Curriculum vitae di Paolo Landini

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Curriculum degli studi:

1986: Laurea in Scienze Biologiche (M.Sc. degree), Universita' di Pavia. Voto di Laurea: 110/110.

1988-1989: Tirocinio post-lauream presso l'Istituto di Microbiologia dell'Universita' di Pavia Esame di Stato per l'abilitazione alla professione di Biologo.

2000: Ph.D. in Biochimica, School of Biochemistry, University of Birmingham (UK). Titolo della tesi di dottorato: "Mechanism of transcription activation by the Ada protein of *Escherichia coli*".

Esperienze professionali:

1989-1992: Research Biologist, Marrion Merrel Dow Research Center, Gerenzano (Varese).

1993-1996. Research Associate, Dept. Of Molecular Genetics and Microbiology, University of Massachusetts Medical School, Worcester, MA, USA.

1996-1999. Research Fellow, School of Biochemistry, University of Birmingham (UK).

1999-2004. Oberassistent (Senior Scientist) EAWAG (Swiss Institute for Environmental Technologies), Dübendorf (CH).

2004-2007: Ricercatore in Microbiologia generale (settore BIO/19), Università degli Studi di Milano.

2007- 2015: Professore Associato in Microbiologia generale (settore BIO/19), Università degli Studi di Milano.

2014 (maggio-settembre): Visiting Scientist presso "Institute of Food Research" (IFR), Norwich, UK

2015- Professore Ordinario in Microbiologia generale (settore BIO/19), Università degli Studi di Milano.

Elenco pubblicazioni in giornali scientifici :

(Sono indicati gli Impact Factor delle riviste a partire dal 1997)

1) Pagani, L., Debiaggi, M., Tenni, R., Cereda, P.M., Landini, P., and Romero, E. (1988). Beta-lactam resistant *Pseudomonas aeruginosa* strains emerging during therapy: synergistic resistance mechanisms. *Microbiologica*, **11**, 47-53.

2) Debiaggi, M., Pagani, L., Cereda, P.M., Landini, P., and Romero, E. (1988). Antiviral activity of *Chamaecyparis lawsoniana* extract: study with herpes simplex virus type 2. *Microbiologica*, **11**, 55-61.

3) Pagani, L., Landini, P., Luzzaro, F., Debiaggi, M., and Romero, E. (1990). Emergence of cross-resistance to imipenem and other β-lactam antibiotics in *Pseudomonas aeruginosa* during therapy. *Microbiologica*, **13**, 43-53.

4) Selva, E., Beretta, G., Montanini,N., Saddler, G.S., Gastaldo, L., Ferrari, P., Lorenzetti, R., Landini, P., Ripamonti, F., Goldstein, B.P., Montanaro, L., and Denaro, M. (1991). Antibiotic GE2270A: a novel inhibitor of bacterial protein synthesis. I. Isolation and characterization. *Journal of Antibiotics*, **44**, 693-701.

5) Landini, P., Bandera, M., Goldstein, B.P., Ripamonti, F., Soffientini, A., Islam, K., and Denaro, M. (1992). Inhibition of bacterial protein synthesis by elongation factor Tu-binding antibiotics MDL 62,879 and efrotomycin. *Biochemical Journal*, **283**, 649-652.

6) Landini, P., Corti, E., Goldstein, B.P., and Denaro, M. (1992). Mechanism of action of purpuromycin. *Biochemical Journal*, **284**, 47-52.

7) Berti, M., Candiani, G., Borgonovi, M., Landini, P., Ripamonti, F., Scotti, R., Cavenaghi, L., Denaro, M., and Goldstein, B.P. (1992). Antimicrobial activity of MDL 62,873, a semisynthetic derivative of teicoplanin, in vitro and in experimental infections. (1992). *Antimicrobial Agents and Chemotherapy*, **36**, 446-452.

8) Landini, P., Bandera, M., Soffientini, A., Goldstein, B.P. (1993). Sensitivity of elongation factor Tu (EF-Tu) from different bacterial species to the antibiotics efrotomycin, pulvomycin and MDL 62,879. *Journal of General Microbiology*, **139**, 769-774.

9) Landini, P., Hajec, L.I., and Volkert, M.R. (1994). Structure and trascriptional regulation of the *Escherichia coli* adaptive response gene *aidB*. *Journal of Bacteriology*, **176**, 6583-6589.

10) Landini, P., and Volkert, M.R. (1995). Trascriptional activation of the *Escherichia coli* adaptive response gene *aidB* is mediated by binding of methylated Ada protein**.** *Journal of Biological Chemistry*, **270**, 8285-8289.

11) Stella, S., Montanini, N., Le Monnier, F., Ferrari, P., Colombo, L., Landini, P., Ciciliato, I., Goldstein, B.P., Selva, E., and Denaro, M. (1995). Antibiotic GE37468A: a new inhibitor of bacterial protein synthesis. I. Isolation and characterization. *Journal of Antibiotics*, **48**, 780-786.

12) Landini, P., and Volkert, M.R. (1995).RNA polymerase α subunit binding site in positively controlled promoters: a new model for RNA polymerase-promoter interaction and transcriptional activation in the *Escherichia coli ada* and *aidB* genes. *EMBO Journal*, **14**, 4329-4335.

13) Landini, P., Hajec, L.I., Nguyen, L.H., Burgess, R., and Volkert, M.R. (1996). The leucine-responsive regulatory protein (Lrp) acts as a specific repressor for σ^S-dependent transcription of the *Escherichia coli aidB* gene. *Molecular Microbiology*, **20**, 947-955.

14) Landini, P., Soffientini, A., Monti, F., Lociuro, S., Marzorati, E., and Islam, K. (1996). Antibiotics MDL 62,879 and kirromycin bind to distinct and independent sites on elongation factor Tu (EF-Tu). *Biochemistry*, **35**, 15288-15294.

15) Landini, P., Gaal, T., Ross, W., and Volkert, M.R. (1997). The RNA polymerase α subunit carboxyl-terminal domain is required for both basal and activated transcription from the *alkA* promoter. *Journal of Biological Chemistry*, **272**, 15914-15919. IF 6.963

16) Lociuro, S., Tavecchia, P., Marzorati, E., Landini, P., Goldstein, B.P., Denaro, M., and Ciabatti, R. (1997). Antimicrobial activity of chemically modified thiazolyl-peptide antibiotic MDL 62,879 (GE2270A). *Journal of Antibiotics*, **50**, 344-349. IF 1.523

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19) Landini, P., and Busby, S. (1999). Expression of the *Escherichia coli* Ada regulon in stationary phase: evidence for *rpoS*-dependent negative regulation of *alkA* transcription. *Journal of Bacteriology*, **181**, 6836-6839. IF 3.712

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21) Volkert, M.R., and Landini, P. (2001). Transcriptional responses to DNA damage. *Current Opinions in Microbiology*, **4**, 178-185. IF 7.476

22) Lloyd, G.S., Landini, P., and Busby, S.J.W. (2001). Activation and repression of transcription initiation in bacteria. *Essays in Biochemistry*, **37**, 17-31. IF 0.702

23) Prigent-Combaret, C., Brombacher, E., Vidal, O., Lejeune, P., Ambert, A., Landini, P., and Dorel, C. (2001). A complex regulatory network controls initial adhesion and biofilm formation in *Escherichia coli* via regulation of the *csgB* gene. *Journal of Bacteriology*, **183**, 7213-7223. IF 3.984

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37) Landini, P. (2009). Cross-talk mechanisms between biofilm formation and response to environmental and physiological stresses in *Escherichia coli*. *Research in Microbiology*, **160**, 259-266. IF 2,154

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41) Landini, P., Antoniani, D., Burgess, J.G., and Nijland, R. (2010). Molecular mechanisms of compounds affecting bacterial biofilm formation and dispersal. *Applied Microbiology and Biotechnology*, **86**, 813-823. IF 3,280

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43) Tagliabue, L., Antoniani, D., Maciag, A., Bocci, P., Raffaelli, N., and Landini, P. (2010). The diguanylate cyclase YddV controls production of the exopolysaccharide poly-*N*-acetylglucosamine (PNAG) through regulation of the PNAG biosynthetic *pgaABCD* operon. *Microbiology*, **156**, 2901-2911. IF 2,957

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45) Maciag, A., Peano, C., Pietrelli, A., Egli, T., De Bellis, G., and Landini, P. (2011). *In vitro* transcription profiling of the σ^S subunit of bacterial RNA polymerase: re-definition of the σ^S regulon and identification of σ^S-specific promoter sequence elements. *Nucleic Acids Research*, **39**, 5338-5355. IF 8,026

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49) Carzaniga, T., Antoniani, D., Dehò, G., Briani, F., and Landini, P. (2012). The RNA processing enzyme polynucleotide phosphorylase negatively controls biofilm formation by repressing poly-*N*-acetylglucosamine (PNAG) production in *Escherichia coli* C. *BMC*

Microbiology, **12**, 270. IF 3,104

50) Antoniani, D., Rossi, E., Rinaldo, S., Bocci, P., Lolicato, M., Paiardini, A., Raffaelli, N., Cutruzzolà, F., and Landini, P. (2013) The immunosuppressive drug azathioprine inhibits biosynthesis of the bacterial signal molecule cyclic-di-GMP by interfering with intracellular nucleotide pool availability. *Applied Microbiology and Biotechnology*, **97**, 7325-7336. IF 3,811

51) Landini, P., Egli, T., Wolf, J., and Lacour, S: (2014) sigmaS, a major player in the response to environmental stresses in *Escherichia coli*: role, regulation and mechanisms of promoter recognition. *Environmental Microbiology Reports*, **6**, 1-13. IF 3,293

52) Peano, C., Chiaramonte, F., Motta, S., Pietrelli, A., Jaillon, S., Rossi, E., Consolandi, C., Champion, O.L., Michell, S.L., Freddi, L., Falciola, L., Basilico, F., Garlanda, C., Mauri, P., De Bellis, G., and Landini, P. (2014) Gene and protein expression in response to different growth temperatures and oxygen availability in *Burkholderia thailandensis*. *PLOS ONE*, **9**, e93009. IF 3,234

53) Rossi, E., Motta, S., Mauri, P., and Landini, P. (2014) Sulfate assimilation pathway intermediate phosphoadenosine 5′-phosphosulfate acts as a signal molecule affecting production of curli fibres in *Escherichia coli*. *Microbiology*, **160**, 1832-1844. IF 2,557

54) Gambino, M., Marzano, V., Villa, F., Vitali, A., Vannini, C., Landini, P., and Cappitelli, F. (2015) Effects of sub-lethal doses of silver nanoparticles on *Bacillus subtilis* planktonic and sessile cells. *Journal of Applied Microbiology*, **118**, 1103-1115. IF 2,156

55) Peano, C., Wolf, J., Demol, J., Rossi, E., Petiti, L., De Bellis, G., Geiselmann, J., Egli, T., Lacour, S., and Landini, P. (2015) Characterization of the *Escherichia coli* σ^S core regulon by Chromatin Immunoprecipitation-sequencing (ChIP-seq) analysis. *Scientific Reports*, **5**, 10469. IF 5,228

56) Hengge, R., Galperin, M.Y., Ghigo, J.M., Gomelski, M., Green, J., Hughes, K.T., Jenal, U. and Landini, P. (2015) Systematic Nomenclature for GGDEF and EAL domain-containing cyclic-di-GMP turnover proteins of *Escherichia coli*. *Journal of Bacteriology*, **198**, 7-11. IF 3,198

57) Di Pasquale, P., Caterino, M., Somma, A., Squillace, M., Rossi, E., Landini, P., Iebba, V., Schippa, S., Papa, R., Selan, L., Artini, M., Palamara, A.T., and Duilio, A. (2016) Exposure of *E. coli* to DNA-methylating agents impairs biofilm formation and invasion of eukaryotic cells via down-regulation of the N-acetylneuraminate lyase NanA. *Frontiers in Microbiology*, **7**, 147. IF 4.076

58) Rossi, E., Longo, F., Barbagallo, M., Peano, C., Consolandi, C., Pietrelli, A., Jaillon, S., Garlanda, C., and Landini, P. (2016) Glucose availability enhances lipopolysaccharide production and immunogenicity in the opportunistic pathogen *Acinetobacter baumannii*. *Future Microbiology*, **11**, 335-349. IF 3.374

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Altre publicazioni, capitoli di libri:

Krooneman, J., Harmsen, H., Landini, P., Zinn, M., Munaut, F., van der Meer, W., Beimfohr, C., and Reichert, B. (2005) Microbial safety in space. In "Microgravity Applications Programme: Successful Teaming of Science and Industry". (pp. 258-268). Edited by A. Wilson. ESA Publications Division, ESTEC, Noordwijk, The Netherlands.
Landini, P., Jubelin, G., and Dorel-Flamant, C. (2006) The molecular genetics of bioadhesion and biofilm formation. In "Bioadhesives" (pp. 21-40). Edited by A.M. Smith and J.A. Callow. Springer-Verlag, Berlin-Heidelberg.
Peano, C., Pietrelli, A., Consolandi, C., Rossi, E., Petiti, L., Tagliabue, L., De Bellis, G. and Landini, P. (2013) An Efficient rRNA Removal Method for RNA sequencing in GC-rich bacteria. *Microbial Informatics and Experimentation*, **3**, 1.
Leoni L, Landini P. (2014) Microbiological methods for target-oriented screening of biofilm inhibitors. In "Microbial Biofilms" Editor: Gianfranco Donelli. ISBN: 978-1-4939-0466-2 (Print) 978-1-4939-0467-9 (Online). Springer, New York.

Contributi a libri di testo:
Microbiologia Ambientale ed Elementi di Ecologia Microbica.. Ed. CEA. Curatori: P. Barbieri, G. Bestetti, E. Galli e D. Zannoni. Isbn 978-8808-18434-4.
Laboratorio Didattico di Microbiologia.. Ed. CEA. Curatori: A. Vaughan, P. Buzzini, F. Clementi. Isbn 978-8808-18322-4.
Biologia dei Microrganismi. Ed. CEA. Curatori: G. Dehò, E. Galli. Isbn 978-8808-18262-3.