

Salvatore Fusco's *Curriculum Vitae*

1. PERSONAL INFORMATIONS

Name and Surname: **Salvatore Fusco**

Workplace: **Department of Biotechnology, University of Verona**

Email: **salvatore.fusco@univr.it**; salvatore.fusco@biotecnologitaliani.it

ORCID unique identified: orcid.org/0000-0003-2928-3609

Scopus Author ID: **57222031604**

Web Sites: <https://www.dbt.univr.it/?ent=persona&id=52943>

<https://www.scopus.com/authid/detail.uri?authorId=8780303400>

<https://orcid.org/my-orcid?orcid=0000-0003-2928-3609>

2. EDUCATION

2015 PhD degree in Biotechnology

Department of Biology, Polytechnic School of Basic Sciences,

University of Napoli Federico II, Italy. Supervisor: Prof. Simonetta Bartolucci.

Thesis title: "CRISPR-mediated antiviral defence in *Sulfolobus*: a versatile tool and a dangerous weapon for setting up safeguarded industrial bioprocesses"

2011 Master's degree in Biology

Department of General and Applied Biology, University of Napoli Federico II, Italy.

Supervisor: Prof. Patrizia Contursi.

Final mark: 110/110, Summa cum Laude and Honours.

Thesis title: "Elucidation of the virus-host relationship during the carrier stage: transcriptome analysis of the archaeon *Sulfolobus solfataricus* infected with the fusellovirus SSV1"

2008 Bachelor's degree in Biology

Department of General and Applied Biology, University of Napoli Federico II, Italy.

Supervisor: Prof. Laura Fucci.

Final mark: 110/110, Summa cum Laude.

Thesis title: "Caratterizzazione del promotore prossimale del gene *plaud* in *P. lividus*"

3. PROFESSIONAL ACCADEMIC EXPERIENCES

- 02.2023-to date** **Associate Professor of Biochemistry (BIOS-07/A)**
Group leaded at the Biochemistry and Industrial Biotechnology Laboratory
Department of Biotechnology, University of Verona (ITA)
- 02.2020-to date** **Head of the Biochemistry and Industrial Biotechnology Laboratory**
The research group is devoted to exploit the environmental biodiversity (including extreme environments) to isolate and characterise enzymes and microbes, to exploit them for industrial and environmental biotechnological applications.
- 01.2023-to date** **Visiting Professor of Biochemistry (BIOS-07/A)**
Université Libre De Bruxelles
Laboratoire de Production et de Biostimulation des Plantes cultivées (LPBP)
Faculté des Sciences
- 02.2020 – 01.2023** **Senior Assistant Professor (RTDb of Biochemistry (BIOS-07/A)**
Group leaded at the Biochemistry and Industrial Biotechnology Laboratory
Department of Biotechnology, University of Verona (ITA)
- 02.2017 – 04.2019** **Principal Investigator**
Department of Biology, Polytechnic School of Basic Sciences, University of Napoli Federico II, Italy.
Project: “Thermostable Virion-linked Enzymes: robust virus particles as tailorable scaffolds for the immobilization of enzymes”
- 09.2015 – 08.2017** **Postdoc Research Associate**
Division of Industrial Biotechnology
Department of Biology and Biological Engineering
Chalmers University of Technology, (Göteborg, SE)
- 03.2012 – 03.2015** **PhD student in Biotechnology**
Department of Biology, Polytechnic School of Basic Sciences, University of Napoli Federico II, Italy.
- 10.2013 – 12.2013** **Visiting PhD student**
Danish Archaea Centre, Department of Biology
University of Copenhagen (Copenhagen, DK)
- 09.2010 – 07.2011** **Master student**
University of Napoli Federico II, Italy.
- 09.2009 – 09.2010** **Visiting Master student (Erasmus)**
Danish Archaea Centre, Department of Biology
University of Copenhagen (Copenhagen, DK)

4. TEACHING AND SUPERVISING ACTIVITIES

a In-class and in-lab teaching activities

- 2024 –to date** **Bachelor's degree course of "Molecular Biophysics" (UniVr)**
Role of Dr Fusco: Coordinator and main lecturer
ECTS: 6
Master's degree: Human Centered Medical System Engineering (L-8)
- 2020 –to date** **Master's degree course of "New frontiers in Biocatalysis" (UniVr)**
Role of Dr Fusco: Coordinator and main lecturer of the module "Structure and Function of Diomolecules" (ECTS: 3)
ECTS: 6
Master's degree: Biotechnology for bioresources and sustainable development (LM-8)
- 2020 –to date** **Master's degree course of "Industrial Enzymology" (UniVr)**
Role of Dr Fusco: Coordinator and main lecturer
ECTS: 6
Master's degree: Biotechnology for bioresources and sustainable development (LM-8)
- 2021** **Course for the Doctoral School of Biotechnology (UniVr)**
Role of Dr Fusco: Lecturer
Seminar: Protein Engineering for Enzyme Optimization
- 2017 – 2019** **Bachelor's degree course of "Cloning and expression of recombinant proteins" (UniNa)**
Course's main lecturer: Dr Patrizia Contursi
Role of Dr Fusco: Lecturer and in-lab coordinator of practical activities
Seminar: Discovery and Characterization of a Viral Transcription Regulator
- 2018** **Course for the Doctoral School of Biotechnology (UniNa)**
Course name: Extremophiles and Extremozymes: perspectives for industrial biotechnology
Role of Dr Fusco: Lecturer
Seminar: Thermostable virus-like particles as tailorable scaffolds for the immobilization of enzymes
- 2015** **Bachelor's degree course of "Cloning and expression of recombinant proteins" (UniNa)**
Course's main lecturer: Dr Patrizia Contursi
Role of Dr Fusco: Lecturer and in-lab coordinator of practical activities
Seminar: Discovery and Characterization of a Viral Transcription Regulator

2013 – 2014 **Practical course within the master’s degree course in Biology (UniNa)**
Course name: Applied Biochemistry and Protein Engineering
Course’s main lecturer: Professor Simonetta Bartolucci
Role of Dr Fusco: In-lab coordinator of practical activities

b Supervising and co-supervising activities

2024-to date Supervisor of a PhD student

Supervisor of a PhD student (**Dr Emma Piccoli**) at the Biochemistry and Industrial Biotechnology Laboratory, Department of Biotechnology, University of Verona, Italy. PhD course in Biotechnology

2022 -to date Supervisor of a Postdoc Researcher

Supervised a Postdoc Researcher (**Dr Luca Bombardi**, PhD), as group leader of the Biochemistry and Industrial Biotechnology Laboratory, Department of Biotechnology, University of Verona, Italy.

2021-2025

Supervisor of a PhD student

Supervisor of a PhD student (**Dr Andrea Salini**) at the Biochemistry and Industrial Biotechnology Laboratory, Department of Biotechnology, University of Verona, Italy. PhD course in Biotechnology

2020-to date Supervisor and co-supervisor of master’s degree students

Supervisor of 15 master’s degree students at the Biochemistry and Industrial Biotechnology Laboratory, Department of Biotechnology, University of Verona, Italy. PhD course in Biotechnology

2020 – 2022 Supervisor of a Postdoc Researcher

Supervised a Postdoc Researcher (**Dr Luca Zuliani**, PhD), as group leader of the Biochemistry and Industrial Biotechnology Laboratory, Department of Biotechnology, University of Verona, Italy.

2018 – 2019 Supervisor of a Postdoc Researcher

Dr Fusco, as Principal Investigator of the project “TheViriozymes”, has mentored a Postdoc Researcher (**Dr Martina Aulitto**, PhD) at Department of Biology, Polytechnic School of Basic Sciences, University of Napoli Federico II, Italy.

2017 – 2019 Tutoring and co-supervisor of Bachelor and Master students

Lab mentor of a PhD student. Moreover, he has mentored a master and two bachelor students, and he was co-relator of their thesis, at Department of Biology, Polytechnic School of Basic Sciences, University of Napoli Federico II, Italy.

2015 – 2017 Tutoring PhD and Master students

Lab mentor of a PhD student and a master student, at Division of Industrial Biotechnology, Department of Biology and Biological Engineering, Chalmers

4

University of Technology, (Göteborg, SE).

2012 – 2015 Tutoring PhD and Master students

Lab mentor of a visiting Danish PhD student. Moreover, he has mentored two Italian PhD students, six master and ten bachelor students. Dr Fusco has also been the co-relator of their thesis, at Department of Biology, Polytechnic School of Basic Sciences, University of Napoli Federico II, Italy.

2013 Tutoring of Master students

Lab mentor of a visiting master student at the Danish Archaea Centre, University of Copenhagen, Copenhagen, DK.

5. SCIENTIFIC PUBLICATIONS, ACTIVITIES AND COLLABORATIONS

ORCID Author ID: 0000-0003-2928-3609

Scopus Author ID: 57222031604

Bibliometric indicators (reference period: 2013-2025) (source: Scopus)

Total number of publications: 38

H-index: 18

Total citations: 833

First author: 12

Last author: 9

Corresponding author: 11

[Source citations and bibliometric indicators: Scopus](#)

a Article list

Gallo G., Piccoli E., Bombardi L., Aulitto M., **Fusco S.** “Enzymatic and microbial routes to bioplastics: The green chemistry frontier of biopolymers”. (2026) FEBS Open Bio , 16 (4), pp. 709 – 726. DOI: 10.1002/2211-5463.70241

CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: salvatore.fusco@univr.it

Salini A., Gonnelli P.M., Padoan C., Helali Y., Waeytens J., **Fusco S.**, Cannella D. “ Repurposing Commercial Hydrolytic and Oxidative Enzymes toward Synergistic PLA Depolymerization”. (2025) ACS Sustainable Chemistry and Engineering, 13 (48), pp. 20705 – 20716. DOI: 10.1021/acssuschemeng.5c06901

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5

Maresca E., Carbone M., Gallo G., **Fusco S.**, Aulitto M. “Extremophile-Derived Bioactives in Cosmeceuticals: Bridging Nutraceuticals and Skincare for Holistic Wellness”. (2025) Life, 15 (12), art. no. 1787. DOI: 10.3390/life15121787

Fusco S., Aulitto M. “Microbial Enzymes for Biotechnological Applications” (2025) International Journal of Molecular Sciences, 26 (5), art. no. 2040. DOI: 10.3390/ijms26052040

CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: salvatore.fusco@univr.it

Orlando M., Marchetti A., Bombardi L., Lotti M., **Fusco S.**, Mangiagalli M. “Polysaccharide degradation in an Antarctic bacterium: Discovery of glycoside hydrolases from remote regions of the sequence space”. (2025) International Journal of Biological Macromolecules, 299, art. no. 140113. DOI: 10.1016/j.ijbiomac.2025.140113

CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, Italy; email: salvatore.fusco@univr.it

Bombardi L., Coltro A., **Fusco S.** “Endo-1,4-β-D-xylanase Assay Using Azo-Xylan and Variants Thereof”. (2025) Bio-protocol, 15 (8), art. no. e5283. DOI: 10.21769/BioProtoc.5283

CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, Italy; email: salvatore.fusco@univr.it

Bombardi L., Salini A., Aulitto M., Zuliani L., Andreolli M., Bordoli P., Coltro A., Vitulo N., Zaccone C., Lampis S., **Fusco S.** “Lignocellulolytic Potential of Microbial Consortia Isolated from a Local Biogas Plant: The Case of Thermostable Xylanases Secreted by Mesophilic Bacteria”. (2024) International Journal of Molecular Sciences, 25 (2). DOI: 10.3390/ijms25021090

CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: salvatore.fusco@univr.it

Salini A., Zuliani L., Gonnelli P.M., Orlando M., Odoardo A., Ragno D., Aulitto M., Zaccone C., **Fusco S.**

Plastic-Degrading Microbial Consortia from a Wastewater Treatment Plant (2024) International Journal of Molecular Sciences, 25 (23), art. no. 12747, Cited 0 times. DOI: 10.3390/ijms252312747

CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: salvatore.fusco@univr.it

Fusco S., Siebers B.

Extreme Biocatalysts: From Basic Research to Biotechnological Applications (2024) International Journal of Molecular Sciences, 25 (12), art. no. 6492, Cited 0 times. DOI:

6

10.3390/ijms25126492 **CORRESPONDENCE ADDRESS:** S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: salvatore.fusco@univr.it

Marchetti A., Orlando M., Bombardi L., **Fusco S.**, Mangiagalli M., Lotti M.

Evolutionary history and activity towards oligosaccharides and polysaccharides of GH3

glycosidases from an Antarctic marine bacterium (2024) International Journal of Biological Macromolecules, 275, art. no. 133449, Cited 2 times. DOI: 10.1016/j.ijbiomac.2024.133449
CORRESPONDENCE ADDRESS: M. Mangiagalli; Department of Biotechnology and Biosciences, University of Milano Bicocca, Milano, Piazza della Scienza 2, 20126, Italy; email: marco.mangiagalli@unimib.it

Bombardi L., Orlando M., Aulitto M., **Fusco S.**

Thermophilic Hemicellulases Secreted by Microbial Consortia Selected from an Anaerobic Digester (2024) International Journal of Molecular Sciences, 25 (18), art. no. 9887, Cited 1 times. DOI: 10.3390/ijms25189887
CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology (BIB) Laboratory, Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: salvatore.fusco@univr.it

Molinari F., Salini A., Vittore A., Santoro O., Izzo L., **Fusco S.**, Pollegioni L., Rosini E.

Bio-based production of cis,cis-muconic acid as platform for a sustainable polymers production (2024) Bioresource Technology, 408, art. no. 131190, Cited 2 times. DOI: 10.1016/j.biortech.2024.131190
CORRESPONDENCE ADDRESS: E. Rosini; Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy; email: elena.rosini@uninsubria.it

Ferremi Leali N., Salvetti E., Luzzini G., Salini A., Slaghenaufi D., **Fusco S.**, Ugliano M., Torriani S., Binati R.L.

Differences in the Volatile Profile of Apple Cider Fermented with *Schizosaccharomyces pombe* and *Schizosaccharomyces japonicus* (2024) Fermentation, 10 (3), art. no. 128, Cited 3 times. DOI: 10.3390/fermentation10030128

CORRESPONDENCE ADDRESS: S. Torriani; Department of Biotechnology, University of Verona, Verona, Strada Le Grazie 15, 37134, Italy; email: sandra.torriani@univr.it

Zhang Z., **Fusco S.**

Editorial: New insights into the genetic mechanisms of thermophilic archaea (2023) Frontiers in Microbiology, 14, art. no. 1185784, Cited 0 times. DOI: 10.3389/fmicb.2023.1185784

CORRESPONDENCE ADDRESS: S. Fusco; Biochemistry and Industrial Biotechnology Laboratory, Department of Biotechnology, University of Verona, Verona, Italy; email: salvatore.fusco@univr.it

Aulitto M., Martinez-Alvarez L., **Fusco S.**, She Q., Bartolucci S., Peng X., Contursi P.

Genomics, Transcriptomics, and Proteomics of SSV1 and Related Fusellovirus: A Minireview (2022) Viruses, 14 (10), art. no. 2082, Cited 4 times. DOI: 10.3390/v14102082

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7

Department of Biology, University of Copenhagen, Copenhagen, DK-1165, Denmark; email: peng@bio.ku.dk

Bosso A., Gaglione R., Di Girolamo R., Veldhuizen E.J.A., García-Vello P., **Fusco S.**, Cafaro V.,

Monticelli M., Culurciello R., Notomista E., Arciello A., Pizzo E.

Human Cryptic Host Defence Peptide GVF27 Exhibits Anti-Infective Properties against Biofilm Forming Members of the *Burkholderia cepacia* Complex (2022) *Pharmaceuticals*, 15 (2), art. no. 260, Cited 8 times. DOI: 10.3390/ph15020260

CORRESPONDENCE ADDRESS: E. Pizzo; Department of Biology, University of Naples Federico II, Naples, 80126, Italy; email: elipizzo@unina.it

Ferremi Leali N., Binati R.L., Martelli F., Gatto V., Luzzini G., Salini A., Slaghenaufi D., **Fusco S.**, Ugliano M., Torriani S., Salvetti E.

Reconstruction of Simplified Microbial Consortia to Modulate Sensory Quality of Kombucha Tea (2022) *Foods*, 11 (19), art. no. 3045, Cited 29 times. DOI: 10.3390/foods11193045

CORRESPONDENCE ADDRESS: S. Torriani; Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: sandra.torriani@univr.it

Botturi A., Battista F., Andreolli M., Faccenda F., **Fusco S.**, Bolzonella D., Lampis S., Frison N. Polyhydroxyalkanoate-rich microbial cells from bio-based volatile fatty acids as potential ingredient for aquaculture feed (2021) *Energies*, 14 (1), art. no. 38, Cited 9 times. DOI: 10.3390/en14010038

CORRESPONDENCE ADDRESS: N. Frison; Department of Biotechnology, University of Verona, Verona, Strada Le Grazie 15, 37134, Italy; email: nicola.frison@univr.it

Battista F., Zuliani L., Rizzioli F., **Fusco S.**, Bolzonella D.

Biodiesel, biogas and fermentable sugars production from Spent coffee Grounds: A cascade biorefinery approach (2021) *Bioresource Technology*, 342, art. no. 125952, Cited 45 times. DOI: 10.1016/j.biortech.2021.125952

CORRESPONDENCE ADDRESS: F. Battista; Chemical, Environment and Bioprocesses Engineering Laboratory, Department of Biotechnology, University of Verona, Verona, 37134, Italy; email: federico.battista@univr.it

*Wang R., *Lorantfy B., ***Fusco S.**, Olsson L., Franzén C.J.

Analysis of methods for quantifying yeast cell concentration in complex lignocellulosic fermentation processes (2021) *Scientific Reports*, 11 (1), art. no. 11293, Cited 17 times. DOI: 10.1038/s41598-021-90703-8 CORRESPONDENCE ADDRESS: C.J. Franzén; Division of Industrial Biotechnology, Department of Biology and Biological Engineering, Chalmers University of Technology, Gothenburg, Sweden; email: franzen@chalmers.se ***Equal contribution**

Zuliani L., Serpico A., De Simone M., Frison N., **Fusco S.**

Biorefinery gets hot: Thermophilic enzymes and microorganisms for second-generation bioethanol production (2021) *Processes*, 9 (9), art. no. 1583, Cited 26 times. DOI: 10.3390/pr9091583 **CORRESPONDENCE ADDRESS:** S. Fusco; Biochemistry and Industrial Biotechnology Laboratory, Department of Biotechnology, University of Verona, Verona,

8

37134, Italy; email: **salvatore.fusco@univr.it**

***Fusco S.**, *Aulitto M., Iacobucci I., Crocamo G., Pucci P., Bartolucci S., Monti M., Contursi P. The interaction between the F55 virus-encoded transcription regulator and the RadA host

recombinase reveals a common strategy in Archaea and Bacteria to sense the UV-induced damage to the host DNA (2020) *Biochimica et Biophysica Acta - Gene Regulatory Mechanisms*, 1863 (5), art. no. 194493, Cited 16 times. DOI: 10.1016/j.bbagr.2020.194493
CORRESPONDENCE ADDRESS: M. Monti; Department of Chemical Science, Complesso Universitario Monte Sant'Angelo, Università degli Studi di Napoli - Federico II, Italy; email: montimar@unina.it ***Equal contribution**

*Aulitto M., ***Fusco S.**, Nickel D.B., Bartolucci S., Contursi P., Franzén C.J.
Seed culture pre-adaptation of *Bacillus coagulans* MA-13 improves lactic acid production in simultaneous saccharification and fermentation (2019) *Biotechnology for Biofuels*, 12 (1), art. no. 45, Cited 45 times. DOI: 10.1186/s13068-019-1382-2 **CORRESPONDENCE ADDRESS:** S. Fusco; Department of Biology, University of Naples Federico II, Naples, 80126, Italy; email: salvatore.fusco@unina.it ***Equal contribution**

Aulitto M., **Fusco S.**, Limauro D., Fiorentino G., Bartolucci S., Contursi P.
Galactomannan degradation by thermophilic enzymes: a hot topic for biotechnological applications (2019) *World Journal of Microbiology and Biotechnology*, 35 (2), art. no. 32, Cited 31 times. DOI: 10.1007/s11274-019-2591-3 **CORRESPONDENCE ADDRESS:** P. Contursi; Department of Biology, University of Naples Federico II, Naples, via Cinthia, 80126, Italy; email: contursi@unina.it

*Aulitto M., ***Fusco S.**, Franzén C.J., Strazzulli A., Moracci M., Bartolucci S., Contursi P.
Draft genome sequence of *Bacillus coagulans* MA-13, a thermophilic lactic acid producer from lignocellulose (2019) *Microbiology Resource Announcements*, 8 (23), art. no. e0034119, Cited 14 times. DOI: 10.1128/MRA.00341-19 **CORRESPONDENCE ADDRESS:** P. Contursi; Department of Biology, University of Naples Federico II, Naples, Italy; email: contursi@unina.it ***Equal contribution**

Roscetto E., Contursi P., Vollaro A., **Fusco S.**, Notomista E., Catania M.R.
Antifungal and anti-biofilm activity of the first cryptic antimicrobial peptide from an archaeal protein against *Candida* spp. clinical isolates (2018) *Scientific Reports*, 8 (1), art. no. 17570, Cited 64 times. DOI: 10.1038/s41598-018-35530-0 **CORRESPONDENCE ADDRESS:** P. Contursi; Section of Clinical Microbiology, Department of Molecular Medicine and Medical Biotechnology, University of Naples Federico II, Naples, Via Pansini 5, 80131, Italy; email: contursi@unina.it

Aulitto M., **Fusco S.**, Fiorentino G., Limauro D., Pedone E., Bartolucci S., Contursi P.
Thermus thermophilus as source of thermozymes for biotechnological applications: Homologous expression and biochemical characterization of an α -galactosidase (2017) *Microbial Cell Factories*, 16 (1), art. no. 28, Cited 45 times. DOI: 10.1186/s12934-017-0638-

4 **CORRESPONDENCE ADDRESS:** P. Contursi; Università degli Studi di Napoli Federico II,

Complesso Universitario Monte S. Angelo, Dipartimento di Biologia, Naples, Via Cinthia, 80126, Italy; email: contursi@unina.it

Strazzulli A., **Fusco S.**, Cobucci-Ponzano B., Moracci M., Contursi P.
Metagenomics of microbial and viral life in terrestrial geothermal environments (2017) *Reviews*

in Environmental Science and Biotechnology, 16 (3), pp. 425 - 454, Cited 29 times. DOI: 10.1007/s11157-017-9435-0 CORRESPONDENCE ADDRESS: P. Contursi; Dipartimento di Biologia, Università degli Studi di Napoli Federico II, Naples, Complesso Universitario Monte S. Angelo, Via Cinthia, 80126, Italy; email: contursi@unina.it

*Aulitto M., ***Fusco S.**, Bartolucci S., Franzén C.J., Contursi P.

Bacillus coagulans MA-13: A promising thermophilic and cellulolytic strain for the production of lactic acid from lignocellulosic hydrolysate (2017) Biotechnology for Biofuels, 10 (1), art. no. 210, Cited 66 times. DOI: 10.1186/s13068-017-0896-8 CORRESPONDENCE ADDRESS: C.J. Franzén; Division of Industrial Biotechnology, Department of Biology and Biological Engineering, Chalmers University of Technology, Gothenburg, 412 96, Sweden; email: franzen@chalmers.se

***Equal contribution**

*Gaglione R., *Pirone L., *Farina B., ***Fusco S.**, Smaldone G., Aulitto M., Dell'Olmo E., Roscetto E., Del Gatto A., Fattorusso R., Notomista E., Zaccaro L., Arciello A., Pedone E., Contursi P.

Insights into the anticancer properties of the first antimicrobial peptide from Archaea (2017) Biochimica et Biophysica Acta - General Subjects, 1861 (9), pp. 2155 - 2164, Cited 35 times. DOI: 10.1016/j.bbagen.2017.06.009 CORRESPONDENCE ADDRESS: A. Arciello; Department of Chemical Sciences, University of Naples Federico II, Naples, 80126, Italy; email: anarciel@unina.it ***Equal contribution**

Fusco S., Liguori R., Limauro D., Bartolucci S., She Q., Contursi P.

Transcriptome analysis of *Sulfolobus solfataricus* infected with two related fuselloviruses reveals novel insights into the regulation of CRISPR-Cas system (2015) Biochimie, 118, pp. 322 - 332, Cited 32 times. DOI: 10.1016/j.biochi.2015.04.006 CORRESPONDENCE ADDRESS: Q. She; Danish Archaea Centre, Department of Biology, University of Copenhagen, Copenhagen N, Ole Maaløes Vej 5, DK-2200, Denmark; email: qunxin@bio.ku.dk

Notomista E., Falanga A., **Fusco S.**, Pirone L., Zanfardino A., Galdiero S., Varcamonti M., Pedone E., Contursi P.

The identification of a novel *Sulfolobus islandicus* CAMP-like peptide points to archaeal microorganisms as cell factories for the production of antimicrobial molecules (2015) Microbial Cell Factories, 14 (1), art. no. 126, Cited 31 times. DOI: 10.1186/s12934-015-0302-

9 CORRESPONDENCE ADDRESS: E. Pedone; Istituto di Biostrutture Bioimmagini, CNR, Naples, 80134, Italy; email: empedone@unina.it

Fusco S., She Q., Fiorentino G., Bartolucci S., Contursi P.

Unravelling the role of the F55 regulator in the transition from lysogeny to UV induction of *Sulfolobus* spindle-shaped virus 1 (2015) Journal of Virology, 89 (12), pp. 6453 - 6461, Cited 22 times. DOI: 10.1128/JVI.00363-15

10

Fusco S., Aulitto M., Bartolucci S., Contursi P.

A standardized protocol for the UV induction of *Sulfolobus* spindle-shaped virus 1 (2015) Extremophiles, 19 (2), pp. 539 - 546, Cited 14 times. DOI: 10.1007/s00792-014-0717-y

Contursi P., Farina B., Pirone L., **Fusco S.**, Russo L., Bartolucci S., Fattorusso R., Pedone E.

Structural and functional studies of Stf76 from the *Sulfolobus islandicus* plasmid-virus pSSVx: A novel peculiar member of the winged helix-turn-helix transcription factor family (2014) *Nucleic Acids Research*, 42 (9), pp. 5993 - 6011, Cited 24 times. DOI: 10.1093/nar/gku215
CORRESPONDENCE ADDRESS: E. Pedone; Interuniversity Centre for Research on Bioactive Peptides (CIRPEB), University of Naples Federico II, 80134 Naples, Via Mezzocannone 16, Italy; email: empedone@unina.it

Contursi P., **Fusco S.**, Cannio R., She Q.

Molecular biology of fuselloviruses and their satellites (2014) *Extremophiles*, 18 (3), pp. 473 - 489, Cited 28 times. DOI: 10.1007/s00792-014-0634-0
CORRESPONDENCE ADDRESS: P. Contursi; Dipartimento di Biologia, Università degli Studi di Napoli Federico II, Complesso Universitario Monte S. Angelo, Naples, Via Cinthia, Italy; email: contursi@unina.it

Fusco S., She Q., Bartolucci S., Contursi P.

Tlys, a newly identified *Sulfolobus* spindle-shaped virus 1 transcript expressed in the lysogenic state, encodes a DNA-binding protein interacting at the promoters of the early genes (2013) *Journal of Virology*, 87 (10), pp. 5926 - 5936, Cited 24 times. DOI: 10.1128/JVI.00458-13
CORRESPONDENCE ADDRESS: P. Contursi; Dipartimento di Biologia, Università degli Studi di Napoli Federico II, Complesso Universitario Monte S. Angelo, Naples, Italy; email: contursi@unina.it

Contursi P., **Fusco S.**, Limauro D., Fiorentino G.

Host and viral transcriptional regulators in *Sulfolobus*: An overview (2013) *Extremophiles*, 17 (6), pp. 881 - 895, Cited 23 times. DOI: 10.1007/s00792-013-0586-9
CORRESPONDENCE ADDRESS: G. Fiorentino; Dipartimento di Biologia, Università di Napoli Federico II, 80126 Napoli, via Cinthia, Edificio 7, Italy; email: fiogabri@unina.it

b1 Invited and/or selected speaker at national and international conferences

1. **Fusco S.**, “Enzymatic valorisation of agro-industrial residues yields DAMP-enriched hydrolysates for sustainable crop protections”. Terzo Forum Nazionale della Biodiversità. Napoli (Italy), 19th-21th May **2026**. **Selected oral presentation**.
2. **Fusco S.**, “BioCat4BioPol: AI-Driven Biocatalysts for Next-Generation Bioplastic Copolymer”. MedLIFE 2025 Conference. (**Selected oral presentation**). Napoli (Italy) 9th-11th December **2025**.

11

3. **Fusco S.**, “Bioprospecting in Industrial Facilities: A Source of Enzymes for Biotechnological Applications”. Summer school exploitation of biological waste for novel added value products (**Invited speaker**). Naples (Italy), 14th - 17th July **2025**. (**Invited speaker**).
4. **Fusco S.**, “Enzymes from Industrial Processes: Sources and Applications”. 7th International Summer School on Circular Bioeconomy and Sustainable Development (**Invited speaker**). Thessaloniki (Greece), 27th June - 4th July **2025**.
5. **Fusco S.**, “Transizione ecologica e valorizzazione di scarti e sottoprodotti delle filiere

Autorizzo il trattamento dei miei dati personali presenti nel cv ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 “Codice in materia di protezione dei dati personali” e del GDPR Regolamento UE 2016/679)

agroalimentari". Workshop "Innovazioni tecnologiche e organizzative per la transizione agroecologica dei sistemi agroalimentari locali verso un modello di economia circolare e solidale - InnoAgroECoS" (Horizon Europe project Seeds S27) (**Invited speaker**). Bari & Gravina (Italy), 14th-15th June **2024**.

6. **Fusco S.**, "Deconstruction of untreated lignocellulose by mesophilic and thermophilic microbial consortia from a local biogas plant". European Federation of Biotechnology (EFB), Biotechnology for a circular bioeconomy conference held online on 28th-29th March 2023 * **Selected flash presentation**.
7. **Fusco S.**, "Mesophilic and thermophilic microbial consortia isolated from a biogas plant secrete thermostable xylanases". Trends in Biotechnology: the SIB group perspectives. Napoli (Italy), 23th-24th June **2022**. **Selected oral presentation**.
8. **Fusco S.**, "Cascade biotechnological production of chemical building blocks from municipal wastewater-derived cellulose". European Federation of Biotechnology (EFB2021) (**Selected flash presentation**). Virtual Conference, 10th-14th May **2021**.
9. **Fusco S.**, "Robust virus particles as suitable scaffolds for the immobilisation of enzymes for biorefinery applications". 12th International Congress on Extremophiles -Extremophiles2018- (**Selected oral presentation**). Ischia (Italy), 16th-20th September **2018**.
10. **Fusco S.**, "Provirus integration leads to CRISPR-mediated autoimmunity in *Sulfolobus solfataricus*". 59th Congress of the Italian Society of Biochemistry and Molecular Biology (SIB 2017) (**Selected oral presentation**). Caserta (Italy), 20th-22th September **2017**.
11. **Fusco S.**, "Structure, function and unexplored properties of fuselloviruses-encoded transcription factors". Molecular Biology of *Archaea* 4th conference (**Invited speaker**). Institute Pasteur, Paris (France), 19th-22th May **2014**.

b2 Committee Member & Chairperson at national and international conferences

1. **President of the Organising Committee** of the **Italian Congress of Biotechnology (Biotech 2026)**. Verona (Italy), 24th - 26th June **2026**.

12

2. **Summer school: Exploitation of biological waste for novel added value products** Naples (Italy), 14th - 17th July **2025**. Chairs: **Salvatore Fusco** (IT) Marco Moracci (IT).
3. **The 48th Federation of European Biochemical Societies (FEBS Congress 2024)**. Milan (Italy), 29th June – 3rd July **2024**. Symposia: "Towards sustainable use of natural and renewable resources". Chairs: **Salvatore Fusco** (IT) Michael O'Donohue (FR).

b3 Other national and international conference communications

12. *Bombardi L., Carlini S. & **Fusco S.** “Thermostable hemicellulolytic enzymes secreted by a microbiome isolated from a local anaerobic digester”. The 1st International Online Conference on Fermentation (IOCFE 2025). Online, 12th–13th November **2025**. (Poster presentation; *presenting author).
 13. **Fusco S.**, Piccoli E., Salini A. & Bombardi L. “Bioprospecting in Industrial Facilities: A Source of Enzymes for Biotechnological Applications”. International Forum on Industrial Biotechnology and Bioeconomy (IFIB 2025). Torino (Italy), 25th–26th September **2025**. (Poster presentation).
 14. *Ballabio F., Piccoli E., Odoardo A., Riina F., **Fusco S.**, Ragno D & Giorgino T. “Biocat4Biopol: AI assisted enzymatic engineering for next gen bioplastics”. CECAM - Computations meet Experiments to Advance the Enzymatic Depolymerization of Plastics One Atom at a Time. Trieste (Italy), 5th-8rd May **2025**. Book of abstracts and poster section. *Presenting author.
 15. *Bombardi L., Gulotta L., Sabellico V. & **Fusco S.** “Enzymatic hydrolysis of agro-industrial waste to produce bioactive molecules”. Forum Nazionale della Biodiversità. Milano (Italy), 19th-23rd May **2025**. Book of abstracts and poster section. *Presenting author.
 16. *Bombardi L., Aulitto M., Orlando M. & **Fusco S.** “Thermostable hemicellulolytic enzymes secreted by microbial consortia isolated from a local anaerobic digester”. 5th NextGenBiocat symposium, 8th-9th May **2025**. Book of abstracts and poster section. *Presenting author.
 17. *Orlando M., Marchetti A., Mangiagalli M., Bombardi L., **Fusco S.** & Lotti M. “In silico tools to mine glycoside hydrolase enzymes from nature”. European RosettaCon 2024. Copenhagen (Denmark), 11th-13th November **2024**. Book of abstracts and poster section. *Presenting author.
 18. *Guglielmi G., Salini A., Cicolin G., Ragno D., Giorgino T & **Fusco S.** “Discovery and Engineering of Improved Biocatalysts for the Synthesis of Biodegradable Plastic Copolymers (BioCat4BioPol)”. International Forum on Industrial Biotechnology and Bioeconomy (IFIB 2024). Bologna (Italy), 3rd-4th October **2024**. Poster section. *Presenting author.
 19. *Bombardi L., Manzini S., Gulotta L & **Fusco S.** “Enzymatic hydrolysis of agro-industrial solid leftovers to produce bioactive molecules”. 48th Federation of European Biochemical Societies (FEBS) Congress 2024. Milan (Italy), 29th June – 3rd July **2024**. Book of abstracts and poster section. *Presenting author.
- 13
20. *Guglielmi G., Salini A., Ragno D., Giorgino T & **Fusco S.** “Discovery and Engineering of Improved Biocatalysts for the Synthesis of Biodegradable Plastic Copolymers (BioCat4BioPol)”. 48th Federation of European Biochemical Societies (FEBS) Congress 2024. Milan (Italy), 29th June – 3rd July **2024**. Book of abstracts and poster section. *Presenting author. (**Selected flash presentation**).
 21. *Molinari F., Salini A., Rosini E., **Fusco S.** & Pollegioni L. “Sustainable production of cis,cis-muconic acid production from vanillin by an engineered E. coli strain”. 48th Federation of

European Biochemical Societies (FEBS) Congress 2024. Milan (Italy), 29th June – 3rd July **2024**. Book of abstracts and poster section. *Presenting author. (**Selected oral presentation**).

22. *Marchetti A., Orlando M., Bombardi L., Christakis C., Tsopanakis V., Sarris P., Pavlidis I. V., **Fusco S.**, Mangiagalli M. & Lotti M. “Extreme marine and coastal environments as a source of glycoside hydrolases involved in the degradation of oligosaccharides and polysaccharides”. 48th Federation of European Biochemical Societies (FEBS) Congress 2024. Milan (Italy), 29th June – 3rd July **2024**. Book of abstracts and poster section. *Presenting author.
23. *Salini A., Monarca V., Gonnelli P.M., Soldà M. & **Fusco S.** “Identification of plasticactive enzymes via an activity and metagenomic based approach”. 48th Federation of European Biochemical Societies (FEBS) Congress 2024. Milan (Italy), 29th June – 3rd July **2024**. Book of abstracts and poster section. *Presenting author.
24. *Bombardi L., Manzini S., Gulotta L. & **Fusco S.** “Enzymatic hydrolysis of agro-industrial waste to produce phyto-stimulants and antimicrobials”. Forum Nazionale della Biodiversità. Palermo (Italy), 20th-21th May **2023**. Book of abstracts and poster section. *Presenting author.
25. *Salini A., Soldà M. & **Fusco S.** “Exploring the plastic-degrading capability of wastewater treatment plant enriched consortia”. ESSIB 2023 - 5th European Summer School on Industrial Biotechnology - Functional metagenomics: from nature to biochemical functions. Hamburg, 3rd-6th of July **2023**. Book of abstracts and poster section. *Presenting author.
26. *Bombardi L., Salini A., Monarca V. & **Fusco S.** “Enzymatic hydrolysis of agro-industrial solid leftovers to produce phyto-stimulants and antimicrobials”. 4th Memorial Workshop Maria Ciaramella. Naples (Italy), 16th-17th November **2023**. Book of abstracts and poster section. *Presenting author.
27. *Salini A., Monarca V., Soldà M. & **Fusco S.** “An activity- and metagenomic-based approach to identifying novel plastic-degrading enzymes”. 4th Memorial Workshop Maria Ciaramella. Napples (Italy), 16th-17th November **2023**. Book of abstracts and poster section. *Presenting author.
28. Bombardi L., Salini A., Bordoli P., Coltro A., Bordoli P., Gonnelli P.M., Zuliani L., Monarca V., Soldà M., Zuliani L. & **Fusco S.** “Industrial plants as sources of thermostable industrially relevant hydrolases”. International Forum on Industrial Biotechnology and Bioeconomy, Florence (Italy), 28th-29th September **2023**. Book of abstracts and poster section. **Presenting author.**

14

29. Bombardi L., Salini A., Bordoli P., Coltro A., Bordoli P., Gonnelli P.M., Zuliani L., Monarca V., Soldà M., Zuliani L. & **Fusco S.** “Industrial plants as sources of thermostable industrially relevant hydrolases”. 62nd Congress of the Italian Society of Biochemistry and Molecular Biology (SIB 2023), Florence (Italy), 7th-9th September **2023**. Book of abstracts and poster section. **Presenting author.**
30. *Marchetti A., Bombardi L., Orlando M., **Fusco S.**, Mangiagalli M. & Lotti M. “Antarctic β -glucosidases involved in marine polysaccharides degradation”. Novel Enzymes 2023,

Autorizzo il trattamento dei miei dati personali presenti nel cv ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 “Codice in materia di protezione dei dati personali” e del GDPR Regolamento UE 2016/679)

Graifswald (Germany). 28th-29th March **2023**. *Presenting author.

31. *Salini A., Soldà M. Fontana C., Gonnelli P.M., Zuliani L., & **Fusco S.** “Preliminary characterization of the plastic-degrading potential of environmental consortia”. European Federation of Biotechnology (EFB), Biotechnology for a circular bioeconomy conference held online on 28th-29th March **2023**. *Selected oral presentation.
32. *Bombardi L., Salini A., Coltro A., Bordoli P., Zuliani L., & **Fusco S.** “Mesophilic and thermophilic microbial consortia from a local biogas plant secrete highly stable xylanases”. European Federation of Biotechnology (EFB), Biotechnology for a circular bioeconomy conference held online on 28th-29th March **2023**. *Selected oral presentation.
33. Salini A., Zuliani L., Bordoli P. & **Fusco S.** “Thermostable xylanases from a biogas plant microbiota”. 13th International Congress on Extremophiles -Extremophiles2022-, book of abstracts and poster section. Loutraki (Greece), 18th-22th September **2022**. **Presenting author**.
34. *Salini A., Zuliani L., Gonnelli P.M. Soldà M., Zaccone C. & **Fusco S.** “Hunting for thermophilic plastic-active enzymes in a local wastewater treatment plant”. 13th International Congress on Extremophiles -Extremophiles2022-, book of abstracts and poster section. Loutraki (Greece), 18th-22th September **2022**. *Presenting author.
35. *Salini A., Zuliani L., Gonnelli P.M. Soldà M., Fontana C., Zaccone C. & **Fusco S.*** “Chasing plastizymes from the microbiota of a wastewater treatment plant”. Trends in Biotechnology: the SIB group perspectives. Napoli (Italy), 23th-24th June **2022**. *Selected oral presentation.
36. *Salini A., Zuliani L., Gonnelli P.M. Soldà M., Fontana C., Zaccone C. & **Fusco S.*** “Investigating the plastic-degrading potential of a wastewater treatment plant microbiota”. European Federation of Biotechnology (EFB2022). Virtual Conference, 10th-13th May **2022**. *Selected oral presentation.
37. *Gonnelli P.M., Cannella D., Zuliani L. & **Fusco S.** “Chasing for photo-inducible plastizymes from wastewater treatment plant sludge”. European Federation of Biotechnology (EFB2022). Virtual Conference, 10th-13th May **2022**. *Selected flash presentation.
38. Gatto V., Salvetti E., Ferremi Leali N, **Fusco S.**, & Torriani S. “Microbial community composition of an artisanal scale Kombucha tea fermentation and its impact on SCOBY production”. Microbial Diversity 2021. Virtual Conference, 14th-15th December **2021**.
39. Zuliani L., Ambrosi M., Bonetti N., Frison N. & **Fusco S.** “Hunting for novel lignocellulolytic

15

microorganisms and enzymes from a local biogas plant”. European Federation of Biotechnology (EFB 2021). Virtual Conference, 10th-14th May **2021**.

40. Frison N., Botturi A., Battista F., Andreolli M., Faccenda F., **Fusco S.**, Lampis S. & Bolzonella D. “Polyhydroxyalkanoated-rich microbial cells from bio-based volatile fatty acids as potential ingredient for aquaculture feed”. European Federation of Biotechnology (EFB 2021). Virtual Conference, 10th-14th May **2021**.
41. Battista F., Zuliani L., Rizzioli F., **Fusco S.** & Bolzonella D. “The sequential biorefinery approach

for biodiesel and glucose production from Spent Coffee Grounds”. THESSALONIKI 2021. Virtual Conference, 23th-26th June **2021**.

42. Zuliani L., Ambrosi M., Bonetti N., Frison N. & **Fusco S.** “Lignocellulolytic enzymes secreted by mesophilic and thermophilic microbial consortia enriched on mushrooms litter”. 61th Congress of the Italian Society of Biochemistry and Molecular Biology (SIB 2021). Virtual Conference, 23th-24th September **2021**.
 43. Zuliani L., Ambrosi M., Bonetti N., Frison N. & **Fusco S.** “Untreated lignocellulosic feedstock fermentation by locally sourced enriched thermophilic consortia”. International Forum on Industrial Biotechnology and Bioeconomy (IFIB 2021). Trento (Italy), 30 September – 1 October **2021**.
 44. **Fusco S.**, Aulitto M., Iacobucci I., Bartolucci S., Pucci P., Monti M. & Contursi P. “Unravelling the Crosstalk Between the SSV1 Carrier State Regulator and the *Sulfolobus solfataricus* DNA Damage Surveillance Machinery”. ASM Microbe 2019. San Francisco (CA, USA), 20th-25th June **2019**. **Presenting author.**
 45. Arciello A., Aulitto M., Bartolucci S., Del Gatto A., Dell'Olmo E., Falanga A., Farina B., Fattorusso R., **Fusco S.**, Gaglione R., Galdiero S, Pirone L., Roscetto E., Vollaro A., Smaldone G., Zaccaro L., Zanfardino A., Catania M.R., Varcamonti M., Notomista E., Pedone E. & Contursi P.” VLL-28 is a bioactive peptide from the *Archaea* kingdom showing antimicrobial, antifungal and antitumor activities”. 12th International Congress on Extremophiles -Extremophiles 2018. Ischia (Italy), 16th-20th September **2018**.
 46. Aulitto M., **Fusco S.**, Bartolucci S. & Contursi P. “Thermophilic virus particles as scaffolds for enzymes immobilisation: the case of the *Sulfolobus* spindle-shaped virus 1”. NanoInnovation 2018, book of abstracts and poster section. Rome (Italy), 11th-14th September **2018**.
 47. **Fusco S.**, Olsson H. & Carl Johan Franzén. “CRISPR/Cas9-assisted protein engineering”. Cell Symposia - CRISPR: From Biology to Technology and Novel Therapeutics, book of abstracts and poster section. Sitges (Spain), 29th October- 1st November **2017**. **Presenting author.**
 48. **Fusco S.**, Aulitto M., She Q., Bartolucci S. & Contursi P. “The archaeal lysogeny regulator F55: from discovery to *in vitro* and *in vivo* characterizations”. 59° Congresso Società Italiana di Biochimica e Biologia Molecolare, book of abstracts and poster section. Caserta (Italy), 20th-22th September **2017**. **Presenting author.**
- 16
49. Franzén C.J., Wang R., Nickel D., Olsson L., **Fusco S.**, Aulitto M., Bartolucci S. & Contursi P. “High gravity lignocellulose bioprocess development for ethanol and lactic acid production by multifeed simultaneous saccharification and fermentation”. Recent Advances in Fermentation Technology, book of abstracts and poster section. Bonita Springs (FL, USA), 29th October – 1st November **2017**.
 50. Wang R., **Fusco S.**, Lorantfy B., Olsson L. & Franzén CJ. “Which methods for viable yeast cell quantification can be used in lignocellulosic fermentation processes?”. European Symposium on Biochemical Engineering Sciences (ESBES) 2016, book of abstracts and poster section. Dublin (Ireland), 11th-14th September **2016**.

51. Aulitto M., **Fusco S.**, Fusco FA., Limauro D., Bartolucci S. & Contursi P. "A thermophilic *Bacillus coagulans* strain isolated from beans-waste is promising for cellulosic biomass saccharification". XXI IUPAC CHEMRAWN Conference, book of abstracts and poster section. Rome (Italy), 6th-8th April **2016**.
52. **Fusco S.**, Notomista E., Arciello A., Falanga A., Gaglione R., Galdiero S., Pedone E., Pirone L., Varcamonti M., Zanfardino A. & Contursi P. "A powerful *in silico* approach allowed the identification of a new antimicrobial peptide from the third domain of life". Proteine2016, book of abstracts and poster section. Bologna (Italy), 30th March – 1st April **2016**. **Presenting author.**
53. **Fusco S.**, She Q., Bartolucci S. & Contursi P. "Exploring the lysogenic state of *Sulfolobus* spindle-shaped virus 1: the regulative role of the Ribbon-Helix-Helix viral protein F55". 10th International Congress on Extremophiles -Extremophiles2014-, book of abstracts and poster section. Saint Petersburg (Russia), 7th-11th September **2014**. **Presenting author.**
54. Pirone L., Contursi P., Zanfardino A., **Fusco S.**, Varcamonti M., Notomista E., Falanga A., Galdiero S. & Pedone E. "The identification and characterization of a novel CAMP from Stf76, a *Sulfolobus islandicus* plasmid-virus pSSVx transcription factor". 14th Naples Workshop on Bioactive Peptides: The renaissance era of peptides in drug discovery, book of abstracts and poster section. Napoli (Italy), 12th-14th June **2014**.
55. Pirone L., Contursi P., Farina B., **Fusco S.**, Russo L., Bartolucci S., Fattorusso R. & Pedone E. "structural and functional studies of stf76 from the *Sulfolobus islandicus* plasmid-virus pssvx: a novel peculiar member of the winged helix-turn-helix transcription factor family". Proteine2014, book of abstracts and poster section. Padova (Italy) 31st March – 1st April **2014**.
56. **Fusco S.**, She Q., Bartolucci S. & Contursi P. "F55: a putative lysogeny regulator of the fusellovirus SSV1". CMC Symposium 2013, book of abstracts. Copenhagen (Denmark), 4th October **2013**. **Presenting author.**
57. **Fusco S.**, She Q., Bartolucci S. & Contursi P. "p55, a newly identified Ribbon-Helix-Helix transcription factor encoded by SSV1: elucidation of archaeal host-virus interactions". Proteine2012, book of abstracts and poster section. Chieti (Italy), 25th-26th September **2012**. **Presenting author.**

c National and international collaborations: organization, management, and coordination of (or participation in national and international research groups

2022 –to date	Collaboration with Prof. Loredano Pollegioni at the University of Insubria (Varese, Italy).
2022 –to date	Collaboration with Dr. Elena Rosini at the University of Insubria (Varese, Italy).
2022 –to date	Collaboration with Prof. Marina Lotti at the University of Milano, Bicocca (Italy).
2022 –to date	Collaboration with Dr. Marco Mangiagalli at the University of Milano, Bicocca (Italy).
2021 –to date	Collaboration with Dr. Toni Giorgino at the Institute of Biophysics - National Research Council - (IBF-CNR) (Italy).
2021 –to date	Collaboration with Dr. Daniele Ragno at the University of Ferrara (Italy).
2020 –to date	Collaboration with Prof. David Cannella at the PhotoBioCatalysis Unit (Bio-Cat) (Université Libre de Bruxelles – ULB) (Belgium).
2017 –to date	Collaboration with Prof. Marco Moracci , at the laboratories of the Department of Biology of the University of Naples Federico II (Italy).
2015 –to date	Collaboration with Prof. Lisbeth Olsson and Prof. Carl Johan Franzén at the Division of Industrial Biotechnology of the Department of Biology and Biological Engineering (Chalmers University of Technology, Göteborg, Sweden).
2009 –to date	Collaboration with the research group of the Danish Archaea Center led by Prof. Qunxin She at the Department of Biology (University of Copenhagen, Danmark).

5bis. PUBLIC ENGAGEMENT, OUTREACH AND THIRD MISSION ACTIVITIES

2026

Career Orientation Seminar – Degree Programme in Biotechnology, University of Milan (Italy)

Lecture entitled *“Being a Biotechnologist Today: Career Perspectives and Professional Pathways”*, delivered on 26 March 2026 within the professional orientation programme for undergraduate students enrolled in the Biotechnology Degree Programme (Agro-Food and Molecular-Bioinformatics curricula). The seminar focused on career opportunities in biotechnology, innovation

and industrial sectors, highlighting the role of biotechnology professionals in the contemporary

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labour market.

2025

Biotech Week 2025 – “New Catalysts for the Bioplastics of the Future (BioCat4BioPol)” Public engagement initiative organised within the framework of the national Biotech Week, aimed at presenting research activities on the discovery and engineering of enzymes for sustainable bioplastic production to a broad audience, including students and citizens.

2025

Career Orientation Seminar – Degree Programme in Biotechnology, University of Milan (Italy) Lecture entitled “*Being a Biotechnologist Today: Career Perspectives and Professional Pathways*”, delivered on 20 March 2025 within the professional orientation programme for Biotechnology students. The seminar presented career opportunities in research, industry and innovation, including the activities of the Italian Association of Biotechnologists.

2024

STEM Careers Orientation Programme – COSP Verona ETS (Italy) Lecture entitled “*Become the Catalyst of Yourself*”, delivered on 21 November 2024 to secondary school students within the STEM career orientation programme promoted by COSP Verona ETS.

2024

Career Orientation Seminar – Degree Programme in Biotechnology, University of Milan (Italy) Seminar dedicated to the professional role of biotechnologists and career opportunities in biotechnology, with particular emphasis on the activities of the Italian Association of Biotechnologists.

2023

Maker Faire Rome – The European Edition (Rome, Italy) Exhibitor and science communicator at Maker Faire Rome 2023 (20–22 October 2023), one of Europe's largest innovation and technology events, promoting biotechnology research and technology transfer activities to the general public.

2024

STEM Careers Orientation Programme – COSP Verona ETS (Italy) Lecture entitled “*Become the Catalyst of Yourself*”, delivered on 20 March 2024 to secondary school students from Verona and surrounding areas within the STEM career orientation programme.

2023–2025 Management of the LinkedIn Communication Channel of the Department of Biotechnology, University of Verona Coordination and management of institutional scientific communication activities through the Department's LinkedIn profile, including dissemination of research achievements, educational initiatives, public engagement activities and stakeholder outreach.

2023 Production and Coordination of Promotional Videos for the Degree Programmes of the Department of Biotechnology, University of Verona Coordination of the development of promotional and outreach multimedia content aimed at supporting student recruitment and public dissemination of educational opportunities offered by the Department.

2023

“The Role of the Biotechnologist in Industry” – Second Edition Organizer and scientific coordinator of a career-development event hosted by the Department of Biotechnology, University of Verona, involving professionals from industry, technology transfer organisations, innovation clusters and the Italian Association of Biotechnologists. The initiative aimed to connect students with biotechnology professionals and illustrate career opportunities beyond academia.

2022

“The Role of the Biotechnologist in Industry” – First Edition Organizer and scientific coordinator of a public engagement and career orientation event held at the Department of Biotechnology, University of Verona, with participation from industrial biotechnology professionals, technology transfer experts and representatives of the Italian Association of Biotechnologists.

2020–2023

Management of the Facebook Communication Channel of the Department of Biotechnology, University of Verona Management and dissemination of scientific communication, educational activities and outreach initiatives through the Department's institutional Facebook profile.

2024

“The Role of the Biotechnologist in Industry” – Third Edition Organizer and scientific coordinator of the third edition of the event, featuring professionals from pharmaceutical industries, biotechnology companies, academia and the circular bioeconomy sector. The initiative promoted interaction between students and biotechnology professionals and showcased multiple career pathways available to biotechnology graduates.

6. ABILITY TO ATTRACT FUNDING

6A. FUNDED PROJECTS

2027 – 2029 **Competitive Research Grant** (HE – MSCA Postdoctoral Fellowship) Project: ThermaCORE: Thermus thermophilus Accelerated Co-evolution of Robust Enzymes for Industrial Applications

Role of Prof. Fusco: Host Institution Supervisor

Budget allocated to Dr Fusco's unit activities: 261,854 EUR

Funding body: European Research Executive Agency (HE – MSCA PF) **2022 – 2026** **Competitive Research Grant**

Project: Discovery and Engineering of Improved Biocatalysts for the Synthesis of Biodegradable Plastic Copolymers (BioCat4BioPol)

Role of Prof. Fusco: **Principal Investigator and Scientific Responsible**

Budget allocated to Dr Fusco's unit activities: **190,000 EUR** Funding body: Ministry of University and Research (MUR)

- 2022 – 2026** **Competitive Research Grant**
 Project: National Biodiversity Future Center (PNRR 2022-2025)
 Role of Prof. Fusco: **Research Unit Leader**
 Budget allocated to Dr Fusco’s unit activities: **170,000 EUR**
 Funding body: Ministry of University and Research (MUR)
- 2020 – 2022** **Starting Grant**
 Project: Department of Excellence 2018/2022
 Location: Department of Biotechnology, University of Verona
 Financing amount: **75,000 EUR**
 Funding body: Ministry of University and Research (MUR)
- 2017 – 2019** **Competitive Young Researchers Grant**
 Department of Biology, University of Naples Federico II (ITA)
 Project: Thermostable Virion-linked Enzymes: robust virus particles as tailorable scaffolds for the immobilization of enzymes
 Role of Dr. Fusco: **Principal Investigator and Scientific Responsible**
 Project acronym: TheViriozymes
 Amount of funding: **100,000 EUR**
 Financing bodies: Compagnia di San Paolo and University of Naples Federico II

68. POSITIVELY EVALUATED PROJECTS

Call: HORIZON-EIC-2021-PATHFINDEROPEN-01 (Coordinator)

Type of action: HORIZON-EIC

Proposal number: 101047130

Proposal acronym: HopPLA

Duration (months): 54

Proposal title: Bioplastics Upcycling Towards Innovative Biodegradable Polymers

Activity: HORIZON-EIC-2021-PATHFINDEROPEN-01-01

Grande Rilevanza_Cina_MOST_ Agriculture and Food Sciences (Coordinator)

Identificativo **PGR11977**

Area di ricerca Titolo (in Italiano) *Elementi generali*

Agriculture and Food Sciences

Biocatalizzatori e Solventi Eco-compatibili per un Mercato delle

Bevande Alcoliche Circolare ed Ecosostenibile

Titolo (in altra lingua) **Biocatalysts and Biobased Solvents for a Circular and Eco-Friendly**

Alcoholic Drinks Market (CHEERS)

Call: HORIZON-CL5-2024-D3-02 (Coordinator

Type of action: HORIZON-RIA

Proposal number: 101235730

Proposal acronym: BioConverge

Duration (months): 36

Proposal title: Biorefineries Integration for Optimal Conversion of Residual Biomasses to Advanced Bio-Based Products

Activity: HORIZON-CL5-2024-D3-02-03

Call: HORIZON-EIC-2025-PATHFINDEROPEN (Coordinator

Type of action: HORIZON-EIC

Proposal number: 101258336

Proposal acronym: SuperBio

Duration (months): 36

Proposal title: Sustainable upcycling of end-of-life plastics and organic waste into bioproducts

Activity: HORIZON-EIC-2025-PATHFINDEROPEN

Call: HORIZON-JU-CBE-2025 (Coordinator

Type of action: HORIZON-JU-RIA

Proposal number: 101291573

Proposal acronym: BioForest

Duration (months): 36

Proposal title: Integrated Biorefineries for the Sustainable Valorisation of Untapped Forest
BioIntegrated Biorefineries for
the Sustainable Valorisation of Untapped Forest Biomass into High-Value Bio-Based Products.

Activity: HORIZON-JU-CBE-2025-RIA-01

Proposer name Country

Call: HORIZON-EIC-2025-PATHFINDEROPEN (Coordinator

Type of action: HORIZON-EIC

Proposal number: 101258336

Proposal acronym: SuperBio

Duration (months): 36

Proposal title: Sustainable upcycling of end-of-life plastics and organic waste into bioproducts

Activity: HORIZON-EIC-2025-PATHFINDEROPEN

Call: HORIZON-EIC-2025-PATHFINDERCHALLENGES-01 (Unit Leader

Type of action: HORIZON-EIC

Proposal number: 101307092

Proposal acronym: Bio-UPMIN

Duration (months): 36

Proposal title: Microbial and enzymatic biodegradation and upcycling of micro/nanoplastics in waste- and seawater (Bio-UPMIN)

Competitive Research Grant (HE – MSCA Postdoctoral Fellowship) (Seal Of Excellence)

The project proposal: 101273364 — PET2CAR “From PET to CARotenoids: a thermophilic synthetic biology approach” submitted under the Horizon Europe Marie Skłodowska-Curie Actions call HORIZON-MSCA-2025-PF-01-01 — MSCA Postdoctoral Fellowships 2025 by Giovanni Gallo and UNIVERSITA DEGLI STUDI DI VERONA (**Prof. Salvatore Fusco**) following evaluation by an international panel of independent experts was recognised as a high-quality project proposal in a highly competitive evaluation process but could not receive funding due to budgetary constraints and is therefore recommended by the European Commission for funding by other sources.

Competitive Research Grant (HE – MSCA Postdoctoral Fellowship) (Seal Of Excellence)

The project proposal 101278284 — EcoBio “Sustainable Upcycling of Mixed Waste Streams into Advanced Functional Materials” submitted under the Horizon Europe Marie Skłodowska-Curie Actions call HORIZON-MSCA-2025-PF-01-01 — MSCA Postdoctoral Fellowships 2025 By Monaza Bibi and UNIVERSITA DEGLI STUDI DI VERONA (**Prof. Salvatore Fusco**) following evaluation by an international panel of independent experts was recognised as a high-quality project proposal in a highly competitive evaluation process but could not receive funding due to budgetary constraints and is therefore recommended by the European Commission for funding by other sources

Competitive Research Grant (HE – MSCA Postdoctoral Fellowship) (Fellow Supervisor)

Call: HORIZON-MSCA-2025-PF

Type of action: HORIZON-TMA-MSCA-PF-EF

Proposal number: 101277648

Proposal acronym: EnzImmo

Duration (months): 24

Proposal title: Next-Generation Enzyme Design from Agro-Waste: Metagenomic Discovery and Bacteriophage-Assisted

Biosynthesis for Environmental Sustainability

Activity: EF-LIF

7. AWARDS

- | | |
|-------------|--|
| 2014 | FEMS scholarship
FEMS Young Scientist Meeting Grant 2014
10th International Congress on Extremophiles -Extremophiles2014- |
| 2009 | Erasmus scholarship
Danish Archaea Center
Department of Biology University of Copenhagen (Copenhagen, DK) |

8. AFFILIATION WITH SCIENTIFIC SOCIETIES

2023 – to date	Bord of Directors the Italian Association of Biotechnologists (Biotecnologi Italiani)
2022 – to date	Member of European Society of Applied Biocatalysis (ESAB)
2022 – to date	Member of The International Society for Extremophiles (ISE)
2021 – to date	Member of the Italian Association of Biotechnologists (Biotecnologi Italiani)
2014 – to date	Member of the Italian Society of Biochemistry and Molecular Biology (SIB)

9. PARTICIPATION TO EDITORIAL AND EVALUATION COMMITTEES

2025 – to date	Member of the Editorial Board (Associate Editor Journal: Biotechnology and Applied Biochemistry
2022 – to date	Member of the Editorial Board (Guest Editor Journal: International Journal of Molecular Sciences Special Issue: Microbial Enzymes for Biotechnological Applications
2022 – to date	Member of the Editorial Board (Associate Editor Journal: Frontiers in Microbiology Section: Biology of Archaea
2022 – to date	Member of the Editorial Board (Reviewer Editor Journal: Frontiers in Microbiology Section: Microbiotechnology
2022 – to date	Member of the Editorial Board (Guest Editor Journal: International Journal of Molecular Sciences Special Issue: Extreme Biocatalysts: From Basic Research to Biotechnological Applications
2021 – to date	Member of the Editorial Board (Topical Advisory Member Section Topical Advisory Panel Members for 'Biochemistry' Journal: International Journal of Molecular Sciences
2021 – to date	Member of REPRISE Expert Peer Reviewer for Italian Scientific Evaluation of Project Proposals

- 2020 – to date** **Member of the Editorial Board (Guest Editor)**
Journal: Frontiers in Microbiology
Research Topic: New Insights into the Genetic Mechanisms of Thermophilic Archaea
- 2019 – to date** **Member of the Editorial Board (Reviewer Editor)**
Journal: Frontiers in Microbiology
Section: Biology of Archaea
- 2014 – to date** **Invited Reviewer**
ACS Sustainable Chemistry & Engineering (**ACS Publications**); Scientific Reports (**Nature Publishing Group**); Biotechnology for Biofuels (**Springer Nature, BCM**); Biomass Conversion and Biorefinery (**Springer Nature**); Frontiers in Microbiology (Frontiers Media); Microbial Cell Factories (**BCM**); Environmental Technology & Innovation (**Elsevier**); Marine Drugs (**MDPI**); Nanomaterials (MDPI); Microorganisms (MDPI); Bioengineering (MDPI); Extremophiles (**Springer Link**); Biocatalysis and Agricultural Biotechnology (Elsevier); Journal of Cleaner Production (Elsevier).

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali"

Verona, giugno 2026
f.to Salvatore Fusco

*DICHIARAZIONE SOSTITUTIVA DI CERTIFICAZIONE O DELL'ATTO DI NOTORIETÀ
artt. 46 e 47 del D.P.R. 445/2000)*

Il sottoscritto Salvatore Fusco consapevole della responsabilità penale cui può andare incontro in caso di dichiarazione mendace, ai sensi dell'art. 76 del D.P.R. 445 del 28/12/2000,

DICHIARA

che tutto quanto riportato nel presente Curriculum Vitae corrisponde al vero.

Verona, giugno 2026
f.to Salvatore Fusco