 5-6 July, 2016

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: Major prebiotic transitions as stages of protocellular development.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: Beilstein Symposium 2016: 'Chemistry, Life and Evolution'.

PUBLICATION: Yes.

MEETING PLACE: Prien, Germany.

DATES: 31 May – 2 June, 2016

AUTHORS (*main presenter*): Alvaro Moreno & K. Ruiz-Mirazo

TITLE: Why we should worry about the definition of life.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: International Workshop – Understanding Life: new perspectives from philosophy and biology.

PUBLICATION: Yes (forthcoming).

MEETING PLACE: Bern, Switzerland.

DATES: 26-27 May, 2016

AUTHORS (*main presenter*): K. Ruiz-Mirazo & Alvaro Moreno

TITLE: Autonomy and open-ended evolution: epistemological bases for a universal biology.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: International Workshop – Understanding Life: new perspectives from philosophy and biology.

PUBLICATION: No.

MEETING PLACE: Bern, Switzerland.

DATES: 26-27 May, 2016

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: A new scenario to address the problem of origins of life: the 'systems chemistry' challenge.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: PKSymposium (Celebrating the 75th Anniversary of Peter Schuster) -- Chemolution: from chemistry to evolution.

PUBLICATION: No.

MEETING PLACE: Vienna, Austria.

DATES: 19-20 May, 2016

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: Integrating prebiotic peptide chemistry and fatty acid self-assembly dynamics: a crude but realistic 'bottom-up' approach to biogenesis.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: SysChem2016 (CM 1304 COST Action Meeting).

PUBLICATION: No.

MEETING PLACE: Valtice, Czech Republic.

DATES: 8-12 May, 2016

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: *Emergent chemical behaviour in variable-volume protocells.*
TYPE OF PRESENTATION: **IL**
WORKSHOP/COURSE: *International Workshop 'Emergence in chemical systems 4.0'*
PUBLICATION: No.

MEETING PLACE: *Anchorage (Alaska), USA.*
DATES: *22-27 June, 2015*

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: *Life requires chemistry making its own dynamic boundaries.*
TYPE OF PRESENTATION: **IL**
WORKSHOP/COURSE: *SysChem2015 (CM 1304 COST Action Meeting).*
PUBLICATION: No.

MEETING PLACE: *Rolduc Abbey, Kerkrade, Holand.*
DATES: *19-22 May, 2015*

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: *On the phenomenal width of the chemical-biological divide.*
TYPE OF PRESENTATION: **IL**
WORKSHOP/COURSE: *Workshop 'Origins of life: history and philosophy of astrobiology'*
PUBLICATION: No.

MEETING PLACE: *Höör, Sweden.*
DATES: *8-10 May, 2015*

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: *Is current biology up to the challenge of defining life?*
TYPE OF PRESENTATION: **IL**
WORKSHOP/COURSE: *Summer School 'Life on Earth and beyond: the history and philosophy of origins of life'*
PUBLICATION: No.

MEETING PLACE: *Ven Island, Sweden.*
DATES: *3-7 May, 2015*

AUTHORS (main presenter): G. Piedrafita & K. Ruiz-Mirazo
TITLE: *Protocell development through lipid endogenesis: a semi-empirical approach.*
TYPE OF PRESENTATION: **OC**
WORKSHOP/COURSE: *Workshop on 'Vesicle permeability' (WG3 Meeting – COST-Action 1304).*
PUBLICATION: Yes.

MEETING PLACE: *Parmenides Foundation, Pullach (Münich), Germany.*
DATES: *21-22 Nov., 2014*

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: *'Synthetic protocell philosophy': fabricating new ontological constructs, in vitro and in silico, to establish more solid epistemological bases for biology.*
TYPE OF PRESENTATION: **IL**
WORKSHOP/COURSE: *Third European Advanced Seminar in the Philosophy of the Life Sciences.*
PUBLICATION: Yes (forthcoming).

MEETING PLACE: *KLI Institute, Klosterneuburg (Vienna), Austria.*

DATES: 1-5 Sept., 2014

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Vesicles, protocells and artificial cells: constructing a more plausible scenario for the origins of life?

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: Workshop on Origins, Evolution and Future of the Biosphere. (Erasmus IP)

PUBLICATION: No.

MEETING PLACE: Banyuls, France.

DATES: 18-29 August, 2014

AUTHORS (main presenter): K. Ruiz-Mirazo & S. Murillo Sánchez

TITLE: From self-assembly to biological organization: 'the minimal 'lipid-peptide protocell' model

TYPE OF PRESENTATION: **OC**

WORKSHOP/COURSE: SYSCHEM 2014 – COST Action CM1304 (Emergence and Evolution of Complex Chemical Systems) Meeting.

PUBLICATION: No.

MEETING PLACE: P. Miramar, Donostia-San Sebastián, Basque Country.

DATES: 9-12 June, 2014

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Potencial y limitaciones de la Biología Sintética.

TYPE OF PRESENTATION: **O** (Round Table – invited participant)

WORKSHOP/COURSE: Café científico sobre biología sintética (CRG -- Centro de Regulación Genómica)

PUBLICATION: No.

MEETING PLACE: Biblioteca Nacional de Catalunya, Barcelona, Spain.

DATES: 21 May, 2013

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Sobre la naturaleza y el origen de la evolución biológica.

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: Día Darwin 2014

PUBLICATION: No.

MEETING PLACE: Univesitat de València, Valencia, Spain.

DATES: 13 Feb., 2014

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: On life's nature and the intrinsic limits of Synthetic Biology.

TYPE OF PRESENTATION: **OC**

WORKSHOP/COURSE: SMLC 2013 International Workshop: Synthetic Modeling of Life and Cognition – Open Questions

PUBLICATION: No.

MEETING PLACE: Bergamo, Italy.

DATES: 12-14 Sept., 2013

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: Beyond self-assembling vesicles: protocells as prebiotic model systems

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: Workshop on Origins, Evolution and Future of the Biosphere. (Erasmus IP)

PUBLICATION: No.

MEETING PLACE: Banyuls, France.

DATES: 19-30 August, 2013

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Advances and new challenges in the study of the origins of life.*

TYPE OF PRESENTATION: **IL (Open Public Lecture)**

WORKSHOP/COURSE: *International Summer School in Astrobiology: Biosignatures – The Fingerprints of Life*

PUBLICATION: No.

MEETING PLACE: *Palacio de la Magdalena, Santander, Spain.*

DATES: 24-28th June, 2013

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Understanding life through its origins.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *International Workshop on Education in Astrobiology*

PUBLICATION: No.

MEETING PLACE: *Höör, Sweden.*

DATES: 6-9th June, 2013

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Simulation of compartmentalized chemical supersystems.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Lake Balaton Meeting on Systems Chemistry (in memory of Tibor Ganti)*

PUBLICATION: Yes (*forthcoming*).

MEETING PLACE: *Badacsony, Hungary.*

DATES: 8-12 May, 2013

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *On the origin of self-constructing systems: coupling chemistry with compartments.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *COOL-EDGE Workshop 2013 (Origins of Life Initiative at CERN)*

PUBLICATION: No.

MEETING PLACE: *CERN, Gèneve, Switzerland.*

DATES: 26th Feb. – 01 March, 2013

AUTHORS (main presenter): K. Ruiz-Mirazo & A. Moreno

TITLE: *Synthetic Biology: challenging life in order to grasp, use or extend it.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *International Workshop on Ethical, Philosophical and Political Issues of Synthetic Biology*

PUBLICATION: Yes.

MEETING PLACE: *Centre for Human and Social Sciences – CSIC, Madrid, Spain.*

DATES: 11th ., 2013

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *From protocells to minimal cells: models and experimental vesicle systems*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Workshop on Origins, Evolution and Future of the Biosphere. (Erasmus IP)*

PUBLICATION: No.

MEETING PLACE: *Banyuls, France.*

DATES: *20-31 August, 2012*

AUTHORS (*main presenter*): *F. Mavelli & K. Ruiz-Mirazo*

TITLE: *Self-producing and re-producing protocells: conditions for stationary division cycles*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Chemiogenesis 2011: 'systems chemistry' (COST Action CM0703 -- Final Meeting).*

PUBLICATION: No.

MEETING PLACE: *Heraklion, Crete.*

DATES: *27-30 Oct., 2011*

AUTHORS (*main presenter*): *K. Ruiz-Mirazo*

TITLE: *The challenge to synthesize protocells 'bottom-up': current in vitro and in silico approaches*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Synthesis: Interdisciplinary Interconnections in Synthetic Biology.*

PUBLICATION: *Yes (special issue in Biological Theory – forthcoming)*

MEETING PLACE: *ZiF, Bielefeld, Germany*

DATES: *30 Sept. – 1 Oct., 2011*

AUTHORS (*main presenter*): *K. Ruiz-Mirazo*

TITLE: *Protocell chemistry as a way to search for the natural roots of autonomy, function and agency.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Bridging Chemistry and Biology in the search for the Origins of Life: Historical and Philosophical Perspectives.*

PUBLICATION: No

MEETING PLACE: *Ecole Normale Supérieure, Paris, France.*

DATES: *30 June – 1 July, 2011*

AUTHORS (*main presenter*): *K. Ruiz-Mirazo*

TITLE: *Basic autonomy: from self-organisation to self-construction.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *Colloque International Philosophie de la Biologie: 'Self-Organization in Biology'. (Université de Provence, CREA, Paris, and IAS Research Group, San Sebastian)*

PUBLICATION: No

MEETING PLACE: *Aix-en-Provence, France.*

DATES: *24 – 25 May, 2011*

AUTHORS (*main presenter*): *K. Ruiz-Mirazo*

TITLE: *Taking a strong 'bottom-up' approach to the origins of life: How far can prebiotically plausible molecules go?.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *Brainstorming Workshop on the Question of the Origins of Life. (CERN)*

PUBLICATION: No

MEETING PLACE: *CERN, Geneva, Switzerland.*

DATES: 20 May, 2011

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Bottom-up strategies towards the synthesis of minimal (living?) cells.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *First Summer School on Life and Cognition (UPV/EHU – CREA, Paris)*

PUBLICATION: No

MEETING PLACE: *San Sebastián – Donostia, Spain.*

DATES: 22 – 26 June, 2010

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Molecular and systemic perspectives on the origins of life.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *Workshop in Biotechnology and Biomedicine (Cantabria University)*

PUBLICATION: No

MEETING PLACE: *Santander, Spain.*

DATES: 25 Jan – 5 Feb, 2010

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *On the lipid-peptide minimal cell scenario.*

TYPE OF PRESENTATION: **OC (Invited)**

WORKSHOP/COURSE: *Systems Chemistry II: Evolution and Systems (ESF-COST Research Conferences)*

PUBLICATION: No

MEETING PLACE: *Lake Balaton, Hungary.*

DATES: 18-23 Oct. 2009.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *A systems view on defining the boundaries of the problem of origins of life.*

TYPE OF PRESENTATION: **OC**

WORKSHOP/COURSE: *OQOL'09 (International Workshop 'Open Questions on the Origins of Life 2009)*

PUBLICATION: Yes (extended abstract)

MEETING PLACE: *Palacio Miramar, Donostia – San Sebastián, Spain.*

DATES: 20-23 May 2009.

AUTHORS (main presenter): G. Piedrafita, F. Olasagasti, K. Ruiz-Mirazo, J. Peretó, A. Moreno, F. Montero & F. Morán

TITLE: *Conceptual bases for the emergence of early protocells*

TYPE OF PRESENTATION: **OC**

WORKSHOP/COURSE: *OQOL'09 (International Workshop 'Open Questions on the Origins of Life 2009)*

PUBLICATION: Yes (extended abstract)

MEETING PLACE: *Palacio Miramar, Donostia – San Sebastián, Spain.*

DATES: 20-23 May 2009.

AUTHORS (main presenter): K. Ruiz-Mirazo

TITLE: *Minimal protocell models.*

TYPE OF PRESENTATION: **OC (Invited)**

WORKSHOP/COURSE: *Workshop on Theoretical Biology (NAP Project)*

PUBLICATION: No

MEETING PLACE: Collegium Budapest, Budapest, Hungary.

DATES: 13-31 Oct. 2008

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Modelling Prebiotic Cells: Lipid-Peptide Integration in Primitive Membranes*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *Advanced Topics in Cell Model Systems (Summer School)*

PUBLICATION: No

MEETING PLACE: Tor Vergata, Rome, Italy.

DATES: 8-13 June 2008

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Beyond self-organization: hypothetical mechanisms for self-construction.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *Int. Workshop 'Explanations in Biology'*

PUBLICATION: No

MEETING PLACE: San Sebastián -- Donostia, Spain.

DATES: 7 April 2008

AUTHORS (*main presenter*): K. Ruiz-Mirazo, A. Moreno & J. Peretó

TITLE: *Defining life: why, how and what for.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Colloque 'Définir la vie/Defining Life'*

PUBLICATION: Yes (Paper)

MEETING PLACE: Muséum National d'Histoire Naturelle, Paris, France.

DATES: 4-5 Feb. 2008

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Stochastic modelling of minimal proto-metabolic cells.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Symposium on Systems Biology and Metabolic Networks (in the memory of Prof. Reinhardt Heinrich)*

PUBLICATION: No

MEETING PLACE: Madrid, Spain.

DATES: 6-8 June 2007

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Functional protocells as the main challenge of present synthetic biology.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *Workshop on Synthetic Biology*

PUBLICATION: No

MEETING PLACE: Collège d'Espagne, Paris, France.

DATES: 1-2 June 2007

AUTHORS (*main presenter*): K. Ruiz-Mirazo & F. Mavelli

TITLE: *Simulation model for primitive functionalized vesicles: lipid-peptide integration in closed membranes*

TYPE OF PRESENTATION: **P**

WORKSHOP/COURSE: *Prebiotic Chemistry and Early Evolution (COST Action D27: Final evaluation meeting)*

PUBLICATION: Yes (Abstract)

MEETING PLACE: *Dubrovnik, Croatia.*

DATES: *11-13 May 2007*

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Critical remarks on 'The origins of molecular autonomous agent by natural selection' (by Chrisantha Fernando & Jon Rowe)*

TYPE OF PRESENTATION: **OC**

WORKSHOP/COURSE: *Modelling biological and cognitive autonomy.*

PUBLICATION: Yes (Paper)

MEETING PLACE: *San Sebastián – Donostia, Spain.*

DATES: *22-23 March 2007*

AUTHORS (*main presenter*): K. Ruiz-Mirazo & *F. Mavelli*

TITLE: *Stochastic simulations of protocell dynamics*

TYPE OF PRESENTATION: **P**

WORKSHOP/COURSE: *Chemiogenesis 2006 – Systems Chemistry (COST Chemistry -- Action D27)*

PUBLICATION: No.

MEETING PLACE: *Institute d'Estudis Catalans, Barcelona, Spain.*

DATES: *15-17 Dec. 2006*

AUTHORS (*main presenter*): F. Mavelli & *K. Ruiz-Mirazo*

TITLE: *Bridging the gap between in silico and in vitro approaches to minimal (living?) cells.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *International School on Complexity: 'Basic questions about the origins of life'*

PUBLICATION: Yes (Abstract).

MEETING PLACE: *Erice, Sicilia, Italy.*

DATES: *2-6 Oct. 2006.*

AUTHORS (*main presenter*): K. Ruiz-Mirazo & *F. Mavelli*

TITLE: *Modelling minimal lipid-peptide cells.*

TYPE OF PRESENTATION: **IL**

WORKSHOP/COURSE: *International School on Complexity: 'Basic questions about the origins of life'*

PUBLICATION: Yes (Abstract).

MEETING PLACE: *Erice, Sicilia, Italy.*

DATES: *2-6 Oct. 2006.*

AUTHORS (*main presenter*): K. Ruiz-Mirazo

TITLE: *Working towards basic autonomy: a simulation model to study minimal self-re-producing cells.*

TYPE OF PRESENTATION: **L**

WORKSHOP/COURSE: *Int. Workshop 'Organizational Principles in Biology'*

PUBLICATION: No.

MEETING PLACE: *San Sebastián – Donostia, Spain.*

DATES: *27-28 April 2006.*

AUTHORS (*main presenter*): K. Ruiz-Mirazo & *F. Mavelli*

TITLE: Simulation model of a minimal self-maintaining lipid-peptide cell.
TYPE OF PRESENTATION: P
WORKSHOP/COURSE: Chembiogenesis 2005 (COST Chemistry -- Action D27)
PUBLICATION: No.

MEETING PLACE: Venice International Univ., Venice, Italy.
DATES: 28 Sept. – 1 Oct. 2005.

AUTHORS (main presenter): K. Ruiz-Mirazo
TITLE: Informational constraints: the last step of the origin of life and the beginning of open-ended evolution.
TYPE OF PRESENTATION: IL
WORKSHOP/COURSE: Workshop on Evolution, Information and Computation: from living to non-living matter
PUBLICATION: No.

MEETING PLACE: European Center for Living Technology, Venice, Italy.
DATES: 22 – 27 May 2005.

AUTHORS (main presenter): K. Ruiz-Mirazo & P. L. Luisi
TITLE: Interaction of basic proteins and peptides with oleate vesicles.
TYPE OF PRESENTATION: P
WORKSHOP/COURSE: Third Workshop on Prebiotic Chemistry and Early Evolution (COST Chemistry -- Action D27)
PUBLICATION: No.

MEETING PLACE: Hersonissos, Crete, Greece.
DATES: 30 Sept. – 3 Oct. 2004.

PHD THESIS (UNDER SUPERVISION / SUPERVISED)

TITLE: Heterogeneidad metabólica en poblaciones de microorganismos primitivos: un análisis sobre los fundamentos de la diversidad fenotípica y sus implicaciones ecológicas y evolutivas.

Ph. D. STUDENT: **Arián Ferrero Fernández (Basque Government PhD Fellowship)**
UNIVERSITY: **Basque Country (UPV/EHU)** FACULTY/SCHOOL: **Faculty of Science and Technology**
YEAR (starting year): 2023 MARK: *In progress*

TITLE: Statistical mechanics of multicellular metabolic control

Ph. D. STUDENT: **Krishnadev Narayanankutty (FBB contract)**
UNIVERSITY: **Basque Country (UPV/EHU)** FACULTY/SCHOOL: **Faculty of Science and Technology**
YEAR (starting year): 2022 MARK: *In progress*

TITLE: Minimal Metabolism as a central concept for understanding the origins of life and developing systems biology. ***

Ph. D. STUDENT: **Nino Lauber (ITN European contract)**
UNIVERSITY: **Basque Country (UPV/EHU)** FACULTY/SCHOOL: **Faculty of Science and Technology**
YEAR (starting year): 2019 MARK: *In progress*

*** This PhD is within the Marie-Curie Innovative Training Network '**ProtoMet**' (Protometabolic pathways: exploring the chemical roots of systems biology.)

TITLE: Los orígenes de la individualidad y la función biológicas: una aproximación a través de la química de sistemas.

Ph. D. STUDENT: **Sara Murillo-Sánchez (UPV/EHU PhD Scholarship)**
UNIVERSITY: **Basque Country (UPV/EHU)** FACULTY/SCHOOL: **Faculty of Philosophy**
YEAR: **2017 (07/09/17)** MARK: **DISTINCTION 'CUM LAUDE'** (unanimously)

TITLE: Modelling early transitions toward autonomous protocells. ***

Ph. D. STUDENT: **Ben Shirt-Ediss (UPF Contract)**
UNIVERSITY: **Basque Country (UPV/EHU)** FACULTY/SCHOOL: **Faculty of Philosophy**
YEAR: **2016 (09/02/16)** MARK: **DISTINCTION 'CUM LAUDE'** (unanimously)

*** This International PhD was awarded '**Premio Extraordinario de Doctorado**' by the UPV/EHU

TITLE: Desarrollo de un modelo semiempírico de sistema protocelular automantenido con cierre metabólico.

Ph. D. STUDENT: **Gabriel Piedrafita (FPU Scholarship)**
UNIVERSITY: **Complutense de Madrid** FACULTY/SCHOOL: **Faculty of Sciences**
YEAR: **2013 (19/07/13)** MARK: **DISTINCTION 'CUM LAUDE'** (unanimously)

REFEREE RESEARCHERS

(Up to 3 researchers' names may be given by applicant to give references.

Compliance of this section is not compulsory for the applicant)

SURNAMES, NAME: MORENO BERGARECHE, ALVARO

PROFESSIONAL RELATIONSHIP WITH APPLICANT: MENTOR AND COLLABORATOR

(Professor-tutor, Research director, Employee-boss, Collaborator, Others)

LENGTH OF RELATIONSHIP (give dates): STARTING FROM 1996

BODY TO WHICH YOU BELONG TODAY: UNIVERSITY OF THE BASQUE COUNTRY, SPAIN

(Institution and country)

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TELEPHONE: +34 943018249

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SURNAMES, NAME: LUISI, PIER LUIGI

PROFESSIONAL RELATIONSHIP WITH APPLICANT: RESEARCH DIRECTOR DURING POSTDOC

(Professor-tutor, Research director, Employee-boss, Collaborator, Others)

LENGTH OF RELATIONSHIP (give dates): STARTING FROM 2003

BODY TO WHICH YOU BELONG TODAY: UNIVERSITY ROMA TRE, ITALY

(Institution and country)

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SURNAMES, NAME: GOÑI URCELAY, FELIX

PROFESSIONAL RELATIONSHIP WITH APPLICANT: RESEARCH DIRECTOR & COLLABORATOR

(Professor-tutor, Research director, Employee-boss, Collaborator, Others)

LENGTH OF RELATIONSHIP (give dates): STARTING FROM 2005

BODY TO WHICH YOU BELONG TODAY: UNIVERSITY OF THE BASQUE COUNTRY, SPAIN

(Institution and country)

POST: FULL PROFESSOR, BIOFISIKA INSTITUTE (CSIC -- UPV/EHU).

TELEPHONE: +34 946012625

E-MAIL: felix.goni@ehu.es

OTHER ACHIEVEMENTS
(in two DIN A4 pages at most)

- **Personal Grants/Awards:**

Included in the (MICCIN) I3 Program -- 2011 (Excellence in Research Trajectory).

Excellent PhD Dissertation Award, by the University of the Basque Country (UPV-EHU), 2004.

Post-doctoral (Mod. E) fellowship provided by the Basque Government to re-join Alvaro Moreno's research group on philosophy of biology. (Oct 2005 – Dec. 2006).

FPI Post-doctoral fellowship provided by the MECED (Spanish Government) to collaborate with Pier Luigi Luisi's group at ETH-Zürich (Switzerland: February – September 2003) and in Rome, Italy (Dept. of Biology, Roma Tre University: January 2004 – March 2005).

Post-doctoral fellowship provided by the National Institute of Aerospace Technology (INTA) of the Spanish Government to work at the Centre for Astrobiology (CAB) in Madrid (April 2002 - September 2002)

Invited researcher (all sustenance costs covered by the host) for a two-month stay (July-September, 1999) at the University of Newcastle (Australia), to work with the Complex Dynamic Systems Research Group, led by Professor Cliff A. Hooker.

Invited student (all sustenance costs covered by the host) to the "1998 Complex Systems Summer School", organized by the Santa Fe Institute (SFI), held at The College of Santa Fe, New Mexico, USA, during the four weeks of June 1998.

Pre-doctoral fellowship provided by the University of the Basque Country (UPV-EHU), during 4 consecutive years, to do research leading to the development of a Ph. D. dissertation on "Physical conditions for the appearance of autonomous systems with open-ended evolutionary capacities". (October 1996 - November 2000) -- *Excellent Dissertation Award (2004)*.

Erasmus grant (for 'post-graduates') to stay at the University of Notre Dame de la Paix of Namur (Belgium) and carry out the second half (6 months) of the Master in "European Studies on Society, Science and Technology" (March-Sept. 1995).

- **Organization of conferences/workshops/summer schools (incl. fund raising):**

Main organizer (Chair) of 'OLDM'23' (Origins of Life Donostia Meeting 2023) to be held at Palacio Miramar, San Sebastian-Donostia, Basque Country, Spain (October 2-4, 2023). <https://www.oldm2023.org/>

Co-organizer (together with Dora Tang, MPI-CBG, Dresden, Germany, and other members of the 'Protomet' Consortium, Marie Curie ITN) of the 'Summer School in Protocell Models: Coacervates and Vesicles', virtually carried out during 5-8 July, 2021.

Main organizer (Chair) of the Workshop 'SYSCHEM 2014' held at Palacio Miramar, San Sebastian-Donostia, Spain (9-12 June 2014). This was a Meeting of the COST-Action CM1304 (Emergence and Evolution of Complex Chemical Systems), with additional financial support from the Basque Government (7.500 €, for student grants) and the University of the Basque Country (4.500 €, local expenses). Aprox. global budget: **80.000 €**. Number of attendants: 90, mainly European and some from the United States. More info at: <http://www.systemschemistry.com/cm1304/activities.html>

Main organizer (together with Prof. P. L. Luisi) of the International Workshop 'Open Questions on the Origins of Life' held at Palacio Miramar, San Sebastian-Donostia, Spain (20-23 May 2009). Aprox. global budget: **40.000 €** (15.200 € from the Basque Government, 8.000€ from MICINN, 7.000€ from UPV/EHU, 1.000€ from CSIC, 2.500€ from a private enterprise (Kutxa), and the rest from registration fees. More info at: <http://oqol2009.wordpress.com/>

Co-organizer (together with other members of the IAS Research Group, UPV/EHU, and CREA, from Paris) of the 'First Summer School on Life and Cognition' held at Palacio

Miramar, in San Sebastian-Donostia, on the 22-26 of June 2010 (Further info at the webpage: <http://www.lifecognitionschool.eu/>).

Main organizer (together with Xabier Barandiaran, from the IAS Research Group) of the International Workshop ‘**Modelling biological and cognitive autonomy**’ held at the UPV/EHU in San Sebastian-Donostia (22-23 March 2007). Aprox. global budget: **6.000 €** (4.100€ from the ‘EuCognition’ Program and 1.632€ from ‘Kutxa’)

Co-organizer (together with other members of the IAS Research Group) of one- or two-day National and International Workshops held in San Sebastian-Donostia over the years (‘**Synthetic Biology: past, present and future**’, ‘**Stability and Variation in Biological Systems**’, ‘**Explanations in Biology**’, ‘**Seminario sobre Funciones**’, ‘**On the chemoton and other proto-metabolic models**’ ‘**Organizational Principles in Biology**’, ‘**Definition of life**’, etc.)

For further information, see our webpage: <http://www.ehu.es/ias-research>).

- **Invited Lecturer for Seminars at different (national and international) Research Centres:**

Invited Lecturer (accommodation/sustenance/travel costs, covered by the host centre) at: **University of Toronto (IHPST)**, Toronto, Canada (March 2023), **Centre for Molecular Simulation (CMS)**, Calgary, Canada (Feb 2023), **University of Alberta (UAlberta)**, Edmonton, Canada (Oct. 2022), **Centro Andaluz de Biología del Desarrollo (CABD)**, Sevilla, (Jan 2022), **University Complutense of Madrid (UCM)**, Madrid (Dec 2018), **University College London (UCL)**, London, UK (May 2018); **University of Cantabria (IBBTEC)**, Santander (July 2017); **University of Trento (CIBIO)**, Italy (Nov. 2016); **Konrad Lorenz Institute (KLI)**, Vienna, Austria (May 2016); **University of Cambridge**, UK (April 2015); **CIB** (Spanish National Centre for Biological Research) Madrid, Spain (March 2015) **University of Tokyo (Kobama)**, Japan (July 2014); **Centre for Astrobiology (CAB)**, Torrejón de Ardoz, Spain (May 2014; April 2016); **Friedrich-Schiller Universitat**, Jena, Germany (March 2013); **Gulbenkian Institute**, Oeiras, Portugal (July 2011); **FLinT**, Southern Denmark University (June 2010); **CREA**, Paris (Feb. 2010); **IBI** (Institute for Biocomplexity and Informatics) Univ. of Calgary (Dec. 2009); **Collegium Budapest**, Hungary (Oct. 2008); **ECLT** (European Centre for Living Technology) Venice, Italy (May 2005); **CNB** (Spanish National Centre for Biotechnology) Madrid, Spain (March 2003).

- **Current lecturing activity at the UPV/EHU (responsible for the following subjects):**

Systems Biology (1st semester, 4.5 ECTS, Faculty of Science and Technology); **Philosophy of Biology and Cognitive Sciences** (Partly: 2 ECTS, Masters on Philosophy, Science and Values); **Introduction to Scientific Research – Philosophy of Science** (Partly: 1.5 ECTS, Masters on Chemistry and Polymers); **Cell and Molecular Biology of Membranes** (Partly: 0.2 ECTS, Masters on Molecular Biology & Biomedicine).

- **Editor/Reviewer of International Journals:**

Member of the **Editorial Board** of *Origins of Life and Evolution of Biospheres* (Springer) and of *ChemSystemsChem* (Wiley).

Frequent **Reviewer** of manuscripts submitted for publication to: *Biology & Philosophy*, *Artificial Life*, *OLEB*, *BioSystems*, *Journal of Biological Theory*, *Biological Theory*, *Journal of Theoretical Biology* and other scientific journals like *Nat Comm.*, *Scientific Reports*, *Angewandte Chemie*, *Open Biology*, or *Plos ONE*.

- **Positive evaluations of research activity:**

3 ‘Sexenios’ (last one: 2012-2017). **Basque Segments B1-B2-B3**

Unibasq ‘habilitation’ as ‘**Full Research Professor**’ (in Humanities). April 2018.