An image of the document is not provided, but you can describe the content from the text snippet you provided. Here is a breakdown of the key points:

**Aim**
Selection of bacterial isolates effective for control of fire blight and to elucidate mechanism of action.

**Screening on pear fruitlets and identification**
Out of 299 isolates originating from leaves and soil 107 showed high efficiency in protection of pear fruitlets cv. ‘Conference’ against fire blight. Yellow colony isolates (24) were characterized using physiological and biochemical tests according to keys of Bradbury (1988) and Schad et al. (2001), by and 16s r RNA sequence analyses (Weisburg et al.1991; Drancourt et al. 1997).

**Bacterial colonies with characteristic morphology were counted after 48 h of incubation at 24°C.**

**Mechanisms of action**

**Siderophores production**

**Signaling molecules N - acyl homoserine lactones (AHL)**

**Isolate 49M produced siderofens on medium containing complex: CAS - Fe³⁺ - HDTMA prepared according to the method of Schwyn and Neilands (1987).**

**Strain 49M did not produced N - acyl homoserine lactones in test with AHL - indicator strain Chromobacterium violaceum CV026 according to the method of McClain et al. (1997).**

**Strain 49M was included for comparison.**

**Protection of M.26 rootstock shoots**
Tips of terminal shoots on one-year-old apple M.26 growing in pots in the greenhouse were cut off with sterile scissors and afterwards sprayed with water suspension of 49M at 10⁵ cfu/ml. BlightBan A506 (USA) was included for comparison. Immediately after spraying the shoots were covered with plastic bags. After 6 hours they were spray inoculated with water suspension of E. amylovora strain Ea59 at 10⁷ cfu/ml. The presence of blight symptoms was recorded after 5 to 9 days.

**Summary**
- Strain 49M significantly protected apple blossoms and shoots against fire blight. High efficiency was obtained when 49M was applied at concentration 10⁵ cfu/ml (89.0-82.8%).
- Survival of 49M bacteria on apple blossoms cv. Jonagored in orchard was high; 10 days from their introduction by spraying with water suspension at 10⁵ cfu/ml 2.0×10⁻⁶–6.7 x 10⁵ cfu/ blossom were detected.
- Strain 49M produced siderophores and biofilm but not N - acyl homoserine lactones (AHL).
- The presence of regulatory gen gacA influencing the production of several secondary metabolites including antibiotics was found in 49M; however, no phlD, phlE, phlB, phlC and penD genes were not detected.
- Study on biofilm relationships between tested isolate and E. amylovora on 3 microbiological media (Nutrient Agar with sucrose, King B and LB) showed that 49M inhibited growth of pathogen only on King B medium.

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